



# College of Pharmacy University of the Philippines Manila



## Bachelor of Science in Pharmacy (BSP)

### COURSE CHECKLIST

First Year, First Semester - 21 units				
	Course	Unit/s	Prerequisite/s	Co-requisite/s
NSTP 1	National Service Training Program 1	(3)		
	<i>National Service Training Program (NSTP) is a program aimed at enhancing civic consciousness and defense preparedness in the youth by developing the ethics of services and patriotism while undergoing training in any of its three (3) program components. Its various components are especially designed to enhance the youth's active contribution to the general welfare.</i>			
PE I	Physical Education I	(2)		
GE	Core GE Subject	3		
GE	Core GE Subject	3		
GE	Core GE Subject	3		
Chem 18	Fundamentals of General Chemistry II	3		
Pharm 101	Pharmacy as a Profession	2		
	<i>Overview of the scope of pharmacy practice in the Philippine context including descriptions of various fields and career opportunities</i>			
Pharm 106	Pharmaceutical Calculations	2		
	<i>Calculations in the preparation and safe and effective use of pharmaceuticals</i>			
Clin Pharm 140	Pharmacist in the Healthcare System	2		
	<i>Introduction to the Philippine health care system and the roles of the pharmacist at various levels of care</i>			
Clin Pharm 141	Health Ethics and Leadership in Pharmacy	2		
	<i>Ethical tenets, rules of professional conduct and leadership in pharmacy practice</i>			
Clin Pharm 150	Introductory Pharmacy Practice Experience in Philippine Healthcare System	1		
	<i>Introductory experience of pharmacy students in various levels of the Philippine healthcare system</i>			
First Year, Second Semester – 21 units				
	Course	Unit/s	Prerequisite/s	Co-requisite/s
NSTP 2	National Service Training Program 2	(3)		
	<i>National Service Training Program (NSTP) is a program aimed at enhancing civic consciousness and defense preparedness in the youth by developing the ethics of services and patriotism while undergoing training in any of its three (3) program components. Its various components are especially designed to enhance the youth's active contribution to the general welfare. NSTP 2 focuses on the specialization on Literacy Training Service component of the program.</i>			
PE II	Physical Education II	(2)		
GE	Core GE Subject	3		
GE	Prescribed Elective GE Subject	3		
Bio 127	Medicinal Botany	3		
Pharm 107	Pharmaceutical Analytical and Inorganic Chemistry	3	Pharm 106, Chem 18	
	<i>Concepts and principles in pharmaceutical inorganic chemistry and its applications in general methods of analysis</i>			
Pharm 107.1	Pharmaceutical Analytical and Inorganic Chemistry Laboratory	1		Pharm 107
	<i>Qualitative and quantitative methods of the analysis of inorganic pharmaceuticals</i>			
Pharm 110	Pharmaceutical Organic Chemistry 1	3	Chem 18	



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	<i>Structure, function, and reactivity of pharmaceutically relevant organic compounds</i>			
Clin Pharm 142	Foundations of Pharmaceutical Care	2	Clin Pharm 141, Clin Pharm 150	
	<i>Foundational knowledge and skills in medication therapy management</i>			
Clin Pharm 143	Foundations of Social and Administrative Pharmacy	2	Clin Pharm 141, Clin Pharm 150	
	<i>Foundational knowledge, principles and skills in the practice of social and administrative pharmacy</i>			
Clin Pharm 151	Introductory Pharmacy Practice Experience in Institutional Setting	1	Clin Pharm 141	
	<i>Introductory experience of pharmacy students in institutional pharmacy practice</i>			
<b>Second Year, First Semester - 20 units</b>				
	<b>Course</b>	<b>Unit/s</b>	<b>Prerequisite/s</b>	<b>Co-requisite/s</b>
PE III	Physical Education III	(2)		
GE	Core GE Subject	3		
Pharm 113	Pharmaceutical Biochemistry	3	Pharm 110	
	<i>Metabolism of biological molecules in the normal and diseased states of the human body, with emphasis on biochemical pathways as potential drug targets</i>			
Pharm 116	Pharmaceutical Management	2		
	<i>Fundamental, human resource, and strategic management, including leadership principles and concepts, applicable to the pharmaceutical industry</i>			
Pharm 120	Human Anatomy and Physiology for Pharmacy 1	2		Pharm 113
	<i>Structures and functions of the human integumentary, skeletal, muscular, lymphatic and immune, and nervous systems</i>			
Pharm 125	Pharmacology for Pharmacy 1	2		Pharm 120
	<i>General concepts in pharmacology and study of antimicrobials and drugs affecting the autonomic and central nervous systems.</i>			
Pharm 195	Pharmaceutical Statistics	3		
	<i>Applications of statistical methods in pharmacy</i>			
Clin Pharm 160	Pharmacy Operations	3	Clin Pharm 150, Clin Pharm 151	Pharm 116
	<i>Structural, functional, business and inter-relational aspects of pharmacy operations</i>			
Clin Pharm 161	Pharmacy Wellness and Health Promotion	2	Clin Pharm 142	Pharm 120, Pharm 125
	<i>Concepts on wellness, health promotion, disease prevention and self-care as applied in pharmacy</i>			
<b>Second Year, Second Semester – 20 units</b>				
	<b>Course</b>	<b>Unit/s</b>	<b>Prerequisite/s</b>	<b>Co-requisite/s</b>
PE IV	Physical Education IV	(2)		
Pharm 104	Pharmacognosy	3	Bio 127	
	<i>Composition and pharmaceutical uses of the most commonly used natural products</i>			
Pharm 121	Human Anatomy and Physiology for Pharmacy 2	2	Pharm 120	
	<i>Structures and functions of the human respiratory, hematopoietic, cardiovascular, digestive, endocrine, genitourinary and reproductive systems</i>			
Pharm 126	Pharmacology for Pharmacy 2	2	Pharm 125	Pharm 121
	<i>Pharmacology of autacoids, pain medicines and drugs affecting the musculo-skeletal, respiratory, hematopoietic, digestive, cardiovascular, and endocrine, genitourinary, and reproductive systems.</i>			
Pharm 130	Pharmaceutics 1	5	Pharm 107.1	
	<i>Pharmaceutical dosage forms with focus on the scientific background and technical aspects of pharmaceutical dosage form design</i>			
Pharm 136	Legal Pharmacy	2	2 <sup>nd</sup> Yr standing	
	<i>Laws, issuances and regulations relevant to the practice and ethics in the pharmacy profession</i>			
Pharm 133	Dispensing and Incompatibilities	3	Pharm 125	Pharm 130, Pharm 126
	<i>Principles and general procedures of dispensing pharmaceuticals</i>			



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Clin Pharm 162	Medication Safety	2	Clin Pharm 160	Pharm 133, Clin Pharm 152
	<i>Promotion of medication safety in health care</i>			
Clin Pharm 152	Introductory Pharmacy Practice Experience in Community Retail Setting	1	Clin Pharm 160	Pharm 133, Clin Pharm 162
	<i>Introductory experience of pharmacy students in community retail setting</i>			
<b>Third Year, First Semester - 21 units</b>				
	<b>Course</b>	<b>Unit/s</b>	<b>Prerequisite/s</b>	<b>Co-requisite/s</b>
GE	Elective GE Subject	3		
GE	Core GE Subjects	3		
Pharm 127	Pharmaceutical Toxicology	2	Pharm 125	
	<i>Study of the mechanisms of toxicity, clinical signs and symptoms, laboratory tests, management risk assessment and management, and design of recovery procedures of pharmaceutical toxicants</i>			
Pharm 131	Pharmaceutics 2	2	Pharm 130	
	<i>Production and quality control testing of pharmaceutical products based on the principles of Good Manufacturing Practices</i>			
Clin Pharm 169	Pharmaceutical Analysis and Quality Control	3	Pharm 130	Pharm 131
	<i>Modern methods of analysis and quality control in ensuring safety and efficacy of pharmaceutical products used in clinical practice</i>			
Clin Pharm 170	Clinical Pharmacokinetics and Therapeutic Drug Monitoring	3	Pharm 126, Pharm 130	
	<i>Application of pharmacokinetics and therapeutic drug monitoring in pharmaceutical care</i>			
Clin Pharm 171	Quality Management for Clinical Pharm Practice	2	Pharm 136	
	<i>Management of the regulatory process of drugs and biologics from innovation and discovery to marketing approval and commercialization</i>			
Clin Pharm 172	Evidence-based Medicine and Drug Information	3	Pharm 195, Pharm 126	
	<i>Principles of health and drug information retrieval and evaluation for evidence-based decision-making and health education</i>			
<b>Third Year, Second Semester – 18 units</b>				
	<b>Course</b>	<b>Unit/s</b>	<b>Prerequisite/s</b>	<b>Co-requisite/s</b>
PI 100	Philippine Institutions	3		
Pharm 114	Pharmaceutical Microbiology and Parasitology	3	Pharm 113	
	<i>Integration of bacteriology, virology, mycology, parasitology, and immunology as applied in the management of infectious diseases, pharmaceutical quality control and biotechnology</i>			
Pharm 117	Pharmaceutical Accounting	2	Pharm 116	
	<i>Financial management accounting as applied to the different areas of practice of pharmacy</i>			
Pharm 128	Medicinal Chemistry	3	Pharm 126	
	<i>Pharmacy and chemistry of natural, semisynthetic, and synthetic organic medicinals with application to drug design and development</i>			
Clin Pharm 114	Pharmaceutical Microbiology and Parasitology Laboratory	2	Pharm 125, Pharm 126	Pharm 114
	<i>Skills in cultivation, characterization, identification and control of microorganisms and parasites as applied in pharmacy</i>			
Clin Pharm 166	Clinical Nutrition in Pharmacy	2	Pharm 121	
	<i>Integration of pharmacy practice with nutrition issues</i>			
Clin Pharm 167	Integrative Medicine	2	Pharm 104, Clin Pharm 161	
	<i>Introduction to alternative health modalities and how they complement allopathic medicine</i>			
Clin Pharm 153	Introductory Pharmacy Practice Experience in the Pharmaceutical Industry	1	Pharm 131, Clin Pharm 171	
	<i>Introductory experience of pharmacy students in pharmaceutical industry</i>			



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<b>Fourth Year, First Semester - 21 units</b>				
<b>Course</b>		<b>Unit/s</b>	<b>Prerequisite/s</b>	<b>Co-requisite/s</b>
Pharm 118	Pharmaceutical Marketing	2	Pharm 117	
	<i>Theory and practice of marketing in the pharmaceutical industry and pharmacy-related services</i>			
Pharm 138	Health Technology Assessment and Pharmaceutical Policy	3	4 <sup>th</sup> Yr standing	
	<i>Principles and methods of health technology assessment and health policy as applied to pharmacy</i>			
Pharm 199	Research Methods in Pharmacy	2	Pharm 195	
	<i>Fundamentals and design of pharmaceutical research</i>			
Clin Pharm 173	Pharmacoevidence in Therapeutic Risk Management	3	Clin Pharm 171, Clin Pharm 172	Pharm 138, Pharm 199
	<i>Application of epidemiologic principles and methods in examining the benefits and risk of medications in the population</i>			
Clin Pharm 174	Clinical Assessment for Pharmacy Practice	3	Pharm 121	Clin Pharm 181, Clin Pharm 182
	<i>Integration of principles of patient assessment with medication therapy management in specific clinical situations</i>			
Clin Pharm 180	Immunopharmacotherapy	2	Pharm 126	Clin Pharm 174
	<i>Integrated approach to pharmacotherapeutic management of inflammatory and immune diseases</i>			
Clin Pharm 181	Pharmacotherapy of Infectious Diseases	3	Pharm 114, Clin Pharm 114,	Clin Pharm 174
	<i>Integrated approach to pharmacotherapeutic management of infectious diseases</i>			
Clin Pharm 182	Pharmacotherapy of Pulmonary and Gastrointestinal Diseases	3	Pharm 126	Clin Pharm 174
	<i>Integrated approach to pharmacotherapeutic management of pulmonary and gastrointestinal diseases</i>			
<b>Fourth Year, Second Semester – 20 units</b>				
<b>Course</b>		<b>Unit/s</b>	<b>Prerequisite/s</b>	<b>Co-requisite/s</b>
Pharm 129	Pharmaceutical Biotechnology	2	Pharm 126	
	<i>Production and applications of biotechnology-derived articles</i>			
Clin Pharm 176	Medication Counseling	3	Clin Pharm 172 4 <sup>th</sup> Yr standing	
	<i>Skills in providing medication counseling to patients and other clients in various settings</i>			
Clin Pharm 183	Pharmacotherapy of Cardiovascular Diseases	3	Clin Pharm 174	
	<i>Integrated approach to pharmacotherapeutic management of cardiovascular diseases</i>			
Clin Pharm 184	Pharmacotherapy of Nephrologic and Endocrine Diseases	3	Clin Pharm 174	
	<i>Integrated approach to pharmacotherapeutic management of nephrologic and endocrine diseases</i>			
Clin Pharm 185	Pharmacotherapy of Neurological and Psychological Disorders	3	Clin Pharm 174	
	<i>Integrated approach to pharmacotherapeutic management of neurological and psychological disorders</i>			
Clin Pharm 186	Oncology Pharmacotherapy	3	Clin Pharm 174	
	<i>Integrated approach to pharmacotherapeutic management of disease states in oncology</i>			
Clin Pharm 187	Pharmacotherapy in Emergency and Critical Care	3	Clin Pharm 174	
	<i>Integrated approach to pharmacotherapeutic management of disease states encountered in emergency and critical care</i>			
<b>Fifth Year, First Semester - 19 units</b>				
<b>Course</b>		<b>Unit/s</b>	<b>Prerequisite/s</b>	<b>Co-requisite/s</b>
Pharm 197	Pharmacy Seminar	1	Pharm 199	
	<i>Reports on the current developments in the selected field of pharmacy practice.</i>			
Clin Pharm 191	Advanced Practice Experience in Industrial Pharmacy	7.5	5 <sup>th</sup> Yr standing	



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	<i>Internship in industrial pharmacy</i>			
Clin Pharm 192	Advanced Practice Experience in Community Pharmacy	7.5	5 <sup>th</sup> Yr standing	
	<i>Internship in community pharmacy</i>			
Clin Pharm 193	Advanced Practice Experience in Institutional Pharmacy	3	5 <sup>th</sup> Yr standing	
	<i>Internship in institutional pharmacy</i>			
<b>Fifth Year, Second Semester – 18 units</b>				
	<b>Course</b>	<b>Unit/s</b>	<b>Prerequisite/s</b>	<b>Co-requisite/s</b>
Clin Pharm 194	Advanced Practice Experience in Hospital Pharmacy	7.5	5 <sup>th</sup> Yr standing	
	<i>Internship in hospital pharmacy</i>			
Clin Pharm 195	Advanced Practice Experience in Public Health and Regulatory Pharmacy	4.5	5 <sup>th</sup> Yr standing	
	<i>Internship in public health and regulatory pharmacy</i>			
Clin Pharm 196	Advanced Practice Experience in Primary Health Care Pharmacy	3	5 <sup>th</sup> Yr standing	
	<i>Internship in primary health care pharmacy</i>			
Clin Pharm 200	Pharmacy Thesis	3	Pharm 199	
	<i>Conduct of an original research in pharmacy</i>			
		<b>199 units</b>		

## LIST OF GENERAL EDUCATION SUBJECTS (24 units)

<b>CORE GE SUBJECT</b>	
Wika1	Wika, Kultura, at Lipunan
Kas1	Kasaysayan ng Pilipinas
Ethics1	Ethics and Moral Reasoning in Everyday Life
STS1	Science, Technology, and Society
Math 10	Math, Culture, and Society
Comm 10	Critical Perspectives in the Communications
<b>PRESCRIBED GE ELECTIVE</b>	
SS1	Self and Society
<b>ELECTIVE GE SUBJECTS*</b>	
Science 10	Probing the Physical World
Science 11	Living Systems
Arts 1	Critical Perspective in Arts
Philarts 1	Philippine Arts and Culture
Nat Sci 50	Molecules to Man
	Genre-Based Writing

\*Elective GE subjects will not be limited to the list above. New offering of CAS may be added to the list above