



BACHELOR OF SCIENCE IN PHARMACY

Program Description

The Bachelor of Science in Pharmacy program equips students with a broad spectrum of training that may lead to employment, principally in higher education institutions, community drug stores, hospitals, government agencies, research establishments, public health and in the pharmaceutical industry. Students may also choose to continue with Medical education with an edge as they become competent and knowledgeable in biochemical mechanisms and actions of drugs, therapeutic roles, side effects, potential drug interactions, and monitoring parameters essential to produce professionals who are able to effectively communicate specialized knowledge on safe and effective medication use to patients.

Program Outcomes

The following outcomes reflect the terminal skills that all BS Pharmacy graduates should be able to demonstrate upon program completion:

1. Demonstrate effective interpersonal written and verbal skills in providing high quality, evidence-based, patient-centered care in cooperation with patients, prescribers and members of the inter-professional health care team.
2. Demonstrate the ability to use critical analysis and problem-solving skills for the provision of high quality, evidence-based pharmacy services and patient care.
3. Demonstrate self-calibration skills and a commitment to the lifelong learning needed to provide high quality pharmaceutical care.
4. Demonstrate exemplary professional, ethical and legal behaviors, complying with the laws and regulations related to pharmacy practice.



BACHELOR OF SCIENCE IN PHARMACY

FIRST YEAR

First Semester

		No. of hrs.		RLE		Total Units	Pre-requisites	Co-requisites
		Lec	Lab	SL	C			
PHARMACY1	History and Orientation To Pharmacy	3	0	0	0	3		
PHIBIOSCI1	Pharmaceutical Botany With Taxonomy	3	2	0	0	5		
GENINCHEM	General and Inorganic Chemistry	3	2	0	0	5		
GEDCORE04	Mathematics in the Modern World	3	0	0	0	3		
PHYSEDUC1	Physical Education1	2	0	0	0	2		
RCICALL01	Computer Aided Language Learning Program 1	0	1	0	0	1		
RCIPHBMT1	Basic Pharmaceutical Math Techniques 1	1	0	0	0	1		
NSTPCWTS1	National Service Training Program	3	0	0	0	3		
Total		18	5	0	0	23		

Second Semester

		No. of hrs.		RLE		Total Units	Pre-requisites	Co-requisites
		Lec	Lab	SL	C			
PHARMACY2	Pharmaceutical Calculation	3	0	0	0	3	PHARMACY1	
PHARCARE1	General Concept of the Health Care System	3	0	0	0	3		
PHBIOSCI2	Human Anatomy and Physiology with Patophysiology	3	2	0	0	5		
CHMSTRYOR	Organic Chemistry	3	2	0	0	5	GENINCHEM	
PHYSEDUC2	Physical Education	2	0	0	0	2		
RCICALL02	Computer Aided Language Learning Program 2	0	1	0	0	1		
RCIPHBMT2	Basic Pharmaceutical Math Techniques 2	1	0	0	0	1		
NSTPCWTS2	National Service Training Program 2 (CWTS)	3	0	0	0	3	NSTPCWTS1	
Total		18	5	0	0	23		



SECOND YEAR

First Semester

		No. of hrs.		RLE		Total	Pre-	Co-
		Lec	Lab	SL	C	Units	requisites	requisites
PHBIOSCI3	Pharmaceutical Biochemistry	3	2	0	0	5	CHMSTRYOR PHBIOSCI2	
PHCEUTIC1	Drug Delivery System	3	2	0	0	5	PHARMACY2	
PHARMINFO	Pharmacy Informatics	2	1	0	0	3		
GEDCORE01	Understanding the Self	3	0	0	0	3		
GEDCORE03	Purposive Communication	3	0	0	0	3		
PHYSEDUC3	Physical Education3	2	0	0	0	2		
RCIREED01	Values and Leadership Of Jesus Christ	2	0	0	0	2		
RCICALL03	Computer Aided Language Learning Program 3	0	1	0	0	1		
Total		18	6	0	0	24		

Second Semester

		No. of hrs.		RLE		Total	Pre-	Co-
		Lec	Lab	SL	C	Units	requisites	requisites
PHARMACY3	Physical Pharmacy	3	1	0	0	4	CHMSTRYOR PHCEUTIC1 PHBIOSCI1 PHBIOSCI3 PHARMACY2 PHBIOSCI2	
PHBIOSCI4	Pharmacognosy & Plant Chemistry	3	2	0	0	5		
PHARMACY4	Biopharmaceutics and Pharmacokinetics	3	0	0	0	3		
GEDCORE02	Reading in Philippines History	3	0	0	0	3		
GEDCORE06	Science, Technology and Society	3	0	0	0	3		
GEDCORE07	Ethics	3	0	0	0	3		
PHYSEDUC2	Physical Education	2	0	0	0	2		
RCIREED02	Lessons of Professionalism in the Bible	2	0	0	0	2		
RCICALL04	Computer Aided Language Learning Program 4	0	1	0	0	1		
Total		22	4	0	0	26		

Summer

		No. of hrs.		RLE		Total	Pre-	Co-
		Lec	Lab	SL	C	Units	requisites	requisites
PHCOMINTR	Community & Chemistry of Medicinals 1	0	0	0	4	4	PHARMACY1	
Total		0	0	0	4	4		



THIRD YEAR

First Semester

		No. of hrs.		RLE		Total Units	Pre-requisites	Co-requisites
		Lec	Lab	SL	C			
PHARCHEM1	Pharmacy & Chemistry of Medicinals 1	3	1	0	0	4	GENINCHEM PHARMACY1	
PHBIOSCI5	Pharmaceutical Microbiology and Parasitology	3	2	0	0	5	PHBIOSCI2 PHBIOSCI3	
PHARMACY5	Hospital Pharmacy	2	1	0	0	3	PHCEUTIC1	
PHARCARE3	Communication and Interpersonal Skills	3	0	0	0	3		
ENGLISH05	Technical Writing	3	0	0	0	3		
GEDCORE08	Art Appreciation	3	0	0	0	3		
GEMANDATE	Life and Woks of Rizal	3	0	0	0	3		
Total		20	4	0	0	24		

Second Semester

		No. of hrs.		RLE		Total Units	Pre-requisites	Co-requisites
		Lec	Lab	SL	C			
PHARCHEM2	Pharmacy and Chemistry of Medicinal 2	3	2	0	0	5	PHBIOSCI3 PHARCMED1	
PHCEUTIC2	Manufacturing Pharmacy	3	2	0	0	5	PHCEUTIC1 PHARMACY3	
PHBIOSCI6	Pharmacology 1	4	0	0	0	4	PHBIOSCI2 PHBIOSCI5 PHARCHEM1	
PHARCARE4	Dispensing and Medication Counseling	3	0	0	0	3	PHARCARE3	
PHHOSINTR	Hospital Pharmacy Internship	0	0	0	4	4	PHARMACY5	
GEDCORE05	The Contemporary World	3	0	0	0	3		
GEDELEC06	Living in the IT Era	3	0	0	0	3		
Total		19	4	0	4	27		

Summer

		No. of hrs.		RLE		Total Units	Pre-requisites	Co-requisites
		Lec	Lab	SL	C			
PHMANINTR	Manufacturing Pharmacy Internship	0	0	0	4	4	PHCEUTIC2	
Total		0	0	0	4	4		

FOURTH YEAR

First Semester

		No. of hrs.		RLE		Total Units	Pre-requisites	Co-requisites
		Lec	Lab	SL	C			
PHBIOSCI17	Pharmacology 2 and Therapeutics	3	1	0	0	4	PBIOSCI6	



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PHARCHEM3	Quality Control 1- Drug Testing and Assay	3	2	0	0	5	PHCEUTIC1
PHASRCH1	Introduction to Pharmacy Administration and Management	1	2	0	0	3	SENIOR- STANDING
PHADMGT01	Principles of Pharmacy Administration and Management	3	0	0	0	3	SENIOR- STANDING
PHARJURIS	Pharmaceutical Jurisprudence and Ethics	3	0	0	0	3	PHARMACY1 PHHETNHICS
PHMAJINTR	Major Pharmacy Internship 1	0	0	0	4	4	PHCOMNTR PHHOSINTR PHMANINTR
PHCOMAPP1	Pharmacy Competency Appraisal 1	0	0	1	0	1	SENIOR- STANDING
GEDELEC01	Great Books	3	0	0	0	3	
Total		16	5	1	4	26	

Second Semester

		No. of hrs.		RLE		Total	Pre-	Co-
		Lec	Lab	SL	C	Units	requisites	requisites
PHARCHEM5	Clinical Toxicology	2	1	0	0	3	PHBIOSCI7	
PHASRCH2	Pharmacy Research Thesis Writing	1	0	0	0	1	SENIOR- STANDING	
PHARCARE5	Clinical Pharmacy	3	1	0	0	4	PHARMACY5 PHARCARE4	
PHADMGT02	Marketing and Entrepreneurship	3	0	0	0	3	SENIOR- STANDING	
PHMJRINTR	Major Pharmacy Internship 2	0	0	0	3	3	PHCOMINTR PHHOSINTR PHMANINTR	
PHARCARE2	Public Health	3	0	0	0	3	PHARCARE1 PHBIOSCI5	
PHARCHEM4	Quality Control 2- Drug Testing Assay/ Instrumentation	3	1	0	0	4	PHCEUTIC2	
PHCOMAPP2	Pharmacy Competency Appraisal 2	0	0	1	0	1	PHCOMAPP1	
GEDELEC08	The Entrepreneurial Mind	3	0	0	0	3		
Total		18	3	1	3	25		



SUMMARY OF REQUIRED COURSES Bachelor of Science In Pharmacy

	Number of Courses Required	RLE/ Lec	Lab	Total Subtotal	Units
Core Courses					24
Understanding the Self	1	3	0	3	
Readings in Philippine History	1	3	0	3	
The Contemporary World	1	3	0	3	
Mathematics in the Modern World	1	3	0	3	
Purposive Communication	1	3	0	3	
Art Appreciation	1	3	0	3	
Science, Technology and Society	1	3	0	3	
Ethics	1	3	0	3	
Elective Courses					9
Living in the IT Era	1	3	0	3	
The Entrepreneurial Mind	1	3	0	3	
Great Books	1	3	0	3	
The Life and Works of Rizal					3
The Life and Works of Rizal	1	3	0	5	
Other Courses					14
Physical Education	4	2	0	8	
National Service Training Program (NSTP 1 and 2)	2	3	0	6	
Major Courses					35
General and Organic Chemistry	1	3	2	5	
Pharmaceutical Botany with Taxonomy	1	3	2	5	
Organic Chemistry	1	3	2	5	
Human Anatomy & Physiology with Pathology	1	3	2	5	
History and Orientation to Pharmacy	1	3	0	3	
Pharmacy Informatics	1	2	1	3	
General Concept of the Health Care System	1	3	0	3	
Communication & Interpersonal Skills	1	3	0	3	
Communication & Interpersonal Skills	1	3	0	3	



Other Institutional Courses

12

Computer Aided Learning Program 1	1	1	0	1
Computer Aided Learning Program 2	1	1	0	1
Computer Aided Learning Program 3	1	1	0	1
Computer Aided Learning Program 4	1	1	0	1
Values and Leadership of Jesus	1	2	0	2
Lessons of Professionalism in the Bible	1	2	0	2
Pharmacy Competency Appraisal 1	1	0	1	1
Pharmacy Competency Appraisal 2	1	0	1	1
Basic Pharmaceutical Math Techniques 1	1	1	0	1
Basic Pharmaceutical Math Techniques 2	1	1	0	1

Professional Courses

109

Public Health	1	3	0	3
Drug Delivery Systems	1	3	2	5
Pharmaceutical Biochemistry	1	3	2	5
Pharmaceutical Calculation	1	3	0	3
Pharmacy and Chemistry of Medicinals 1	1	3	1	4
Physical Pharmacy	1	3	1	4
Biopharmaceutics and Pharmacokinetics	1	3	0	3
Pharmacognosy & Plant Chemistry	1	3	2	5
Pharmaceutical Microbiology & Parasitology	1	3	2	5
Pharmacy and Chemistry of Medicinals 2	1	3	2	5
Manufacturing Pharmacy	1	3	2	5
Pharmacology 1	1	4	0	4
Hospital Pharmacy	1	2	1	3
Quality Control 1- (Drug Testing & Assay)	1	3	2	5
Pharmacology 2 & Therapeutics	1	3	1	4
Quality Control 2- Drug testing & Assay With Instrumentation)	1	3	1	4
Dispensing & Medication Counseling	1	3	0	3
Principles of Pharmacy Administration and Management	1	3	0	3
Pharmacy Jurisprudence & Ethics	1	3	0	3
Clinical Toxicology	1	2	1	3
Clinical Pharmacy	1	3	1	4
Marketing and Entrepreneurship	1	0	4	4
Major Pharmacy Internship 1	1	0	4	4
Major Pharmacy Internship 2	1	0	3	3
Hospital Pharmacy Internship	1	0	4	4
Introduction to Pharmacy Research	1	1	2	3
Pharmacy Research Thesis Writing	1	1	0	1

Total

206



MAJOR COURSE DESCRIPTION Bachelor of Science In Pharmacy

GENINCHEM GENERAL AND INORGANIC CHEMISTRY **5 units**

The course deals with the fundamental concepts of matter, its properties and chemical behavior in relation to their atomic and molecular structure. It also includes the changes which matter undergoes and the energy associated with it. It focuses on the properties, structure and changes of matter and its relation to chemical reactions and energy transformations.

PHBIOSCI1 PHARMACEUTICAL AND BOTANY WITH TAXONOMY **5 units**

The course is an extensive presentation of plant life and related living forms inclusive of morphoanatomy and hierarchical organization and its value as an integral part of the ecosystem and the pharmaceutical field.

CHMSTRYOR ORGANIC CHEMISTRY **5 units**

The course prepares the students to apply the principles and techniques of organic chemistry to biochemical and health-related fields of study. It also prepares them for studying higher courses that require knowledge in organic chemistry. The course deals with the different classes of organic compounds, their structures, properties, and reaction mechanisms.

PHBIOSCI2 HUMAN ANATOMY AND PHYSIOLOGY WITH PATHOPHYSIOLOGY **5 units**

This course deals with the study of the parts and functions of the major organs and organ systems of the human body. It introduces students to the language of anatomy, as well as, the fundamental concepts of cellular structures and functions, integration, organization, and control of all body systems, and common interventions for pathophysiological disorders of the major body systems.

PHARMACY1 HISTORY AND ORIENTATION TO PHARMACY **3 units**

The course orients the student in the history and development of pharmacy and the standards of its practice.

PHARMINFO PHARMACY INFORMATICS **3 units**

An introduction to methods of gathering and using drug and health-related information from various sources with focus on Information Communication Technology (ICT) using different web sites and search engines.

PHARCARE1 GENERAL CONCEPT OF HEALTH CARE SYSTEM **3 units**

The course deals with the holistic approach in the promotion of health. It includes discussions on the human life cycle, health problem identification, health care strategies, essential health intervention, and health sectors that support health – related issues and policies.



PHARCARE3 **3 units**
COMMUNICATIONS
AND
INTERPERSONALSKILLS

This course deals with the study of basic concepts of interpersonal relationships and effective communication. It covers a variety of areas of learning interpersonal communications and acquiring skills needed by pharmacists to meet the responsibilities of a patient – centered pharmaceutical care services.

ENGLISH05 **3 units**
TECHNICAL WRITING

This course engages students to craft academic papers with strong, effective, and clear theses, body paragraphs, and conclusions. It also provides the students with various strategies for generating ideas about a topic and teaches the student different organizational patterns, topic development, and methods for making their writing more coherent.

PHARCARE2 **3 units**
PUBLIC HEALTH

This course will introduce the students to community health which includes both the private and public efforts of individuals, groups and organizations to promote, protect and preserve the health of those in the community.

PHCEUTIC1 **5 units**
PUBLIC HEALTH

This course deals with the basic pharmaceutical principles and technologies applied in the preparation of pharmaceutical dosage forms and drug delivery system.

PHBIOSCI3 **5 units**
PHARMACEUTICAL BIOCHEMISTRY

The course deals with the molecular hierarchy of the living cells. It covers the study of the biomolecules carbohydrates,

proteins, lipids and nuclei acids in relation to their structure and functions in the living system, the generation and storage of metabolic energy biosynthesis of biomolecules and the transmission and expression of genetic information. It also discusses the importance and correlation of biomolecules to health and diseases.

PHARMACY2 **3 units**
PHARMACEUTICAL CALCULATIONS

This course covers metrology and calculations applied in the practice of pharmacy

PHARCHEM1 **4 units**
PHARMACY AND CHEMISTRY OF
MEDICINAL 1

The course covers the chemistry and pharmacy of inorganic and organic medicinal, with emphasis on those official in the USP and NF, their preparations, properties, tests and uses. It includes the concepts and chemical reactions related to qualitative analysis of inorganic compounds. This also includes the study of structure and physio-chemical properties in relation to biological activity, preparation and/or synthesis, uses and doses of organic medicinal.

PHARMACY3 **4 units**
PHYSICAL PHARMACY

This course involves an analysis of application of basic physiochemical principles and methodology as they relate to drug dosage form design preparation stabilization and evaluation. It also considers the relationship of these principles to selected therapeutic problems.



PHARMACY4 3 units
BIOPHARMACEUTICS &
PHARMACOKINETICS

This course deals with the basic principles and factors affecting drug liberation, absorption, distribution, metabolism and excretion including the appropriate mathematical models that describe drug behavior in the body in both normal and altered physiologic states which are necessary for the design of a rational dosage regimen.

PHABIOSCI4 5 units
PHARMACOGNOSY AND PLANT
CHEMISTRY

The course deals with the study of the classification, physical and chemical properties, pharmacological and pharmaceutical uses of natural drugs (including Philippine medicinal plants). It also covers the biosynthesis, extraction, isolation, purification and identification of drug constituents.

PHABIOSCI5 5 units
PHARMACEUTICAL MICROBIOLOGY
AND PARASITOLOGY

The course deals with microorganism particularly those pathogenic to man and the parasitic helminthes of man – their biology the infections they cause host response to these infections, and their mode of transmission, prevention and treatment. The course provides laboratory experience in studying microorganism and parasitic helminthes and in utilizing aseptic techniques for microbial control. It also discusses microbiological aspects of the pharmaceutical industry. Special attention is given to sterilization and disinfection antibiotics and chemotherapeutic agents.

PHARCHEM2 5 units
PHARMACY AND CHEMISTRY OF
MEDICINAL 2

This is a continuation of Medicinal 1 which emphasizes on the study of structure, physicochemical properties in relation to biological activity preparation and/or synthesis, uses and doses of organic medicinal.

PHCEUTIC2 5 units
MANUFACTURING PHARMACY

This course presents the basic principles, methods and technology involved in the production of various drugs dosage forms and delivery systems, from the initial design of the dosage forms to their actual manufacture, including the requirements for packaging, equipment and facilities.

PHBIOSCI6 4 units
PHARMACOLOGY 1

The course deals with the study of drugs and their biochemical and physiological effects, mechanism of action, pharmacokinetic properties, therapeutics uses, adverse reactions, toxicological effects and interactions.

PHARMACY5 3 units
HOSPITAL PHARMACY

An introductory course to the practice of pharmacy in a hospital setting. It includes organizational structure of the pharmacy department and its relations to other departments. It covers the different drug distribution system bulk compounding methods, parenteral admixtures, practice standards, pharmacy and therapeutics committee and general pharmacy administration.



PHARCHEM3 5 units **HOSPITAL PHARMACY**

This course deals with the important theories, principles, techniques and applications of various quantitative pharmaceutical analyses, as applies in the quality control of raw materials and drug products.

PHBIOSCI7 4 units **HOSPITAL PHARMACY**

This course a continuation of Pharmacology 1, deals with the pharmacodynamics, pharmacokinetic toxicology and therapeutic properties of drug used in the management of cardiovascular respiratory gastrointestinal, renal, endocrine, metabolic, coagulative, CNS, immunologic oncologic and infectious conditions.

PHARCHEM4 4 units **QUALITY CONTROL 2- DRUG** **TESTING & ASSAY WITH** **INSTRUMENTATION**

This is a continuation of Quality Control 1 with application of instrumental methods of analysis. It includes the principles, organization and function of quality control in the pharmaceutical and cosmetic industry. In-process test, the use of quality control charts for solid pharmaceuticals, stability testing as well as quality assurance functions in various stages of manufacture are discussed.

PHARCARE4 3 units **DISPENSING AND MEDICATION** **COUNSELING**

This course deals with the basic concepts of dispensing, dispensing techniques and the ethical policies that govern this important facet of the professional practice of pharmacy. It also deals with the study of theoretical

perspectives and contemporary issues relevant to social and behavioral aspects concerning therapeutic medication counseling. Furthermore, this course provides opportunities for experiential learning of the techniques and skills of patient medication counseling roles of pharmacists.

PHBADMGT01 3 units **PRINCIPLES OF PHARMACY** **ADMINISTRATION AND** **MANAGEMENT**

This is an introductory course designed to teach the concepts, principles, and fundamentals of pharmaceutical administration and management. This includes the basic functions of planning, organizing, staffing, directing and controlling as they relate to fiscal, personnel and merchandizing management. The course is also intended to provide the students with the tools and skills necessary to effectively manage themselves and to participate fully in their organization in a changing world environment.

PHARJURIS 3 units **PHARMACEUTICAL** **JURISPRUDENCE AND ETHICS**

The course deals with the study of legal rules and regulations as applied to pharmacy and pharmacy practice. It also embodies a code of ethics of the profession.

PHARCHEM5 3 units **PHARMACEUTICAL** **JURISPRUDENCE AND ETHICS**

The fundamental of clinical toxicology including a study of the general classes of toxic agents, mechanism of toxicity, target organ toxicity, management, and their detection.



PHARCARE5 **4 units**
CLINICAL PHARMACY

This course defines the role of pharmacists in drug therapy which includes P-R-I-M-E, C-O-R-E and F-A-R-M.

PHADMGT02 **3 units**
PHARMACEUTICAL
JURISPRUDENCE AND ETHICS

The course deals with concepts, theories and principles of marketing such as product, price, promotion and place of distribution combined with learning about entrepreneurship. It includes application through case study methods and business planning, and marketing strategy and elements of display.

PHCOMINTR **4 units**
COMMUNITY **PHARMACY**
INTERNSHIP

A 200 hours practicum conducted in a community pharmacy; provides introductory experiences in contemporary pharmacy practice including: dispensing, prescription processing systems, management, and patient counseling.

PHMANINTR **4 units**
MANUFACTURING **PHARMACY**
INTERNSHIP

A 200 hours practicum conducted in a manufacturing industry; provides the students with the hands-on application of the basic manufacturing processes, validation and regulatory concepts in the manufacturing industry. It focuses on the current good manufacturing practices, drug product development, regulatory and registration requirements, and different unit operations in the manufacture of pharmaceutical and cosmetic products.

PHMANINTR **3 units**
MAJOR PHARMACY INTERNSHIP 1

A 200 hours practicum conducted in any of the three (3) areas in the pharmacy practice namely; Community, Hospital and Manufacturing Pharmacy.

PHMANINTR **4 units**
MAJOR PHARMACY INTERNSHIP 2

A 160 hours practicum conducted in any of the three (3) areas in the pharmacy practice namely; Community, Hospital and Manufacturing Pharmacy.

PHHOSINTR **4 units**
HOSPITAL PHARMACY INTERNSHIP

A 200 hours practicum conducted in a hospital pharmacy; provides the students the basic concepts of hospital practice, policies and procedures in the provision of pharmacy services, and critical application in the actual setting. Focus is on drug distribution process and policies, medication orders to administration, clinical services (clinical pharmacy, intravenous admixture program, ambulatory care, and drug information), and education and research.

PHMANINTR **3 units**
INTRODUCTION TO PHARMACY
RESEARCH

This course deals with the specific problem related to pharmaceutical sciences that would be worthwhile to investigate during the laboratory work. It will comprise actual pharmaceutical and pharmacologic principles and animal testing which will be conducted inside the laboratory. It also includes the testing writing after experimental results are completed.



PHARSRCH2 **1 unit**
PHARMACY RESEARCH THESIS
WRITING

This is a continuation of Introduction to Pharmacy Research, this course deals with the specific problem related to pharmaceutical sciences that would be worthwhile to investigate during the

laboratory work. It will comprise actual pharmaceutical and pharmacologic principles and animal testing which will be conducted inside the laboratory. It also includes the testing writing after experimental results are completed.

OTHER INSTITUTIONAL COURSE DESCRIPTION

PHCOMAPP1 **1 unit**
PHARMACY COMPETENCY
APPRAISAL 1

The course reviews and prepares the students for the Pharmacy Licensure Examination in the following subjects; Pharmaceutical Chemistry, Inorganic Pharmaceutical and Medicinal Chemistry, Organic Pharmaceutical and Medicinal Chemistry, Qualitative Pharmaceutical Chemistry, Pharmacognosy and Plant Chemistry, Biochemistry, Practice of Pharmacy, Compounding & Dispensing, Clinical and Hospital Pharmacy, Pharmaceutical Calculations.

PHCOMAPP2 **1 unit**
PHARMACY COMPETENCY
APPRAISAL 2

The course reviews and prepares the students for the Pharmacy Licensure Examination in the following subjects; Pharmacology, Pharmacokinetics, Toxicology, & Incompatibilities and Drug

Reaction, Pharmaceutics, Manufacturing Pharmacy, Pharmaceutical Dosage Forms, Physical Pharmacy, Jurisprudence, and Ethics, Quality Assurance and Quality Control, Drug Testing and Instrumentation, Microbiology and Public Health.

RCIPHBMT1 **1 unit**
BASIC PHARMACEUTICAL MATH
TECHNIQUES 1

The course orients the student in the common systems of measurement, explain the process of percentage, ratio, and proportion and show how they apply to pharmacy calculations.

RCIPHBMT2 **1 unit**
BASIC PHARMACEUTICAL MATH
TECHNIQUES 2

The course is a continuation of the Basic Pharmaceutical Math Techniques 1, where the student will be able to solve practical problems using mathematical skills.

INSTITUTIONAL COURSE DESCRIPTION



GEDCORE01 **3 units** **UNDERSTANDING THE SELF**

This course deals with the different aspects and concepts of self in terms of physical, emotional, cognitive, social, moral and responsible self. It covers topics about the nature of personal identity, enhancing one's self-image and assessing self-improvement. It aims to assist students in developing self-awareness, understanding and accepting oneself and others. As the course progresses, it will guide them to realize their vision in life and increase commitment to find meaning in their life.

GEDCORE02 **3 units** **READINGS IN PHILIPPINE HISTORY**

This course critically analyses Philippine History from multiple perspectives through the lens and selected primary sources. Priority will be given to primary sources that describe the important turning points in Philippine History from prehistoric times up to the contemporary period and articulate various perspectives. The approach, though historical, will deal with interdisciplinary subjects so as to broaden and deepen the student's understanding of Philippine political, economic, social and cultural history and equip the learner with the competencies necessary to analyze and evaluate different types of information: print, visual and audio visual and quantitative. The end goal is to develop the historical and critical consciousness of the students so that they will become versatile, broad-minded, morally upright and responsible citizens.

GEDCORE03 **3 units** **PURPOSIVE COMMUNICATION**

Purposive communication is a three-unit course that develops students' communicative competence and enhances their cultural and intercultural awareness through multimodal tasks that provide them opportunities for communicating effectively and appropriately to a multicultural audience in a local or global context. It equips students with tools for critical evaluation of a variety of texts and focuses on the power of language and the impact of images to emphasize the importance of conveying messages responsibly. The knowledge, skills, and insights that students gain from this course may be used in their other academic endeavors, their chosen disciplines, and their future careers as they compose and produce relevant oral, written, audio-visual and /or web-based output for various purposes.

GEDCORE04 **3 units** **MATHEMATICS IN THE MODERN WORLD**

This course deals with nature of mathematics, appreciation of its practical, intellectual and aesthetic dimensions and application of mathematical tools in daily life.

The course begins with an introduction to the nature of mathematics as an exploration of patterns (in nature and environment) and an application of inductive and deductive reasoning. By exploring these topics, students are encouraged to go beyond the typical understanding of mathematics as merely a set of formulas but as a source of aesthetics in patterns of nature and a rich



language in itself (and the science) governed by logic reasoning.

The course then proceeds to survey ways in which mathematics provides a tool for understanding and dealing with various aspects of present day living such as managing personal finances, making social choices, appreciating geometric designs, understanding codes used in data transmission and security, and dividing limited resources fairly. These aspects will provide opportunities for actually doing mathematics in a broad range of exercises that bring out the various dimensions of mathematics as a way of knowing the test the students' understanding and capacity. (CMO No. 20, series of 2013)

GEDCORE05 **3 units** **THE CONTEMPORARY WORLD**

This course introduces students to the contemporary world by examining the multifaceted phenomenon of globalization. Using the various disciplines of the social sciences, it examines the economic, social, political, technological and other transformations that have created an increasing awareness of the interconnectedness of people and places around the globe. To this end, the course provides an overview of the various debates in global governance, development and sustainability. Beyond exposing the student to the world outside the Philippines, it seeks to inculcate a sense of global citizenship and global ethical responsibility.

This course includes mandatory topics on population education in the context of population and demography.

GEDCORE06 **3 units** **STS- SCIENCE, TECHNOLOGY AND SOCIETY**

The course deals with the interaction between science and technology and social, cultural, political and economic contexts that shape and are shaped by them (CMO No. 20, series of 2013)

The interdisciplinary course engages students to confront the realities brought about by science and technology in society. Such realities pervade the personal, the public, and the global aspects of our living and are integral to human development. Scientific knowledge and technological development happen in the context of society with all its socio-political, cultural, economic and philosophical underpinnings at play. This course seeks to instill reflective knowledge in the students that they are able to live the good life and display ethical decision making in the face of scientific and technological advancement. This course includes mandatory topics on climate change and environmental awareness.

GEDCORE07 **3 units** **ETHICS**

Ethics deals with principles of ethical behavior in modern society at the level of the person, society, and in interaction with the environment and other shared resources. (CMO 20 s 2013)

Morality pertains to the standards of right and wrong that an individual originally picks up from the community. The course discusses the context and principles of



ethical behavior in modern society at the level of individual, society, and interaction with the environment and other shared resources. The course also teaches students to make moral decisions by using dominant moral frameworks and by applying a seven-step moral reasoning model to analyze and solve moral dilemmas. The course is organized according to the three (3) main elements of the moral experience: (a) agent, including context-cultural communal, and environmental; (b) the act; and (c) reason or framework (for the act).

GEDCORE08 **3 units**
ART APPRECIATION

Art Appreciation is a three-unit course that develops students' ability to appreciate, analyze, and critique works of art. Through interdisciplinary and multimodal approaches, this course equips students with a broad knowledge of the practical, historical, philosophical and social relevance of the arts in order to hone students' ability to articulate their understanding of the arts. The course also develops students' competency in researching and curating art as well as conceptualizing, mounting and evaluating art productions. The course aims to develop students' genuine appreciation for Philippine arts by providing them opportunities to explore the diversity and richness and their rootedness in Filipino culture.

BICHMSTRY **5 units**
BIOCHEMISTRY

Chemistry for the Life Sciences is a course for students typically majoring in nursing. The course gives a general knowledge of chemistry (mostly

inorganic) with an emphasis on health-related topics and problem-solving strategies. Descriptive and quantitative principles are discussed. This course also introduces the fundamental principles of biochemistry and biochemical reaction cycles. Its deals with the study of the properties, structures, functions, absorption, digestion and metabolism of proteins, enzymes, carbohydrates and lipids.

MICROPARA **4 units**
MICROBIOLOGY **AND**
PARASITOLOGY

This is an introductory course designed to assist students in the study of the important microorganisms and parasites. The first part covers the fundamentals of Microbiology (forms, morphology, arrangement and physiology of bacteria, fungi, viruses and protozoa) mechanics of causing diseases, their resistance to treatment and the body's immune defense against them. The second part briefly covers the study of human parasites (mode of transmission, life cycle and disease process) which are of medical importance.

Emphasis of this course is given on pathology, treatment and prevention of various diseases.

CO PHYSICS **3 units**
COLLEGE PHYSICS

It is a lecture and laboratory course. The course deals with the basic concepts of Physics, such as matter and energy and their interaction. Conceptual approach is used. Covers the ideas of motion, forces, momentum and energy from within the framework of Newton's Laws. The principles and applications of classical mechanics and thermodynamics,



including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces are studied with emphasis on problem solving. Laboratory experiments supporting the topics are included. The students are provided with laboratory activities designed to strengthen classroom discussions and lectures.

EARTH SCIE **3 units** **EARTH SCIENCE**

Earth Science and the Environment is a 3-unit course intended for college students who are taking a portion of their college general requirements. The course will cover basic topics in geology (major minerals and rock types, rock-forming processes, time scales; temperatures, pressures, compositions, structure of the Earth, and measurement techniques; geologic structures and relationships observable in the field; sediment movement and landform development by moving water, wind, and ice; crustal processes and planetary evolution in terms of global plate tectonics) and astronomy (stars, solar system, interstellar medium, the galaxy, and the universe). The course will also cover various environmental issues such as global warming, climate change, geological hazards, pollution, and renewable energies

GEMANDATE **3 units** **LIFE AND WORKS OF RIZAL**

As mandated by Republic Act 1425, this course covers the life and works of the country's national hero, Jose Rizal. Among the topics covered are Rizal's biography and writings, particularly the novels *Noli Me Tangere* and *El*

Filibusterismo, some of his essays, and various correspondences.

RCIREED01 **2 units** **VALUES AND LEADERSHIP OF JESUS CHRIST**

Values and Leadership of Jesus Christ is designed to give student's adequate knowledge about Catholic Faith and Doctrine in the light of the Sacred Scripture, Sacred Tradition and Church Documents. It exposes students to the many misconception and corrections about Catholic Faith which led them to carry out the sound and authentic Catholic Faith in their day to day lives. The course is organized according to the three (3) main elements of the moral experience: (a) agent, including context-cultural communal, and environmental; (b) the act; and (c) reason or framework (for the act).

The Course also tackles the Values and Leadership of Jesus Christ as portrayed from the Sacred Scriptures and Church social teachings. It identifies the different kinds of Christian Leadership a student of Riverside College must become.

RCIREED02 **2 units** **LESSON OF PROFESSIONALISM FROM THE BIBLE**

The Lesson of Professionalism from the Bible (Sacred Scriptures) is designed to give students the adequate knowledge about the fundamental biblical descriptions according to the Catholic Church teachings. It exposes students the right way in understanding the Bible as a means for them to share their experiences and lessons taken from the biblical chapters and verses discussed. The Course tackles the value of professionalism which can be associated



to the different human characters discussed in the subject. This is organized according to the connectivity of the Sacred Scriptures to the Trinitarian perspectives of God the Father, God the Son and God the Holy Spirit

RCIPHYSICS **3 units** **COLLEGE PHYSICS**

The course deals with the basic concepts of Physics, such as matter and energy and their interaction. Conceptual approach is used. Covers the ideas of torque, motion, forces, momentum and energy from within the framework of Newton's Laws. The principles and applications of classical mechanics and thermodynamics, including harmonic motion, mechanical waves and sound, physical systems, Newton's Laws of Motion, and gravitation and other fundamental forces are studied with emphasis on problem solving.

GEDELEC01 **3 units** **GREATBOOKS**

The course aims to introduce students to the international dimension of the Western literary tradition. Throughout this history, readers & writers were familiar with works in a variety of languages, & the great books all arise within a multilingual context. The course will draw on literatures written in English. The course aims to build up a sense of this broad context, & to give students the opportunity to read some "great books" with the understanding that this brings.

GEDELEC04 **3 units** **PHILIPPINE POPULAR CULTURE**

This course locates popular culture as a historico-spatial condition and

phenomenon of Philippine modernity. It provides the students with critical perspective in understanding and way of knowing popular culture in the Philippines. This course also provides multi-disciplinary attention on how art, music, and literature arising from opportunities and demands of mass audiences, markets and mass media and their social, economic, and political contexts.

GEDELEC05 **3 units** **PEOPLE AND THE EARTH'S ECOSYSTEM**

This course explores the ways in which human activity impacts the natural environment and how modification of environment can eventually have significant consequences to human activity. Topics include environmental challenges, such as air and water pollution, population growth and distribution, global atmospheric changes, ecosystems and evolution, agriculture and food resources and renewable and non-renewable energy resources.

GEDELEC06 **3 units** **LIVING IN THE IT ERA**

This course described the science, culture and ethics of Information Technology, in various uses and applications as well as its influence on culture and society. It is also designed to introduce the students to more advanced applications that can be used for research, communication, and electronic presentations.



GEDELEC07 **3 units** **GENDER AND SOCIETY**

Gender as a social construction, its role in the society and impact on different facets of societal life. This course critically examines the ways gender informs the social world in which we live. It exposes the "common sense" world of gender around us, considers how we develop our gendered identities, explores the workings of the institutions that shape our gendered lives and leads to an understanding of the between gender and the social structure

GEDELEC08 **3 units** **THE ENTREPRENEURIAL MIND**

This course introduces the concept of an entrepreneurial mindset and encourages the development of mindset and its associated enterprising skills, such as solving problems creatively, communicate persuasively, work effectively in teams and understand individual and organizational impact.

RCICALL1 **1 unit** **NEW DYNAMIC ENGLISH**

RCI Computer Aided Language Learning (RCI CALL) is designed to equip students the needed skills in English communication such as reading, listening, speaking and writing with the use of courseware and other references. RCI CALL embraces a wide range of information and communications technology applications and approaches to teaching and learning the universal language. The 21st century learners' interest in technology will be aided by the said program into an interactive and fun learning experience. Thus, the RCI CALL programs can be used by teachers as

technology partners in running their classrooms and solve problems like capturing students' attention and maintaining their interests. The nature of RCI CALL ensures that learning is a two-way street — dynamic and rigid.

RCICALL01 (NEW DYNAMIC ENGLISH) focuses on writing skills and uses well-designed scope and sequence. It promotes long term learning and keeps learners engaged with language. Since it focuses on the writing skill, it introduces students to the norms of academic writing

RCICALL2 **1 unit** **ENGLISH FOR SUCCESS**

RCI Computer Aided Language Learning (RCI CALL) is designed to equip students the needed skills in English communication such as reading, listening, speaking and writing with the use of courseware and other references. RCI CALL embraces a wide range of information and communications technology applications and approaches to teaching and learning the universal language. The 21st century learners' interest in technology will be aided by the said program into an interactive and fun learning experience. Thus, the RCI CALL programs can be used by teachers as technology partners in running their classrooms and solve problems like capturing students' attention and maintaining their interests. The nature of RCI CALL ensures that learning is a two-way street — dynamic and rigid.

RCI CALL 2 (ENGLISH FOR SUCCESS) Improves students reading comprehension and develops their English vocabulary. Also, It helps them



master the foundational reading skills and most importantly, it enhances their English language skills.

RCICALL3 **1 unit** **CLEAR SPEECH WORKS**

RCI Computer Aided Language Learning (RCI CALL) is designed to equip students the needed skills in English communication such as reading, listening, speaking and writing with the use of courseware and other references. RCI CALL embraces a wide range of information and communications technology applications and approaches to teaching and learning the universal language. The 21st century learners' interest in technology will be aided by the said program into an interactive and fun learning experience. Thus, the RCI CALL programs can be used by teachers as technology partners in running their classrooms and solve problems like capturing students' attention and maintaining their interests. The nature of RCI CALL ensures that learning is a two-way street — dynamic and rigid.

RCICALL03 (CLEAR SPEECH WORKS) focuses on Speaking skills, emphasizes the use of English language in expressing oneself orally and Improves students' oral communication and comprehension skills.

RCICALL4 **1 unit** **ADVANCE LISTENING**

RCI Computer Aided Language Learning (RCI CALL) is designed to equip students the needed skills in English communication such as reading, listening, speaking and writing with the use of courseware and other references. RCI CALL embraces a wide range of information and communications technology applications and approaches to teaching and learning the universal language. The 21st century learners' interest in technology will be aided by the said program into an interactive and fun learning experience. Thus, the RCI CALL programs can be used by teachers as technology partners in running their classrooms and solve problems like capturing students' attention and maintaining their interests. The nature of RCI CALL ensures that learning is a two-way street- dynamic and rigid.

RCICALL04 (Advanced Listening) is a useful and interesting tool because it develops the listening strategies, vocabulary and critical thinking skills of students. It also enhances their high-level listening and note taking skills. It emphasizes on English sounds, stress, and intonation pattern.