

Mission Statement

We are a Catholic institution of learning dedicated to advancing the frontiers of knowledge in the theoretical and applied fields through quality graduate education that is comprehensive and responsive to the needs of society.

We are committed to the formation of scholars and high-quality professionals who are ethical, competent, compassionate, and committed to the service of their respective professions, the church, the nation, and the global community.

Vision Statement

We envision a Graduate School that stands for excellence and innovation and that is globally recognized for its distinct degree programs and quality research outputs.

Goals and Objectives

The Graduate School commits itself to develop:

1. competent professionals who, inspired by the ideals of St. Antoninus of Florence, promote excellence in the production, advancement, and transmission of specialized knowledge and skills in the sciences, the arts, and community service;
2. scholarly researchers and creative thinkers who, kindled by St. Thomas Aquinas' ardour for truth, aspire to become fountains of intellectual creativity and, in their quest for quality research, are proficient and critical in assessing and communicating information in various fields that impact the professions, the church, the nation, and the global community;
3. professional Christian leaders who, touched by St. Dominic de Guzman's apostolic fire and warmed by Mary's motherly care, articulate ethics and truth, high level of moral maturity in resolving issues and promoting social justice and compassion for the poor, and care for the environment;
4. globally engaged citizens who, with ardent advocacy for life, promote a deeper understanding of tolerance and justice as well as linguistic, religious, and cultural diversities as a result of precise evaluation of modern problems and inquiries;
5. committed scholars who, nurtured by the dogmas of Christian faith and values, are dedicated to the pursuit of truth through the promotion of an intellectual culture that values academic rigor and freedom of scientific investigations; and
6. lifelong learners who, empowered by St. Antoninus of Florence's zeal for learning, are committed to the advancement of a higher culture through a continuous search for intellectual inquiries and new knowledge as well as faithfulness to Catholic intellectual traditions.

Program Intended Learning Outcomes (PILO)

Upon successful completion of the Doctor of Philosophy in Pharmacy Program, the graduate will be able to:

1. Demonstrate updated and in-depth professional and functioning knowledge of a research program and apply them to topics of your choice in the pharmaceutical fields.
2. Demonstrate skills of critical and creative approaches in the conduct and presentation of documentary requirements of a research.
3. Demonstrate the ability to lead and work independently and collaboratively with others and exercising ethical actions in resolving regulatory and ethical issues.
4. Demonstrate high order level of skills in assessing, analyzing and communicating ideas.
5. Demonstrate global awareness of pharmaceutical trends and practices.
6. Demonstrate initiatives and self-direction to advance one's knowledge and skills in evidence based research using established sources of advance information in the field.

DOCTOR OF PHILOSOPHY MAJOR IN PHARMACY

PREREQUISITE COURSES: (9 UNITS)

PHL 821 – Philosophy of St. Thomas Aquinas

An expository course of the essential philosophical teachings of the Angelic Doctor organized around the 24 fundamental theses of Thomism against the background of St. Thomas Aquinas' successful synthesis of Scholastic Philosophy, Biblical, and Catholic Tradition and Aristotelian Method.

PHL 822 – Philosophy of Human Person

An analytical study of contemporary Christian critique and synthesis of modern and contemporary philosophies of man, with background of philosophies of man from Ancient Greece, India, and China.

PHL 823 – Philosophy of Values

A survey exposition of the moral philosophies dating back from Socrates, Buddha, and Confucius to contemporary moral philosophies around a reflective critique of these in the light of contemporary Catholic moral thought.

SPECIALIZATION COURSES: (30 UNITS)

Choose ten (10) courses only

PHR 601- Advanced Medicinal Chemistry

The course deals with new trends in medicinal chemistry and drug discovery. Detailed discussion of receptor theories and quantitative structure activity relationships will be discussed. Advanced topics in the metabolism of xenobiotics and related organic compounds are studied in details.

PHR 801 – Systems Approach To Pharmaceutical Research

A course on the management of research activities based on systems approach which views research conceptualized into a cycle of inputs, throughputs, outputs and feedback. It shall focus on how to be an organized researcher dealing with both experimental and descriptive studies with a view as future mentors or evaluators of researches as well as preparation of published articles in peer-reviewed journal

Generation of clinical protocols for safety and efficacy in human trials are also included in the course.

At the end of the course, the student should be able to critique proposals, manuscripts and researches.

PHR 802- Molecular Pharmacognosy

Course focuses on the application of molecular biology, latest development in Pharmacognosy, insights on the safety and efficient usage of crude drugs, molecular assays, conserving and utilizing wild resources on the basis of knowledge of genetic diversity, understanding the molecular mechanisms of actions of important traditional medicinal plants as a basis for potential drug development.

PHR 803 – Pharmaceutical Production Management

Introduce students to current management principles, its proponents and impact to production in a pharmaceutical company. It shall focus on the creation and maintenance of a clearly defined organization and an effective and coordinated use of personnel, land, buildings and equipment including the management of inventory assets. It includes the practical application of management principles, processes, regulatory guidelines, and good manufacturing practices to pharmaceutical production.

PHR 804 – Pharmaceutical Assay and Techniques

Pharmaceutical Assay Techniques deals with the different biological assay techniques used for the screening and pharmaceutical testing of newly discovered as well as established compounds for drug development.

PHR 805 – Drug Evaluation

This course deals with the criteria for evaluating drugs and its preparations in terms of quality, safety and efficacy. It involves evaluation of documents under development pharmaceuticals, pre-clinical and clinical phases, including test principles, calculations, supporting printed data presentations which are required for the quality control and release of components and finished products. Criteria and guidelines applied to documentation for registration purposes are also included. It focuses on the parameters used in compliance to the International Conference on Harmonization (ICH) and the ASEAN Common Technical Documents (ACTD) and Requirements (ACTR) for registration to obtain marketing approval.

PHR 806 – Pharmacovigilance

A comprehensive course that focuses on the development of pharmacovigilance as a science, basic terminologies, and global scenario of pharmacovigilance. Establishment of pharmacovigilance program in an organization, various methods to generate safety data and signal detection and skills classifying drugs, diseases and adverse drug reactions will also be included.

PHR 807 – Molecular Pharmacology

Courses focuses on the molecular basis of the conception, design and synthesis of new agent/drugs, elucidation of mechanisms of action and resistance of different drug groups, preclinical evaluation, toxicology of promising synthetic drugs, transnational research bearing on

chemotherapy, risk assessment of new therapies and other aspects such as etiology, prevention and pathogenesis of the diseases.

PHR 808 – Pharmaceutical Economics

This course is designed to familiarize the student with the economic structure, conduct and performance of the pharmaceutical industry. The course includes such topics as prices and profits in the industry, productivity, cost, economies of scale, innovation, economic effects of regulation, cost benefit and cost effectiveness of pharmaceuticals and efficiency of drug delivery systems.

PHR 809 – Clinical Pharmacy and Therapeutics

The course deals with the concepts of clinical pharmacy practice and the principles of rational drug use in both ambulatory and in-patient settings. The course reviews the evolution of patient-oriented pharmacy practice and the principles of drug selection in pharmacotherapy.

PHR 810 – Public Health Pharmacy

The course deals with the basic concepts and tools and framework for recognizing public health problems and opportunities for participation in public health activities so that pharmacists can be pro-active and become proponents in addressing health issues and be involved in initiatives to improve health and prevent disease. The course deals with developing insights and skills to incorporate public health activities into pharmacy practice and providing models of pharmacist participation in public health advocacies.

PHR 811 – Seminar in Pharmacy Leadership

The Pharmacy Leadership course fosters pharmacist leaders who can redefine roles continuously in response to a changing environment. This course plays a role in transforming pharmacist to become leaders because good leadership skills in the pharmacy department help ensure improved or excellent patient care and outcomes; health systems need pharmacy leaders who will engage at the executive level to affect quality patient outcomes and financial survival for the organization; leadership skills and adeptness are needed at all levels within the pharmacy organization in various settings to advance and transform practice. This course will address new tools, knowledge, and insights that will explain to pharmacist leaders what they must do in order to bring about extraordinary performance in leading the organization. This will also develop necessary skills to be successful in a leadership role meeting the demands, expectations, and challenges of diverse practice settings.

PHR 812 – Design and Analysis of Clinical Drug Trials (Investigational Drugs)

The course deals with concepts and timelines in drug development with emphasis on the phases of clinical trials of investigational drugs. The extent of involvement and responsibilities of the pharmacist as a member of the clinical trial team will be highlighted as well as the evolution of regulations, guidelines and legal aspects of clinical drug trials.

PHR 813 – Biopharmaceutics and Drug Delivery Systems

The course deals with the concepts of dosage form design with emphasis on the relationships of the biologic system (cell, tissue, organ) and the physico-chemical properties of drugs that focuses on viable delivery for desired clinical outcomes. The course involves derivation of physiologic and mathematical models that represent kinetic and dynamic processes involved in drug absorption and disposition as well as physical and chemical reactions that govern classic and advanced galenic forms.

COGNATE: (6 UNITS)

Any course which has a direct bearing on one's dissertation.

TERMINAL REQUIREMENTS: (12 UNITS)

Foreign Languages: (6 units) (non-credit)

Written Comprehensive Examinations (WCE)

DW I – 6 units (Research Proposal)

DW II – 3 units (Research Colloquium)

DW III – 3 units (Defense)

Total = 57 Units

Summary of Program Requirements

Degree Requirements	units
Pre-requisite Courses	9
Specialization Courses	30
Cognate Courses	6
Foreign Language	(6)
Written Comprehensive Exam	---
Dissertation Writing I	6
Dissertation Writing II	3
Dissertation Writing III	3
TOTAL	57

UST Graduate School Administration Officials and Faculty Set-up

MARILU R. MADRUNIO, Ph.D.
Dean

FR. JOSÉ ANTONIO E. AUREADA, O.P., S.Th.D.
Regent

ALEJANDRO S. BERNARDO, Ph.D.
Faculty Secretary

GRECEBIO JONATHAN D. ALEJANDRO, Dr.rer.nat.
Director for Graduate Research

ALETH THERESE L. DACANAY, Ph.D.
Program Lead
Pharmacy & Medical Technology

PROFESSORIAL STAFF
Jovencio G. Apostol, Ph.D.
Agnes L. Castillo, Ph.D.
Mary Jho-Anne T. Corpuz, Ph.D.
Aleth Therese L. Dacanay, Ph.D.
Marina O. Osi, Ph.D.
Librado Santiago, Ph.D.
Rosalinda C. Solevilla, Ph.D.
Ross Vasquez, Ph.D.
Mafel Ysrael, Ph.D.



University of Santo Tomas
THE CATHOLIC UNIVERSITY OF THE PHILIPPINES
MANILA, PHILIPPINES
The Graduate School

DOCTOR OF PHILOSOPHY IN
PHARMACY

AY 2014 - 2017