

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:

- 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;
- scholarly researchers and creative thinkers who, kindled by St. Thomas Aquinas' ardour for truth, aspire to become fonts 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;
- 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;
- 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;
- 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

- 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.

APPLICATION PROCEDURES

- Application for admission to the UST Graduate School is until October 15 for October enrollees, April 5 for Summer enrollees and May 25 for June enrollees.
- Application forms for Admission are available at the UST Graduate School, UST Admissions Office & at the UST Graduate School Web Site – <http://graduateschool.ust.edu.ph>

Requirements:

Certified true copy of Transcript of Records, one (1) colored passport size, recent photo (if any) document(s) attesting to passing a Bar/Board Exam, or being a scholar of any agency.

Two (2) Referral Forms: One (1) for the current (immediate) superior (or Dean, in the case of a school); and the other, for the professor in one specialization (major) subject.

For Foreigners:

All of the above and;
TOEFL English Proficiency and Student Visa Requirements.

ADMISSION REQUIREMENTS

- Bachelor of Science in Physics; Bachelor of Science in Applied Physics; Bachelor of Science in Physics for Teachers; or
- Bachelor of Science in Chemistry or Bachelor of Science in Engineering with at least twelve (12) units in Physics (up to Modern Physics) and twenty-one (21) units in Mathematics (covering Algebra, Trigonometry, Differential

& Integral Calculus, Differential Equations and Vector Analysis).

- General average of at least 2.0/85% or B.
- Complete accomplished application and referral forms.

COURSE PROGRAM OVERVIEW

The Master of Science in Applied Physics major in Medical Physics is a two-year graduate degree program offered by the University of Santo Tomas (UST) Graduate School, Manila. The Program was established in 1981 as a joint project of the UST, Radiation Health Service (RHS) of the Department of Health (DOH) and Philippine Nuclear Research Institute (PNRI) of the Department of Science and Technology with technical assistance from the International Atomic Energy Agency (IAEA).

The course is intended to meet the need for qualified medical physicists in hospital departments especially the diagnostic radiology, radiation oncology, and nuclear medicine departments; the national regulatory agencies with responsibilities in radiation protection (RHS and PNRI); and the research and academic institutions.

CURRICULUM

MASTER OF SCIENCE IN APPLIED PHYSICS MAJOR IN MEDICAL PHYSICS

PRE-REQUISITE SUBJECTS: 6 UNITS

- GS 500 - St. Thomas and Critical Thinking
- GS 501 - Research Methodology with Instrumentation

CORE SUBJECTS: 9 UNITS

- MEDPHY 600 - Biostatistics
- MEDPHY 601 - Radiation Physics
- MEDPHY 602 - Introduction to Life Sciences

MAJOR SUBJECTS: 17 UNITS

- MEDPHY 701 - Radiation Protection and Radiobiology I
- MEDPHY 702 - Radiation Protection & Radiobiology II (2u)
- MEDPHY 703 - Physics of Diagnostic Radiology
- MEDPHY 704 - Radiation Dosimetry*
- MEDPHY 705 - Physics of Nuclear Medicine
- MEDPHY 706 - Physics of Radiation Therapy*

COGNATE SUBJECTS: 4 UNITS

- MEDPHY 707 - Physics of Ultrasound (2 units)
- MEDPHY 708 - Non-Ionizing Radiation Protection (2 units)

OTHER REQUIREMENTS

- Written Comprehensive Examinations (WCE)
- TW I - 3 units (Thesis Proposal)
- TW II - 3 units (Colloquium)
- TW III - 3 units (Thesis Defense)

*Prerequisites:

- Radiation Dosimetry – Radiation Physics
- Physics of Radiation Therapy – Radiation Physics

Total = 45 Units

PROGRAM OF STUDY FOR MASTER OF SCIENCE IN APPLIED PHYSICS MAJOR IN MEDICAL PHYSICS

1st Year – 1st Semester

Courses	Units
Radiation Physics	3
Introduction to Life Sciences	3
Radiation Protection and Radiobiology I	3
Total Units	9

1st Year – 2nd Semester

Courses	Units
Radiation Dosimetry*	3
Physics of Nuclear Medicine	3
Physics of Diagnostic Radiology	3
Radiation Protection and Radiobiology II	2
Total Units	11

Summer

Courses	Units
St. Thomas on Critical Thinking	3
Biostatistics	3
Total Units	6

2nd Year – 1st Semester

Courses	Units
Thesis Writing 1 - Thesis Proposal	3
Physics of Radiation Therapy*	3
Research Methodology with Instrumentation	3
Total Units	9

2nd Year – 2nd Semester

Courses	Units
Thesis Writing 2 - Practicum in Medical Physics	3
Physics of Ultrasound	2
Non-Ionizing Radiation Protection	2
Written Comprehensive Examination	
Total Units	7

Summer

Courses	Units
Thesis Writing 3 - Thesis Defense	3
TOTAL Units	45

UST GRADUATE SCHOOL ADMINISTRATION OFFICIALS AND FACULTY SET-UP

MARILU R. MADRUNIO, Ph.D.
Dean

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

CRISTINA A. BINAG, Ph.D.
Program Lead, Sciences

PROFESSORIAL STAFF

MAUREEN BOJADOR, M. Sc.

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BERNHARD EGWOLF, Dr.rer.nat
AUGUSTO A. MORALES JR., D. Sc.
PETER P. NG, Ph.D.
AGNETTE P. PERALTA, M. Sc.
BAYANI C. SAN JUAN, M. Sc.
TERESITA SY-ORTIN, MD, FPCR
MARLON Z. TECSON, M. Sc.

SUMMARY OF COURSE REQUIREMENTS

Requirements	Units
Required	6
Core Subjects	9
Major Subjects	17
Cognates	4
Written Comprehensive Exam	--
Thesis Writing I	3
Thesis Writing II	3
Thesis Writing III	3
TOTAL Units	45

UNIVERSITY OF SANTO TOMAS
THE CATHOLIC UNIVERSITY OF THE PHILIPPINES
MANILA, PHILIPPINES

THE GRADUATE SCHOOL



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APPLIED PHYSICS MAJOR IN**

MEDICAL PHYSICS