

GRADUATE OFFICE, COLLEGE OF SCIENCE
University of the Philippines
Diliman, Quezon City

PROGRAM OF STUDY

Original

Revised

STUDENT'S NAME:

STUDENT NO.:

DEGREE PROGRAM: PhD Physics

OPTION: Straight PhD

MINIMUM NO. OF UNITS REQUIRED:

MAXIMUM RESIDENCY PERIOD:

UNDERGRADUATE COURSES TO BE COMPLETED WITHOUT CREDIT:

GRADUATE CORE COURSES

Course No.	Course Title	Units	Grade	Sem / AY
Physics 221	Classical Mechanics I	3		1st / 2020-2021 (1st Year)
Physics 231	Classical Electrodynamics I	3		1st / 2020-2021 (1st Year)
Physics 232	Classical Electrodynamics II	3		2nd / 2020-2021 (1st Year)
Physics 241	Quantum Mechanics I	3		1st / 2020-2021 (1st Year)
Physics 242	Quantum Mechanics II	3		2nd / 2020-2021 (1st Year)
Physics 251	Statistical Mechanics I	3		2nd / 2020-2021 (1st Year)

GRADUATE ELECTIVE COURSES

Course No.	Course Title	Units	Grade	Sem / AY
Physics 261	Laser Physics I	3		1st / 2021-2022 (2nd Year)
Physics 265	Modern Optics I	3		1st / 2021-2022 (2nd Year)
Physics 235/255/271	<i>Course on atomic and molecular physics</i>	3		1st / 2021-2022 (2nd Year)
Physics 262/Breadth	<i>Course on advanced modern optics or breadth elective*</i>	3		2nd / 2021-2022 (2nd Year)
Physics 266	Modern Optics II	3		2nd / 2021-2022 (2nd Year)
Physics 291	Experimental Methods of Quantum Electronics and Optics	3		1st / 2022-2023 (3rd Year)
Physics 361	Advanced Quantum Electronics I	3		1st / 2022-2023 (3rd Year)
Physics 362	Advanced Quantum Electronics II	3		2nd / 2022-2023 (3rd Year)
Specialty/Breadth	<i>*Suggested elective courses found on the next page</i>	3		2nd / 2022-2023 (3rd Year)

AUDIT COURSES

Physics ____		3		1st / 2020-2021 (1st Year)
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OTHER GRADUATE COURSES

Course No.	Course Title	Units	Grade	Sem / AY
Physics 290	Graduate Colloquium	1		1st / 2022-2023 (3rd Year)
Physics 290	Graduate Colloquium	1		2nd / 2022-2023 (3rd Year)
Physics 296	Graduate Seminar	1		1st / 2023-2024 (4th Year)
Physics 400	Doctoral Dissertation	3		2nd / 2021-2022 (2nd Year)
Physics 400	Doctoral Dissertation	3		1st / 2022-2023 (3rd Year)
Physics 400	Doctoral Dissertation	3		2nd / 2022-2023 (3rd Year)
Physics 400	Doctoral Dissertation	3		1st / 2023-2024 (4th Year)

MILESTONES

Passing of the PhD Qualifying Exam	Mid / 2021-2022 (2nd Year)
Passing of the PhD Candidacy Exam	Mid / 2022-2023 (3rd Year)
Appointment of the Dissertation Committee	Mid / 2022-2023 (3rd Year)
Submission and Approval of Dissertation Proposal	1st / 2023-2024 (4th Year)
PhD Dissertation Defense	2nd / 2023-2024 (4th Year)

Prepared by:

Student

Approved by:

Program Adviser

Chair, Graduate Committee

Suggested Course (Subject to approval of adviser)	Course Topic	Course Title	Course Description (from CRS)
BA 192 Prereq: Junior Standing	Entrepreneurship	Entrepreneurship	Principles, problems, & practical aspects of entrepreneurship & intrapreneurship; innovation & new business formations in start-up or corporate settings.
MSE 298 (Special Topics: Nanomaterials) Prereq: COI	Nanotechnology, Nanomaterials	Special Problems	<i>Depends on semester/professor</i>
Physics 301 (Machine Learning) Prereq: COI	Machine Learning	Special Topics in Experimental Physics	<i>Depends on semester/professor</i>
Physics 305 (Frontiers in Optical Metrology II: Biological Applications) Prereq: COI	Advanced Microscopy and Imaging	Special Topics in Theoretical Physics	<i>Depends on semester/professor</i>
Physics 305 (Special Topics on Sensors, Signals and Ubiquitous Instrumentation) Prereq: COI	LabView, Signal Processing	Special Topics in Theoretical Physics	<i>Depends on semester/professor</i>
Physics 305 (Xray Physics and Optics) Prereq: COI	Xray Physics	Special Topics in Theoretical Physics	<i>Depends on semester/professor</i>
Stat 218 Coreq: Stat 217/equiv.	Machine Learning	Statistical Machine Learning	Applications of statistical machine learning; generalized linear models; supervised learning; unsupervised learning; kernel methods; support vector machines; neural networks; ensemble learning; contemporary
Stat 226 Coreq: Stat 223/equiv.	Data Analytics	Applied Multivariate Analysis	Multivariate normal distribution; principal components analysis; biplots and h-plots; factor analysis; discriminant analysis; cluster analysis; canonical correlation analysis; graphical and data oriented techniques;
TM 201 Prereq: COI	R&D Management	Overview of Technology Management	The nature, processes and dynamics of technology; technology management and competitive strategy at the firm, industry, and national levels.
TM 204 Prereq: TM201,202/COI	R&D Management	Management of Research and Development	Systematic treatment of the various issues and factors inherent in the management of R&D; R&D strategies; measurement and assessment of R&D productivity; strategic R&D management.
Env Sci 271 Prereq: To be determined	Environmental monitoring	Principles of Photonic Techniques for Environmental Monitoring	Light as probe for nondestructive analysis; optical signal processing and image analysis
<i>May be offered via special topics courses</i>	Computational photonics, fabrication of solar cells, optical coherence tomography, optical technology in medical fields, plasmonics, environmental monitoring, space and earth monitoring, optical telecommunications, satellite imaging and other related fields		