

This program aims at producing Ph.D. graduates in physics with high level of knowledge and ability to solve various problems by themselves and be able to take initiatives to create quality research at the international level. They should be able to produce research results that can be applied for the benefit of the industrial development and economy of the country.

Applicant Qualifications

1. A candidate must hold a master's degree in physics, applied physics, chemical science or other equivalent fields with a GPA of not less than 3.5.
2. In the case that the candidate's qualification does not match the requirements stated in item no. 1 but is a researcher who has publications or working experience, the Graduate Studies Committee of the program can consider the approval for the admission into the program.
3. A candidate has other qualifications in accordance with Article 15: Admission, King Mongkut's University of Technology Thonburi on Graduate Studies' Regulations B.E. 2547 (2004).

Professions after Graduation

1. Lecturer, academic, academic advisor, researcher and scientist in in both government and private educational institutions
2. Academic, researcher and scientist in research institutes and consultants of establishments in business and industrial sectors
3. Researcher and product developer in the industrial sector
4. Freelance in related fields

Curriculum

Plan 1.1 for student with Master degree	48 Credits
Plan 2.1 for student with Master degree	48 Credits

Curriculum Components

Plan 1.1 for student with Master degree		
● Dissertation	48	Credits
Plan.2 1 for student with Master degree		
● Compulsory	9	Credits
● Elective Course	3	Credits
● Dissertation	36	Credits

COURSE STRUCTURE

Physics

Plan 1.1 for student with Master degree

First Year

First Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
Total	8 (0 – 16 – 32)

Second Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
Total	8 (0 – 16 – 32)

Second Year

First Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
PHY 704 Seminar	1 (0 – 2 – 3) (S/U)
Total	8 (0 – 18 – 35)

Second Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
Total	8 (0 – 16 – 32)

Third Year

First Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
PHY 705 Seminar	1 (0 – 2 – 3) (S/U)
Total	8 (0 – 18 – 35)

Second Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
Total	8 (0 – 16 – 32)

Materials Physics and Nano Technology

Plan 1.1 for student with Master Degree

First Year

First Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
Total	8 (0 – 16 – 32)

The Faculty of Science

Doctor of Philosophy Program in Physics

Second Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
Total	8 (0 – 16 – 32)
Second Year	
First Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
PHY 704 Seminar	1 (0 – 2 – 3) (S/U)
Total	8 (0 – 18 – 35)
Second Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
Total	8 (0 – 16 – 32)
Third Year	
First Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
PHY 705 Seminar	1 (0 – 2 – 3) (S/U)
Total	8 (0 – 18 – 35)
Second Semester	Credits
PHY 790 Dissertation	8 (0 – 16 – 32)
Total	8 (0 – 16 – 32)

Physics

Plan 2.1 for student with Master Degree

First Year	
First Semester	Credits
PHY 702 Advanced Electromagnetic Theory	3 (3 – 0 – 9)
PHY 703 Advanced Solid State Physics	3 (3 – 0 – 9)
PHY XXX Elective	3 (3 – 0 – 9)
Total	9 (9 – 0 – 27)
Second Semester	Credits
PHY 701 Advanced Quantum Mechanics	3 (3 – 0 – 9)
PHY 791 Dissertation	7 (0 – 14 – 28)
Total	10 (3 – 14 – 37)

The Faculty of Science

Doctor of Philosophy Program in Physics

Second Year

First Semester	Credits
PHY 791 Dissertation	7 (0 – 14 – 28)
PHY 704 Seminar	1 (0 – 2 – 3) (S/U)
Total	7 (0 – 16 – 31)

Second Semester	Credits
PHY 791 Dissertation	7 (0 – 14 – 28)
Total	7 (0 – 14 – 28)

Third Year

First Semester	Credits
PHY 791 Dissertation	7 (0 – 14 – 28)
PHY 705 Seminar	1 (0 – 2 – 3) (S/U)
Total	7 (0 – 16 – 31)

Second Semester	Credits
PHY 791 Dissertation	8 (0 – 16 – 32)
Total	8 (0 – 16 – 32)

Materials Physics and Nano Technology Plan 2.1 for student with Master Degree

First Year

First Semester	Credits
PHY 703 Advanced Solid State Physics	3 (3 – 0 – 9)
PHY 701/702 Major Elective	3 (3 – 0 – 9)
PHY 7XX Elective	3 (3 – 0 – 9)
Total	9 (9 – 0 – 27)

Second Semester	Credits
PHY 706 Advanced Nanomaterials	3 (3 – 0 – 9)
PHY 791 Dissertation	7 (0 – 14 – 28)
Total	10 (3 – 14 – 37)

Second Year

First Semester	Credits
PHY 791 Dissertation	7 (0 – 14 – 28)
PHY 704 Seminar	1 (0 – 2 – 3) (S/U)
Total	7 (0 – 16 – 31)



The Faculty of Science

Doctor of Philosophy Program in Physics

Second Semester

PHY 791 Dissertation

Total

Credits

7 (0 – 14 – 28)

7 (0 – 14 – 28)

Third Year

First Semester

PHY 791 Dissertation

PHY 705 Seminar

Total

Credits

7 (0 – 14 – 28)

1 (0 – 2 – 3) (S/U)

7 (0 – 16 – 31)

Second Semester

PHY 791 Dissertation

Total

Credits

8 (0 – 16 – 32)

8 (0 – 16 – 32)