

## Regulations for the Doctoral Program

### 1. Period of study

The minimum period of study for the doctoral program is 2 years.

The maximum period of study is 7 years.

### 2. Coursework and credits

#### (1) Required courses:

Graduate students are required to take the following compulsory courses.

Number	Course name	Credits
PH6015	Special Topics on Teaching Physics I	0
PH6016	Special Topics on Teaching Physics II	0
PH6005	Classical Electrodynamics I	3
PH6006	Classical Electrodynamics II	3
PH6007	Classical Mechanics I	3
PH6012	Statistical Mechanics I	3
PH6003	Quantum Mechanics I	3
PH6004	Quantum Mechanics II	3

Graduate students who take “Special Topics on Teaching Physics I” and “Special Topics on Teaching Physics II” must serve as teaching assistants as arranged by the department.

#### (2) Elective courses

Graduate students are required to take, from the list of elective courses, at the PH6, PH7, PH8 levels, at least 12 credits (4 courses). This does not include “Special Topics” and “Individual Studies”.

#### (3) Minimum graduation credits:

Graduate students are required to complete at least 18 credits of course work.

First-year students who have achieved distinguished qualifications during their M.S. program can apply to enter the Ph.D. program without an M.S. degree. In this case, the course work requirement would be 30 credits.

#### (4) Credit exemption

Graduate students who have already taken courses in college, university or graduate school similar to any of required or elective courses can apply for credit exemption provided they meet one of the following conditions:

(1) if a grade of 80 or above was achieved in the said course.

Under this condition there is no restriction for the total amount of credit exemption.

However at least 2 courses (at the PH6, PH7 or PH8 levels, except for “Special Topics” and “Individual Studies”) should be taken during the doctoral program.

(2) if a grade of between 70 and 79 was achieved in the said course, and the credits have not been counted towards the graduation credits required for the prior degree.

Under this condition the maximum number of exempted credits can not be more than 6.

Courses similar to the required courses, for which a grade between 70 and 79 has been achieved, and credits of which have been counted as graduation credits for the prior degree, may be accepted and the course need not be taken again, but total of the required credits still needs to be made up.

Credit exemption is valid only after the approval of the Course Committee.

### **3. Qualifying examination**

The written qualifying examination will be held within two weeks from the beginning of each semester.

The qualifying examination is composed of two subjects:

- (1) Classical Physics, including Classical Mechanics and Electrodynamics;
- (2) Quantum Physics, including Quantum Mechanics and Statistical Mechanics.

The results will be announced within two weeks after the examination.

Graduate students have to pass the qualifying examination with a score at 70 or above, within four semesters after enrollment.

Each subject may be passed separately.

For a student who fails to pass the qualifying examination, study in the program will be terminated.

### **4. Publications**

Graduate students should have at least two papers accepted or published in journals that are approved by the department.

### **5. Advisors**

Graduate students should select thesis supervisors from full-time faculty members of the department, ranked assistant professor or above, within one year after passing the qualifying exam.

Provided they have approval from the department, students may also have a co-advisor from outside the department.

Graduate students are required to submit a dissertation written under the supervision of a full-time faculty member, and pass an oral examination on their research work before the degree is awarded.

### **6. Scholarship/ grants**

Graduate students can apply for post-graduate scholarships provided by the Ministry of Education during their period of study.

According to the Ministry of Education, scholarship students are obligated to assist in research, teaching, or other academic work on campus.

Graduate students in the doctoral program must serve as teaching assistants, helping the faculty members with their teaching work during the first year.

Graduate students need to complete the appropriate application form in order to apply for scholarships during the winter and summer vacations for each semester.