

**Department of Photonics**  
**Related Regulations of Ph.D. Candidate Qualifying Examination and**  
**Degree Examination for Graduate Students of Ph.D. Program**  
**Applicable to students enrolled beginning the first semester of 2017 onwards**

Nov. 25, 2002	Modified and approved at the institute affairs meeting.
Mar. 25, 2003	Modified and approved at the college affairs meeting.
Dec. 14, 2004	Modified and approved at the institute affairs meeting in the 1st semester of academic year 2004.
Jan. 25, 2005	Modified and approved at the 1st college affairs meeting of academic year 2004.
Nov. 29, 2006	Modified and approved at the institute affairs meeting in the 1st semester of academic year 2006.
Jan. 16, 2008	Modified and approved at the institute affairs meeting in the 1st semester of academic year 2007.
Mar. 6, 2008	Modified and approved at the 2nd college affairs meeting in the 2nd semester of academic year 2007.
Sep. 11, 2008	Modified and approved at the departmental affairs meeting in the 1st semester of academic year 2008.
Oct. 8, 2008	Modified and approved at the 1st college affairs meeting in the 1st semester of academic year 2008.
Oct. 9, 2009	Modified and approved at the 1st departmental affairs meeting in the 1st semester of academic year 2009.
Nov. 9, 2009	Modified and approved at the 1st college affairs meeting in the 1st semester of academic year 2009.
Nov. 10, 2010	Modified and approved at the 3rd departmental affairs meeting in the 1st semester of academic year 2010.
Dec. 15, 2010	Modified and approved at the 2nd college affairs meeting in the 1st semester of academic year 2010.
Sep. 22, 2011	Modified and approved at the 2nd departmental affairs meeting of academic year 2011.
Nov. 2, 2011	Modified and approved at the 1st college affairs meeting of academic year 2011.
Nov. 4, 2011	Approved as per approval with authorized signature.
Sep. 19, 2012	Modified and approved at the 2nd departmental affairs meeting of academic year 2012.
Oct. 25, 2012	Modified and approved at the 1st college affairs meeting of academic year 2012.
Nov. 2, 2012	Approved as per approval with authorized signature.
May 15, 2013	Modified and approved at the 7th departmental affairs meeting of academic year 2012.
May 29, 2013	Modified and approved at the 3rd college affairs meeting of academic year 2012.
Jun. 6, 2013	Approved as per approval with authorized signature.
Oct. 9, 2013	Modified and approved at the 4th departmental affairs meeting of academic year 2013.
Nov. 19, 2013	Modified and approved at the 2nd college affairs meeting of academic year 2013.
Nov. 22, 2013	Approved as per approval with authorized signature.
Feb. 22, 2017	Modified and approved at the 5th departmental affairs meeting of academic year 2016.
May 25, 2017	Modified and approved at the 3rd college affairs meeting of academic year 2016.
Jun. 3, 2017	Approved as per approval with authorized signature.
May 29, 2019	Modified and approved at the 8th departmental affairs meeting of academic year 2018.
July 2, 2019	Modified and approved at the 10th departmental affairs meeting of academic year 2018.
July 5, 2019	Modified and approved at the provisional college affairs meeting of academic year 2018.
July 22, 2019	Approved as per approval with authorized signature.

1. The Related Regulations were formulated in accordance with the “Degree Conferral Act” and its Implementation Bylaws promulgated by the Ministry of Education, as well as the “Academic Regulations” and “Implementation Bylaws for Ph.D. and Master’s Degree Examinations” of the University.
2. Related items during the study period:
  - (1) Weekly staying period at the University:  
 Before completion of taking the minimum number of credits for graduation from the Ph.D. Program, as specified by the Department, general Ph.D. students have to stay at the University for at least 4 days (at least 8 hours per day) per week, and part-time Ph.D. students have to stay at the University for at least 2 days (half day for 4 times) per week, to engage in research or take courses in class.
  - (2) Number of years for completion of degree program: Each student may take 2 to 7 years (exclusive of the period preserved for admission and the suspension period) to complete the degree program.
  - (3) Credit system and course requirements:
    - 1) Students’ course selection has to be approved by their advisors and the Chair.

2) Each student of Ph.D. Program, within 3 years after enrollment, has to complete taking 18 credits, the specified minimum number of credits for graduation. Of the 18 credits, the student has to complete taking 15 credits of the professional photonics courses opened by this Department [including 2 compulsory courses: Seminar (1) (2)]. Besides, the student must have completed Ph.D. Candidate Qualifying Examination.

(4) As from the academic year 2011, two courses maximum selected from Bachelor's Program (the courses must have been indicated in the Course Selection System that their credits shall be recognized by the Graduate Institute) can be recognized and shall have their credits counted as the credits for graduation.

(5) Choosing and appointment of advisors:

If a Ph.D. student has to replace his chosen advisor with reason, the student has to obtain written consent from both the original advisor and the new advisor prior to such change.

(6) Every Ph.D. student has to obtain 550 scores of TOEFL or 213 scores of TOFEL CBT, or pass the High-Intermediate Preliminary Test of GEPT, or obtain 750 scores of TOEIC, or has complete taking 4 credits of the field of "Language Course: English Language" as specified (the related language course has to be the course of English High-Intermediate Level or English High Level of the University) and has obtained a result above 70 scores (inclusive), or has complete taking the related English course designated by the Curriculum Committee of this Department.

(7) Others:

If a Ph.D. student needs a professor of other Graduate Institute to be the co-advisor, the student has to get consent from the advisor first. Then, before the doctoral dissertation proposal is to be reviewed, the student should fill out the Co-advisor Form of the Department and submit it to the Department Office for reference.

### 3. Ph.D. Candidate Qualifying Examination:

Definition of semester: The first semester is from the 1st day of August of every year to the 31st of January of the following year, and the second is from the 1st day of February to the 31st day of July of every year.

(1) Ph.D. Candidate Qualifying Examination: A Ph.D. student has to pass the Ph.D. Candidate Qualifying Examination within 4 years after enrollment. Any students who have not passed this examination shall be expelled from the University.

\* Examination subjects:

1) Opto-Electromagnetism, Photonics.

2) Two compulsory elective core courses, as announced by the Department, of different fields.

\* Standards for passing the Ph.D. Candidate Qualifying Examination:

A. For the examinations of 4 subjects, 3 subjects have to be passed. The full score of each subject is 100; and obtaining 70 scores in a subject is considered having

passed the subject.

- 1) If less than one (inclusive) subject is passed, reexamination of all subjects have to be taken.
- 2) If two subjects are passed, the student may choose one of the following ways:
  - [1] The student need not take reexamination of the passed subjects; but has to pass two other subjects in the examination for the second time. Then the Ph.D. Candidate Qualifying Examination of the student is passed.
  - [2] In the examination for the second time, the student may choose 4 subjects for the examination, but has to pass 3 subjects at one time. Then the Ph.D. Candidate Qualifying Examination of the student is passed.
- 3) If more than three (inclusive) subject are passed, the Ph.D. Candidate Qualifying Examination of the student is passed.

Remarks: If a Ph.D. student fails the examination of a subject, and its result is less than 10% below the scores of passed level (i.e. above 63 scores), the Subject Examination Committee may agree to let the subject be passed. Then the subject examination of the student will be considered passed. But before graduation of the student, in addition to the required number of points for the published (or accepted) research papers, the student shall be required to obtain two more points. (If the requirements of this article are met upon application for examination for the first time, the student may apply for using the requirements specified in this article.)

- B. Of the 4 subjects of the examination, 2 subjects can be immune from the examination, provided that the results of the related courses completed are both above grade A (inclusive). In this case, the student is only required to select 2 other subjects for examination, but has to pass at least 1 of these 2 subjects.

\* **Subject examination exemption method:** Ph.D. students meeting the following circumstances at the same time may apply for subject examination exemption:

- 1) For each of the completed courses that have a total of at least 18 credits, the student has achieved a result positioned at the first 50% (inclusive) among all the students taking the course.
- 2) The student's dissertation proposal review is passed in the first 3 years, and at that time the number of points for the published research papers should be at least 4 points.
- 3) Before graduation, the number of points for the published research papers has reached 12 points. (For calculation method of the number points, please refer to the provisions of Article 3 below.)
- 4) In at least 2 of the published research paper, the student's name is positioned the first amongst all authors.

Remarks: If the graduate students of the Ph.D. Program have not passed the Ph.D.

Candidate Qualifying Examination, they can still use this method to submit application. If the items 1 ~ 4 aforesaid are met, the students are considered having passed the subject examination.

\* After the graduate students of the Ph.D. Program of this Department have passed the Ph.D. Candidate Qualifying Examination or have applied for subject examination exemption, this provision shall be applicable to those graduate students of the Ph.D. Program having passed the Ph.D. Candidate Qualifying Examination or being approved to be exempted from subject examination.

(2) Special studies reports:

- 1) Each student of Ph.D. Program has to present a special studies report for one time in the Seminar to the Department Office one semester before he/she presents the report.
- 2) The reporter has to personally invite three teachers (including the advisor) of the Department to be present at the presentation of his/her report.
- 3) Students of Ph.D. Program have to pass the special studies report prior to application for dissertation proposal review. If the special studies report is not passed, application has to be re-submitted in the semester after the next semester. The evaluation standard of a special studies report is that “it is regarded as being passed as long as over 2/3 (inclusive) of the teachers participating in the presentation let the report be passed.”

(3) Dissertation proposal review:

- 1) A student of Ph.D. Program has to pass the Ph.D. Candidate Qualifying Examination, or has achieved in each of the completed courses, which have a total of at least 18 credits, a result positioned the top 50% (inclusive) among all the students taking the course, and at that time has obtained over 4 points (inclusive) for the published research papers, and has been agreed by the advisor, and within the study period, and has passed the dissertation proposal review 6 months before application for oral defense for dissertation.
- 2) Dissertation Proposal Review Committee is composed of over 3 (inclusive) members. The teachers in the related field of study of the Department shall be the ex officio members. If the number of teachers involving in the related field of study is not enough, the teachers being Assistant Professors or of more senior rank inside and outside the Department may become the members, but they have to be nominated by the advisor and then agreed by the Chair prior to employment of them as the members.
- 3) Application for dissertation proposal review has to be officially submitted and announced two weeks before presentation of the proposal.
- 4) The evaluation standard of dissertation proposal review is that ““it is regarded as being passed as long as over 2/3 (inclusive) of the teachers participating in the evaluation let the dissertation proposal be passed.””

- 5) Those students with their dissertation proposals not passed may make correction of the proposals, achieved consent from the advisor, and then has to re-submit application for dissertation proposal review.
- (4) Related requirements of research paper publication of Ph.D. Program:
- 1) Before degree examination, the total number of points for the published or accepted research papers based on the dissertation should be at least 4 points. The number of points for journals and periodicals are required in accordance with the requirements below.
  - 2) The calculation way and standard for the number of points for the published research papers on journals and periodicals are as follows:
    - [1] The advisor and co-advisor of the Ph.D. student applying for graduation shall not be counted in the number of authors.
    - [2] In case of 2 authors, the first author accounts for 80%, and the second author accounts for 40%.
    - [3] In case of 3 or over 3 authors, the first author accounts for 70%, the second author accounts for 30%, the third author accounts for 20%, and the fourth author and those afterwards shall not be counted.
  - 3) The levels of journals and periodicals of Science Citation Index (SCI; for the points of SCI, only those of the year or the information of the past one year are calculated ) are classified as follows:
    - [1] Those above SCI Impact Factor 2.0 are of Grade A+, and the number of points for each research paper is 4 points.
    - [2] Those above SCI Impact Factor 0.9 are of Grade A, and the number of points for each research paper is 3 points.
    - [3] Those above SCI Impact Factor 0.4 are of Grade B, and the number of points for each research paper is 2 points.
    - [4] Those below SCI Impact Factor 0.4 are of Grade C, and the number of points for each research paper is 1 points.
    - [5] If the SCI Impact Factor is between 0.4 and 0.9, and its ranking is the top 20% in this field, it is still regarded as being Grade A.
  - 4) Regarding calculation of the number of points for the published research papers under Ph.D. Candidate Qualifying Examination of the Department, one of the authors of each of the published research paper must be the advisor; otherwise, the points for this research paper shall not be counted as the number of points for graduation.
- (5) Degree examination of Ph.D. Program:
- 1) Even though a Ph.D. student has passed the Ph.D. Candidate Qualifying Examination and met the related requirements for research paper publication, the student cannot take part in the degree examination of Ph.D. candidates until the advisor has made a

recommendation of the student.

- 2) The members of the Degree Examination Committee of the degree examination of Ph.D. candidates should be nominated in accordance with Articles 10, 11 and 13 of the Implementation Bylaws for Ph.D. and Master's Degree Examinations", agreed by the Chair, and sanctioned by the University President prior to employment.
- 3) If a Ph.D. student fails the degree examination and having not reached the maximum study period, the student may hold a re-examination in the next semester or the next academic year. Re-examination can only be held for once only. Once the student still fails the re-examination, the student should be expelled from the University in accordance with the provisions of the Academic Regulations.
4. Graduation: Students meeting the various requirements aforesaid may submit an application for graduation.
5. The Related Regulations were approved at the departmental affairs meeting and college affairs meeting, and then sanctioned by the University President prior to implementation. Any modifications to be made to the Related Regulations shall follow the same procedure.