

NATIONAL SUN YAT-SEN UNIVERSITY

College of Engineering Institute of Communications Engineering Regulations of Qualification Assessments and Degree Examinations for Graduate Students of Doctoral Program

Applicable for Students Enrolled in School Year 110.

Approved by the 7th Institute General Meeting on May 20, 2008, School Year 96.
Amended and approved by the 3rd College of Engineering General Meeting on June 10, 2008, School Year 96.
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Amended and approved by the 10th Joint Department and Institute General Meeting on May 28, 2021, School Year 109.
Amended and approved by the 2nd College of Engineering General Meeting on July 19, 2021, School Year 109.

I. This set of regulations is issued based on the Ministry of Education Degree Conferral Law and its enforcement rules, as well as “Academic Regulations”, “Enforcement Rules of Postgraduate Students Degree Examinations”, “Implementation Guidelines for the Qualifying Examination of Ph. D. Candidates”, and “Regulations of Direct Pursuit of Doctoral Programs for Students” of National Sun Yat-Sen University.

II. Relevant items during study periods:

A. Study period: Two to seven years in accordance with regulations of the Ministry of Education (periods of student status retention and suspensions not included).

B. Crediting and course criteria:

All course selections by students shall be approved by advisors. Students must complete the minimum graduation credits in accordance with the regulations of the institute before submitting the dissertation proposal for review. At most 6 credits of the elective special topic courses may be counted in the minimum graduation credits. A current student who has studied in a master’s program of the institute for more than one year may apply for the direct pursuit of a doctoral degree program; such student shall complete a minimum of 42 graduation credits (with a maximum of 21 credits obtained during the master’s study period; credits of seminar courses not included).

C. Assignments of advisors:

Graduate students shall select a dissertation advisor from faculty members of the institute within the first school year. If students have to change advisors due to certain reasons, they may only do so once obtaining written agreements of the original and new advisors. New advisors must be faculty members of the university. If advisors resign or retire, joint-supervision shall be carried out.

D. Graduation Threshold for English Competence:

For the purpose of strengthening the language proficiency of doctoral students, students of the institute admitted in School Year97 and after must meet one of the following English criteria as proof of English proficiency prior to applying for a doctoral dissertation defense.

1. A TOEIC score of 700 or above, or an equivalent test/standard established by other language test organizations approved by the Ministry of Education. Please enclose credible documents of proof and authorize the institute chair to make recognition.
2. During doctoral study periods, completing at least 3 credits (inclusive) of a **High-Intermediate level English** course offered by the Department of Foreign Languages and Literature of the university or 3 credits of **English Technical Writing** one course offered by various departments/institute of the engineering college. A student must obtain a grade of at least 70 points for either of the aforementioned courses.

E. International Exchange Activities:

R.O.C. national students in our doctoral program need to go abroad for exchanges before graduation. One of the following shall be completed before submitting a degree exam.

1. Apply for overseas exchange, participate in foreign research courses or projects (more than 3 months)
2. Obtain a dual degree from an overseas university cooperating with our school.
3. If students cannot go abroad for long-term exchanges (such as in-service status, pregnancy, baby-raising, etc.), students must go aboard to participate in the international conference and make oral reports there more than 3 times (inclusive).

F. Others

Doctoral candidates who require joint-supervision from faculty members outside the institute must obtain approvals from their original advisors, followed by making applications to the institute before submitting dissertation proposals for examinations for the institute's general meeting to review.

III. Qualification Assessments of Doctoral Candidates:

Definitions of semesters: The fall semester starts on August 1 of each year and ends on January 31 of the year after, and the spring semester starts on February 1 of each year and ends on July 31 of the same year.

A. Qualification Assessments: Students must complete one of the following qualification assessments within four semesters (the period of suspension not included) after entry to the program. Students may face expulsion if they fail the assessment.

1. Qualification Examinations:

Examination subjects:

- [1] Semiconductor Physics and Devices
- [2] Control Systems
- [3] Discrete Mathematics
- [4] Power Engineering
- [5] Electromagnetics
- [6] Digital Logic

- [7] Signals and Systems
- [8] Communication Theory
- [9] Random Processes
- [10] Digital Signal Processing

The aforementioned [1] to [7] subjects are the examined courses for Group A to G of the Department of Electrical Engineering. Students of the institute shall select two subjects of the ten mentioned above to be examined, of which one belong to our institute and shall be selected as a compulsory examined subject. The exams are written examinations held once at the end of each semester (examination dates shall be announced during the mid-term examinations). Students may sit each subject examination twice at most and may change subjects when re-sitting an exam.

2. Course Selection

This assessment is for the core course (the institute and the department of electrical engineering included) of the master & doctoral program. Students must take two courses from the institute, and one course from other groups. The criteria of assessment: The grade of the elective core courses of the institute must be ranking top 30%, or above A- inclusive. The grade of the elective core courses of other groups must be ranking top 50%, or above B+ inclusive.

The assessment failure of the institute subjects results in a requirement of an additional 50% of graduation dissertation points. The assessment failure of the other group's subjects results in a requirement of an additional 25% of graduation dissertation points. The aforementioned additions of points are not limited to journal papers.

B. Dissertation proposal review:

1. Within 5 years of admission (the period of suspension not included), doctoral students must pass a dissertation proposal review after passing qualification assessments and being approved by their advisor. The review is conducted orally. Students obtain the qualifications of doctoral candidates once they passed the dissertation proposal review. If a doctoral student does not submit a dissertation proposal within 5 years of admission, they will be disqualified for the program, and they will be expelled, in accordance with the university's Doctoral Program Candidate Performance Evaluation Requirements rule three.
2. A dissertation proposal committee shall comprise three to six members of faculty members academically ranked above assistant professors from in or outside the institute nominated by the advisor and appointed following approval of the chair of the institute.
3. A student who does not pass the dissertation proposal review is required to re-submit for a second review once the proposal has been amended, and approved by his/her advisor. A student who fails for the second time shall face expulsion in accordance with the academic regulations of the university.
4. A student who has passed the dissertation review and obtained doctoral candidate qualification prior to the advisor variation shall re-process the doctoral dissertation proposal review after the advisor variation is made.

C. Doctoral program regulations for dissertation/article publications:

1. Regulations for dissertation/article publications as follows:

[1] Graduation Requirements for Publication Points

A minimum of 20 publication points for graduation is required during the study period of the doctoral program.

[2] Rules for Ranking Papers and Calculating Publication Points

- a. Articles in IEEE journals: 15 publication points are awarded to each full paper; 10 publication points are awarded to each short paper or letter.
- b. Articles in Non-IEEE journals: Journals listed in SCIE are categorized into A, B, and C grades according to their JCR Impact Factor ranking. Grade A: 10 publication points are awarded for each paper published in the journal of the top 50% ranking inclusive. Grade B: 7.5 publication points are awarded for each paper published in the journal of top 75% inclusive but not top 50% ranking. Grade C: 5 publication points are awarded for each paper published in the journal after top 75% ranking.
- c. 5 publication points are awarded to each article of other journals' papers or conference papers. At most one paper may be accounted in publication points for graduation requirements.

[3] The aforementioned point regulations are applicable to students of the system Group. Students of EM Wave Group shall refer to "Rules of Calculating Publication Points for Doctoral Degree in EM Wave Group" of the Department of Electrical Engineering.

2. Research outcomes obtained prior to enrolling in the doctoral program or research outcomes published during a doctoral program study period but are irrelevant to the respective specialty of a student shall not be accounted.
3. Awards of points for postgraduate students' publications shall comply with the following regulations:
 - [1] The institute shall be the only listed affiliated unit when a student specifies his/her respective department. If a student simultaneously lists other units, the respective article will not be accounted for graduation dissertation points.
 - [2] A doctoral student publication without the institute listed as the lead unit will not be counted towards the student's graduation dissertation points.
 - [3] Each paper/publication may only be referenced for one graduate student, who shall be the lead author among all listed students. Also, the student's advisor shall be the lead author among non-student authors listed in the publication
4. Should a student change his/her advisor, papers published by the student and his/her original advisor shall not be accounted for graduation points unless the original advisor approves in writing for such works to be counted as graduation points. In cases of other disputes, the institute director shall act to coordinate or convene an academic affairs committee for discussion and decision making.
5. Jointly appointed or retiring professors may proceed with the procedures described above. Orders of listed author names of retiring and jointly appointed professors on articles shall be coordinated according to the actual supervising situation.
6. The aforementioned requirements are the minimum graduation criteria.

D. Doctoral degree examinations:

1. Graduate students who have passed doctoral candidate qualification examinations, met relevant regulations of dissertation publications, been recommended by advisors, and submitted applications for degree examinations by the specified deadline, may enter doctoral candidate degree examinations.
2. Doctoral candidate degree examination committee members shall be

nominated by advisors in accordance with the "Enforcement Rules of Postgraduate Students Degree Examinations" of the university, approved by the institute chair, who then forwards the nominees to the president for approval and appointment.

3. The dissertation needs to be compared with the originality system, and the first draft of the dissertation and the original comparison result must be sent to the degree examination committee one week before the degree examination.
4. Students who fail the degree examinations and have not yet completed study periods may re-sit the exams in the semester or the school year after. A student may only re-sit the exams once. Students who fail the re-sits will face expulsion in accordance with the regulations of the university.

IV. Graduation:

- A. Doctoral students must provide proof of the plagiarism check when submitting the final draft of the dissertation.
- B. It is suggested that the plagiarism check be completed through the thesis originality comparison system of National Sun Yat-Sen University in the same year. Excluding introductions, references, catalogs, attachments, etc., the thesis originality comparison index should not exceed 12%. Those who exceed it can be passed after getting the advisor's no plagiarism confirmation and signature.
- C. When doctoral students apply to leave school, they need to submit the "Originality Comparison Report" of the thesis and "Statement of the Postgraduate Degree Thesis for compliance with Academic Research Ethics", which shall be signed by the advisor. After passing the review of the institute, doctoral students can process leaving school

Students who meet the aforementioned criteria may apply for degree conferral.

- V. This set of regulations has been implemented after approval by the department, the engineering college, and after authorization by the president. The same procedure shall be carried out when amendments are made.

