

Regulations on Graduation Requirements for Doctoral Students of the Department of Computer Science and Information Engineering at National Central University

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Article 1 The Regulations on Graduation Requirements for Doctoral Students of the Department of Computer Science and Information Engineering (CSIE) at National Central University (hereinafter referred to as the Regulations) are stipulated per the National Central University Study Regulations and the National Central University Regulations on the Degree Examinations for Postgraduate Students.

Article 2 Doctoral Qualifying Examinations:

1. Students should take and pass the qualifying examinations in any two of the following subjects: Algorithms, Operating System, and Computer Architecture within five semesters after their enrollment. Those who do not pass the qualifying exams should be forced to drop out of school.
2. A qualifying exam takes place once per semester, and students may select any of the aforementioned subjects for examination; however, an exam for each subject can be taken two times maximum.
3. Students who fail to pass the qualifying exams within five semesters yet have had excellent academic performance or have produced outstanding research outcomes may apply for the exemption from the qualifying exams to the Academic Committee of the Department of CSIE by the end of their fifth semester per the following rules:
 - (1) Exemption with academic performance: within five semesters

after their enrollment, students, who took the subjects recognized for qualifying exams and their scores reached the top 20% of the class or reached 90 points or above, may apply for the exemption from the qualifying exams of the subjects. If a few students take the course and thus the number of the top 20% of the students is less than one, then the top 20% should be calculated as one person.

- (2) Exemption with a journal publication or a patent:
 - A. Students, who took and passed a subject recognized for qualifying exams, published an academic paper in a journal accredited by the Social Science Index (SCI), the Social Sciences Citation Index (SSCI), or the Engineering Index (EI), or announced a paper in an international conference recognized by the Academic Committee, may apply for the exemption from the qualifying exam of the subject. Except for the thesis advisor at the Department of CSIE or the co-advisors, the students should be listed as the first author (applicable for students who enrolled in and after the 107th academic year) of the academic paper. The academic papers submitted for the exemption from the qualifying exams of the subjects are not allowed to be listed as students' academic works for the review for graduation requirements.
 - B. Students who took and passed a subject recognized for qualifying exams and have obtained a patent using the full name of the Department of CSIE may apply for the exemption from the qualifying exam of the subject.
 - C. If the academic paper and the obtained patent mentioned in the preceding items are considered to have the same quality in terms of research outcomes, students can only choose either way to apply for the exemption from a qualifying exam.
- (3) Exemption with a competition prize or an exhibition work: students who took and passed a subject recognized for qualifying exams may apply for the exemption from the qualifying exam of the subject by submitting a competition prize or an exhibition work. Students may submit any supporting materials to the Academic Committee for review.

- (4) Except for the exemption with academic performance, students who wish to apply for the exemption with the rest of the methods should present the aforementioned documents and works by the end of their fourth year of study; otherwise, they should be forced to drop out of school.

Article 3 Applying for graduation by submitting a thesis:

1. Passing the oral defense of the doctoral thesis proposal:
 - (1) The student's thesis advisor convenes a committee that consists of at least two committee members to review the feasibility of the student's doctoral thesis proposal. The committee members should be assistant professors or professors with higher academic ranks at NCU.
 - (2) Students who fail to pass the thesis proposal defense should re-apply for it within one year. Those who pass the thesis proposal defense are considered Ph.D. candidates.
 - (3) After students pass their thesis proposal defense, their proposals should be submitted to the Academic Committee for review in the next semester.
2. Passing the Academic Committee's review of academic works:
 - (1) Students should publish at least two academic papers either in the journals accredited by the SCI, the Science Citation Index Expanded (SCIE), and the SSCI or in full texts in top international conferences (please refer to the appendix), or publish at least one paper respectively in one of the accredited journals and in one of the top international conferences listed in the appendix. Students should be listed as the first author of the published papers (after excluding no more than two faculty members of the Department of CSIE). (The rule applies to students who enrolled in and after the 107th academic year.) The academic works should be published with the full name of the Department of CSIE during the students' study at the Department of CSIE. Only such academic works could be recognized as students' research outcomes during their study.
 - (2) Students should submit their doctoral theses and their published academic works to the Academic Committee for review. The review includes the students' course-taking conditions and course-credit sufficiency. The Academic

Committee may ask students to take additional courses if necessary.

3. Passing the preparatory oral defense for degree examination:

The student's thesis advisor convenes a committee that consists of five to seven committee members (including the thesis advisor) to review the content integrity and coherence of the student's doctoral thesis. The committee members should be assistant professors or professors with higher academic ranks at NCU.

Article 4 Applying for graduation by engaging in industry-academia collaborative projects:

To promote industry-academia cooperation, if students of the Department of CSIE have participated in any industry-academia collaborative projects such as the "Strength Lies in Unity" Projects of the Industrial Technology Research Institute (ITRI), the Industry-Academia Cooperative Ph.D. Projects administered by the Ministry of Education (MOE), or other industry-academia collaborative projects reviewed and recognized by the Academic Committee, they may apply for graduation with "industry-academia collaboration." The procedure for graduation in this way is as follows:

1. Passing the doctoral thesis proposal defense:

- (1) Before their proposal defense, students should apply in written form for the defense, and the applications should be reviewed by the Academic Committee for its approval.
- (2) The student's thesis advisor convenes a committee that consists of at least two committee members to review the feasibility of the student's doctoral thesis proposal. The committee members should include at least one assistant professor or professor with higher academic ranks at NCU and one research and development fellow from the collaborative institution.
- (3) Students who fail to pass the thesis proposal defense should re-apply for it within one year. Those who pass the thesis proposal defense are considered Ph.D. candidates.
- (4) After students pass their thesis proposal defense, their proposals should be submitted to the Academic Committee for review in the next semester.

2. Passing the Academic Committee's review of academic works:

- (1) Students should publish an academic paper in a journal related to their research topics or in an international conference recognized by the Academic Committee. Students should be listed as the first author of the published paper (after no more than two thesis advisors are excluded). The conference paper should go through a full-text review conducted by the conference. The academic work should be published with the full name of the Department of CSIE during the students' study at the Department of CSIE. Only such academic works could be recognized as students' research outcomes during their study.
 - (2) Students should submit their doctoral theses and their published academic works to the Academic Committee for review. The review includes the students' course-taking conditions and course-credit sufficiency. The Academic Committee may ask students to take additional courses if necessary.
3. Passing the preparatory oral defense for degree examination:
The student's thesis advisor convenes a committee that consists of five to seven committee members (including the thesis advisor) to review the content integrity and coherence of the student's doctoral thesis. The committee members should be assistant professors or professors with higher academic ranks at NCU, and/or research and development fellows in the collaborative institutions.

- Article 5 Passing the degree examination:
Please refer to the NCU's Regulations on the Degree Examinations for Postgraduate Students.
- Article 6 Implementation details not specified herein must be subject to relevant regulations of NCU and the Ministry of Education.
- Article 7 The Regulations have been approved at the Departmental Meeting of the Department of Computer Science and Information Engineering and reviewed by the NCU Academic Affairs prior to their implementation. Any future amendments should follow the same administrative procedures.