

Academic Regulations for the Ph.D. Program of the Department of Statistics National Cheng Kung University

Approved by the Department Affairs Council on June 18, 1998

Amended by the Department Affairs Council on January 6, 2022

Amended by the Department Affairs Council on June 8, 2023

Chapter One General Principles

Article 1 The Academic Regulations for the Ph.D. Program of the Department of Statistics, National Cheng Kung University (hereafter, the Regulations) are established by the Department of Statistics (hereafter, the Department) to regulate the academic requirements for its doctoral program in accordance with NCKU Academic Regulations, NCKU Graduate Program Regulations, NCKU Regulations for Graduate Program Admissions, and NCKU Directions for the Administration of the Ph.D. Qualifying Examination.

Chapter Two Admissions

Article 2 The Department shall form an admission committee for the recruitment of doctoral students to administer examination affairs regarding written tests, reviews, and interviews. The committee is composed of at least five full-time faculty members appointed from assistant professors or above by the Department chair, who serves as the convener.

Article 3 Grading criteria for admission examinations:

1. Review: 50% of the final grade (study plan, concrete research achievements, and a minimum of two reference letters).
2. Interview: 50% of the final grade

Chapter Three Study Duration, Credit Requirement, and Course Enrollment

Article 4 Ph.D. students shall complete the graduation requirements for the degree within the regular study duration of seven years (a minimum of two years and a maximum of seven years). In-service Ph.D. students are allowed to extend their study for a maximum of one year from the regular seven-year

duration. Other matters regarding study duration shall be administered in accordance with NCKU Graduate Program Regulations.

Article 5 Ph.D. Students are required to complete a minimum of 34 course credits for graduation, including 4 credits from department-required specific-topic seminar courses and a minimum of 30 credits from elective courses. The minimum credit requirements for graduation excludes the 6 credits designed for specific-topic seminar courses in statistics and the 12 credits designed for the dissertation. With the prior consent of the dissertation advisor or the Department chair, Ph.D. students are allowed to complete a maximum of 15 credits on major courses offered by other programs at NCKU, which can count into the minimum credit requirements for graduation. Other matters regarding credit requirements shall be administered in accordance with NCKU Graduate Program Regulations.

Article 6 Ph.D. students shall enroll in the department-designated Specific-Topic Seminar Course every semester during years of study.

Chapter Four Ph.D. Qualifying Examination

Article 7 The Ph.D. qualifying examination shall be conducted in the forms of written tests and document reviews. In general, all doctoral students should take the written tests for the Ph.D. qualifying examination, except those who may apply for document reviews under the following circumstances:

1. Students admitted into the program with a non-statistics or non-mathematics educational background.
2. International students.
3. Others.

Those who apply for document reviews for the Ph.D. qualifying examination shall submit and complete the application within the first academic year after matriculation (please refer to the attached application form).

Article 8 Written tests for the Ph.D. qualifying examination

1. Students must complete the courses of Advanced Statistics Inference (1)(2) and Advanced Probability Theory before they apply for written tests for the Ph.D. qualifying examination.

2. Students must complete the written tests within 4 years after matriculation (excluding the period of study suspension). The designated test subjects are Advanced Statistics Inference and Linear Model. A student shall take the tests of the two subjects as a first-time applicant for the Ph.D. qualifying examination, and an in-service student can take the written tests scheduled for several times. Those who fail a subject test may retake the test (please refer to the attached application from).
3. The Department shall form a written-test Ph.D. qualifying examination committee consisting of 2 to 4 full-time faculty members appointed from assistant professors or above by the Department chair, who serves as the convener. The major responsibilities of the committee are to develop the question paper, administer the tests, grade the tests, and establish the passing standards.
4. Grading system: Each subject test is graded on a pass/fail basis. A grade of pass shall be based on the score of each subject test. If a student fails a written subject test for a second time with a close-to-passing score, the committee will schedule an oral test on the subject. Should the student receive a close-to-passing score for the oral test under special circumstances, the committee will determine to administer a certification scheme. A student who cancels the written tests for the Ph.D. qualifying exam upon completion of an application will be counted as one fail in the examination. In case of irresistible conditions, the committee will determine whether it should be calculated in the allowed number of applications. Other matters in this regard shall be administered in accordance with NCKU Directions for the Administration of the Ph.D. Qualifying Examination.
5. Students shall complete the requirements specified in the preceding four subparagraphs within 4 years after matriculation (excluding the period of study suspension) before they are considered to have passed the Ph.D. qualifying examination and entitled to submit a doctoral candidate qualification review for approval (a notice of the doctoral candidate qualification review result is attached). In-service students may complete the requirements for the Ph.D. qualifying examination within five

years after matriculation. Other matters in this regard shall be administered in accordance with NCKU Directions for the Administration of the Ph.D. Qualifying Examination.

Article 9 Document reviews for the Ph.D. qualifying examination

1. Ph.D. students who apply for document reviews for the Ph.D. qualifying examination must select a dissertation advisor upon confirmation of the application.
2. Students must complete the courses of Mathematical Statistics (1)(2) and Statistical Methods before they apply for document reviews for the Ph.D. qualifying examination.
3. Within 3 years after matriculation (excluding the period of study suspension), students must apply for an oral examination of their research proposal while the Department must form a qualification review committee. The committee consists of more than five members, including the Department chair as the convener, the dissertation advisor as an ex officio member, and at least two professors from the Department of Statistics or the Institute of Data Science. The oral examination is based on the content of the proposal submitted by the student. The subject of the proposal does not have to be the same as that of the doctoral dissertation, but the proposal must be approved by the advisor before submission to the Department office. Applicants may refer to the structure of the research projects designated by the Ministry of Science and Technology for the format of the proposal. Meanwhile, the applicant shall be evaluated on mathematical statistics-related content in the oral examination. Those who fail the oral examination may retake the exam the following year.
4. Students shall complete the requirements specified in the preceding three subparagraphs within 4 years after matriculation (excluding the period of study suspension) before they are considered to have passed the Ph.D. qualifying examination and entitled to submit a doctoral candidate qualification review for approval (please refer to an attached notice of the doctoral candidate qualification review result). In-service students may complete the requirements for the Ph.D. qualifying examination

within five years after matriculation. Other matters in this regard shall be administered in accordance with NCKU Directions for the Administration of the Ph.D. Qualifying Examination.

Article 10 The written tests for the Ph.D. qualifying examination shall be completed with results announced one week before the first semester of each school year. Students should submit an application to the Department two weeks before the end of the second semester of each academic year.

Chapter Five Dissertation Advisor and Advisory Committee

Article 11 Students who take the written tests for the Ph.D. qualifying examination must select a dissertation advisor within two months after completion of the Ph.D. qualifying examination; those who choose document reviews for the Ph.D. qualifying examination must select a dissertation advisor within one year after matriculation (please refer to the attached application form). The advisor is responsible for the formation of the dissertation advisory committee before an oral examination on the doctoral dissertation research proposal is scheduled.

Article 12 The advisor must be a full-time faculty member of the Department or an adjunct associate professor or above. Professors from other departments at NCKU can only serve as co-advisors.

Article 13 An advisor or co-advisor must be a professor with excellent research credentials (at least one paper published in a statistics-related SCI journal in the past three years, according to the annual information released by the academic committee of the Department).

Article 14 The advisor shall decide whether to conduct an oral examination on the doctoral dissertation research proposal.

Article 15 In principle, Ph.D. students shall not change the dissertation advisor of their choice. However, should need arises under special circumstances, a student may apply for change with a completed NCKU Department of Statistics Application Form for Change of Dissertation Advisor (please refer to an attached application form) in accordance with NCKU Department of Statistics Principles for Change of Thesis/Dissertation Advisor Application (established in a separate text). An advisor whose advisee resists guidance with significant specific facts may seek the consent of the Department chair to terminate the advising relationship.

Students whose guidance has been suspended shall select a new advisor.

Article 16 The Dissertation Advisory Committee shall consist of 5 to 9 members, including more than half of them appointed from the Department and more than one third of them appointed from outside NCKU. The advisor shall serve as the chair of the committee.

Chapter Six Dissertation

Article 17 After passing the Ph.D. qualifying examination, Ph.D. students must register and enroll as regular students for two years to complete seminar courses in dissertation-related statistical research for at least two semesters while engaging in doctoral dissertation research.

Article 18 The research process is intended to provide students with valuable educational experience, especially the cultivation of creativity, the training of independent research and learning, the familiarization of research methods, and the shaping of scholarly style.

Article 19 Research results must be original. Accordingly, a dissertation should substantially increase the basic knowledge of the field of study or provide innovative or ideal interpretations of known facts. Based on this concept, if a dissertation only applies the known principles, technologies and models to situations slightly different from those of the predecessors, it should be considered to be unsatisfactory even if it is published.

Article 20 Research topic and content of a dissertation must be original in the field of statistics.

Article 21 A dissertation should rigorously and clearly demonstrate the student's understanding of the relevant theories and methods applied to the research issues, as well as his/her proficiency in related application fields.

Article 22 A doctoral dissertation should be distinguished by a higher standard of academic research from a master's thesis. Therefore, students should engage an in-depth research in their major field with a dissertation content that substantially demonstrates their proficiency in the research field.

Article 23 A dissertation should present the research results in detail in accordance with the format of paper writing designated by NCKU.

Chapter Seven Graduation

Article 24 Students who meet the requirements specified in Article 14 of NCKU Graduation Program Regulations and these Regulations are allowed to apply for degree examination. Please refer to the application forms required for degree examination and qualification review (please refer to an attached application form).

Article 25 Ph.D. students shall receive a minimum of one point for papers published (or accepted) in SCI or Scopus (with a peer review system) before applying for the degree examination. The points awarded for paper publication are calculated as follows:

1. 1.0 for papers published in journals.
2. 0.5 for papers published in conference proceedings.

The aforementioned papers must be published with the student as the first author or corresponding author. A paper authored by more than one student can only be used as the dissertation for graduation by one student (papers defined herein refer to those published by students after matriculation into the doctoral program of the Department).

Article 26 To maintain academic ethics and prevent plagiarism in dissertations, students should submit an originality report from the online plagiarism detection system, signed for approval by the advisor, before submission of an application for the degree examination.

Article 27 Ph.D. Students are required to complete the requirement for English proficiency before graduation (applicable to students admitted in/after the 2021-2022 academic year).

They should complete an English-taught course or receive one of the following certificates for English proficiency:

1. A certificate of High-Intermediate level or above on GEPT.
2. A minimum score of 72 on the TOEFL iBT test.
3. A minimum IELTS score of 5.5.
4. A minimum score of 785 in listening and reading and a minimum score of 310 in speaking and writing on the New TOEIC test
5. Other certificates for English proficiency equivalent to Level B2

on the Common European Framework of Reference (CEFR).

The credits of an English-taught course can be included in the minimum requirements of 28 credits for graduation, while a certificate for English proficiency from the aforementioned tests dated within 2 years before matriculation is also valid.

Article 28 A committee shall be formed to administer the doctoral degree examination of the Department in accordance with Article 4 of NCKU Enforcement Rules for Doctoral and Master's Degree Examinations. In principle, members of the Dissertation Advisory Committee shall sit on the Doctoral Degree Examination Committee.

Article 29 The Doctoral Degree Examination Committee shall not be chaired by the advisor of the candidate.

Article 30 The Doctoral Degree Examination Committee shall be formed with more than half of the members appointed from the Department.

Chapter Eight Supplementary Provisions

Article 31 These Regulations shall be approved by the Department Affairs Council before taking effect. Amendments shall be processed accordingly.

Article 32 These Regulations shall be applicable to students admitted into the program in and after 2024.

These regulations were translated from the original Chinese. In the event of any discrepancies between the two versions, the Chinese always takes precedence.