

Study Guide for PhD Students

School of Forestry and Resource Conservation National Taiwan University

Mission, Objectives, and Core Competencies of the PhD Program

The mission of the School of Forestry and Resource Conservation is to pursue excellence in education and research in forestry, sustainable forestry, and nature conservation. The PhD program is committed to advancing professional education and innovative research, expanding ecosystem services, promoting the utilization and circular use of bio-based materials, addressing climate change, enhancing environmental conservation, and strengthening forest carbon sequestration and other ecosystem functions in support of sustainable development.

The program aims to cultivate doctoral graduates with advanced knowledge of forestry, sustainable forestry, nature conservation, and forest carbon sequestration, as well as the ability to conduct innovative, interdisciplinary research in forest sciences.

Fundamental Requirements for the PhD Degree

A PhD degree represents far more than the highest level of academic qualification. It reflects the ability to create new knowledge, think independently, and contribute meaningfully to society through original research. Earning a PhD signifies that a student has made an original contribution to the discipline, whether through theoretical advancement or methodological innovation. It also demonstrates the development of profound expertise within a specialized field and the ability to conduct independent research and solve complex problems. Upon completion of the degree, the graduate is recognized as an independent scholar and expert in the field.

Successfully completing a PhD program requires long-term commitment, perseverance, and academic integrity. Throughout the program, students are expected to cultivate independent thinking, rigorous research skills, and progressively strengthen their academic competence. At the same time, students should establish a systematic learning framework to meet the challenges posed by the rapid expansion and continuous evolution of knowledge.

The doctoral curriculum in the School of Forestry and Resource Conservation is designed to provide comprehensive academic and research training. Through the establishment of an Advisory Committee, dissertation proposal development, qualifying examination, publication of research papers, dissertation research and writing, and the final dissertation defense, students gradually develop the research capability, theoretical foundation, and academic independence required to conduct original scholarly research. During this process, students are expected to actively participate in academic activities as emerging scholars. Strong language proficiency and analytical skills are essential for success in research-oriented disciplines, and

students are encouraged to continuously strengthen these competencies throughout their doctoral studies.

The time required to complete a PhD degree varies among students. On average, completion requires approximately four to five years. Students with a solid academic background, strong research capabilities, and a well-defined research direction may complete the degree in a shorter period.

Curriculum Structure and Academic Requirements

1. Overview of the PhD Program and Learning Framework

A PhD degree is awarded to students who make original scholarly contributions within the school's professional fields. Such contributions may involve theoretical advancement, methodological innovation, new perspectives, analytical approaches, datasets, or scientific discoveries that significantly expand, deepen, or transform existing knowledge in the discipline. Accordingly, recipients of the PhD degree are expected to demonstrate originality in research, advanced disciplinary knowledge, strong research capability, academic independence, critical thinking, problem-solving ability, effective communication skills, and meaningful contributions to the academic community.

To prepare doctoral students for the rapidly expanding body of scientific knowledge, the PhD curriculum has been carefully designed to provide a systematic framework for academic development and research training. The PhD learning process includes the following components:

- *Selection of an academic advisor and establishment of the Advisory Committee
- *Completion of required coursework
- *Dissertation proposal
- *Qualifying examination
- *Dissertation research and writing
- *Publication of research papers
- *Dissertation defense and graduation procedures

2. Selection of the Academic Advisor and Establishment of the Advisory Committee

All PhD students are required to identify their prospective academic advisor before admission. For domestic students, the advisor must be confirmed during the admission process. For international students, the advisor must be identified when submitting the application for admission.

Before the end of the first academic year, each PhD student shall report the name of the academic advisor to the Department Office and submit the Declaration Form for PhD Students and the Advisor Consent Form. The academic advisor shall establish an Advisory Committee for the student.

The Advisory Committee shall consist of at least three members with expertise relevant to the student's research. Members may be selected from within or outside the University. The academic advisor serves as an ex officio member and Chair of the Advisory Committee.

Before the end of the first academic year, students shall also submit the Advisory Committee Member List and the Advisory Committee Information Form to the Department Office for the record.

3. Academic Progress Planning

3.1 Graduation Credits and Required Courses

- (1) Regular PhD Students (including international students) and In-service Students are required to complete a minimum of 24 credits, including:
 - a. Seminar (Course Code: 625 D0030), 1 credit, taken four times
 - b. 6 credits of required elective courses (Course Codes: 625 DXXXX or 625 MXXXX)
 - c. 14 elective credits selected from graduate- or undergraduate-level courses offered by NTU (Course Codes: XXX DXXXX, XXX MXXXX, or XXX UXXXX)
- (2) Direct-entry PhD Students are required to complete a minimum of 36 credits, including:
 - a. Seminar (Course Code: 625 D0030), 1 credit, taken four times
 - b. 6 credits of required elective courses (Course Codes: 625 DXXXX or 625 MXXXX)
 - c. 26 elective credits selected from graduate- or undergraduate-level courses offered by NTU (Course Codes: XXX DXXXX, XXX MXXXX, or XXX UXXXX)

3.2 Courses Designated by the Advisory Committee

In addition to the required Seminar course, the Advisory Committee shall determine the courses and study plan for each student based on the student's research needs.

The designated courses and study schedule shall be submitted to the Department Office for record before the end of the first academic year.

4. Dissertation Proposal

After the Advisory Committee has been established, PhD students shall consult regularly with the Committee regarding the dissertation proposal, including the research background, research objectives, theoretical framework, research methodology, expected contributions, anticipated challenges and proposed solutions, and the overall research schedule.

Before the end of the seventh semester, the dissertation proposal shall be reviewed and approved by the Advisory Committee and submitted to the Department Office for the record.

5. Qualifying Examination

The qualifying examination is a continuous evaluation process that begins upon enrollment in the PhD program and concludes when the student is officially recognized as a PhD Candidate. To qualify for PhD candidacy, students must satisfy all of the following requirements:

- (1) Complete all courses designated by the Advisory Committee with satisfactory academic performance.
- (2) Obtain approval of the dissertation proposal from the Advisory Committee.
- (3) Meet the foreign-language proficiency requirement in accordance with the Department's language proficiency standards for master's students.
- (4) Pass the PhD Qualifying Examination, which consists of both Written Examination and Oral Examination. Written Examination covering the fundamental knowledge required for PhD candidates. Oral Examination

during which students present their dissertation research and research achievements to the Examination Committee for evaluation.

- (5) Upon completion of all the above requirements, the Department Office shall submit the list of eligible students to the Office of Academic Affairs for official registration as PhD Candidates.

6. Dissertation Research and Writing

After being officially recognized as a PhD Candidate, students shall continue their dissertation research and complete the doctoral dissertation in accordance with the dissertation proposal approved by the Advisory Committee.

7. Publication Requirements

During the PhD program, students are required to publish the results of their research in academic journals. Before applying for the dissertation defense, students must have completed at least two journal papers related to the dissertation research and satisfy both the Departmental and the College publication requirements. The publication requirements are as follows:

- (1) The submitted papers must be peer-reviewed journal articles and constitute part or all of the doctoral dissertation.
- (2) Students must publish jointly with their academic advisor and be listed as either the first or second author. If the student is the second author, the first author must be the academic advisor.
- (3) At least one paper must be published in or accepted by an SCIE- or SSCI-indexed journal. The journal must have been indexed in SCIE or SSCI within the five years preceding the publication or acceptance date.
- (4) Only full-length research articles published in recognized academic journals are accepted. Technical notes or short communications are not accepted.
- (5) Compliance with the publication requirements shall be reviewed by a committee appointed by the Department Chair after the student submits the application for the dissertation defense.

8. Dissertation Defense and Graduation

After completing the doctoral dissertation, students shall apply for the dissertation defense in accordance with university regulations. Students must complete the public dissertation presentation, successfully pass the oral defense, satisfy the Department's originality requirements for doctoral dissertations, submit the final dissertation, and complete all graduation procedures before the doctoral degree is officially conferred.

9. Academic Progress Review

PhD students shall submit all documents required for the qualifying examination and dissertation defense within the prescribed deadlines in accordance with the Regulations Governing Qualification Examination for PhD Candidates. Students shall also complete periodic self-assessments using the PhD Student Academic Progress Checklist and submit the required documents to the Department Office for the record.