

National Chung Hsing University Department of Chemical Engineering

Guidelines for Doctoral Studies

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Article 1: Admission Eligibility

Applicants must hold a master's degree (or higher) recognized by the Ministry of Education and be admitted via the university's doctoral entrance examination. Current master's students may also apply for direct admission to the doctoral program upon approval.

Article 2: Program Duration

The program duration ranges from 2 to 7 years.

Article 3: Course and Credit Requirements

1. General Doctoral Students:

- A minimum of 34 credits, including 12 credits for the dissertation and 4 credits for seminar discussions (both mandatory). The remaining 18 credits are elective, with at least 9 credits from departmental courses.

2. Direct-Entry from Master's Program:

- A minimum of 46 credits, including 12 credits for the dissertation and 4 credits for seminar discussions (both mandatory). The remaining 30 credits are elective, with at least 12 credits from departmental courses.

3. Direct-Entry from Bachelor's Program:

- A minimum of 40 credits, including 12 credits for the dissertation and 4 credits for seminar discussions (both mandatory). The remaining 24 credits are elective, with at least 12 credits from departmental courses.

4. Doctoral students must complete at least 6 credits from core courses such as Advanced Transport Phenomena, Advanced Chemical Engineering Thermodynamics, or Advanced Chemical Reaction Engineering. If a course grade falls below 35, the student must retake the course.

Article 4: Advisor Selection

Doctoral students must confirm their advisor with the department chair's approval by the end of their first academic year.

Article 5: Qualification Examination for Doctoral Candidates

1. Eligibility:

Students must complete the required coursework and credits.

2. Qualification Examination Requirements:

○ Course Categories:

- **Category A:** Select one of the three core courses (Advanced Chemical Engineering Thermodynamics, Advanced Chemical Reaction Engineering, or Advanced Transport Phenomena).
- **Category B:** Select any two specialized elective courses from the department. Courses with midterm and final exams are eligible.

○ Passing Standards:

- **Category A:** Top 75% (inclusive) of all examinees.
- **Category B:** Top 50% (inclusive) of all examinees. Exceptions must be approved by the Graduate Committee.
- For exams with fewer than three participants, the department chair will appoint examiners, and the Graduate Committee will review the results.
- Students who fail a course may retake midterm and final exams without re-enrolling.
- Master's students may take qualification exams, with a six-year validity for passing scores.

3. Candidate Status:

After meeting coursework, credit, and examination requirements, students may apply for candidacy. The advisor forms a review committee of at least five members for evaluation, including a dissertation proposal presentation. Passing requires an average score of 70 or higher.

Article 6: Research Publication Requirements

1. Doctoral students must publish at least one research paper in an SCI-indexed journal (acceptance letter acceptable) or obtain a national or international invention patent as the first author during their study.
2. The advisor must be a co-author of the publication, except in cases of resignation during co-advisorship. The primary affiliation for the research must be listed as the Department of Chemical Engineering, National Chung Hsing University.

Article 7: Foreign Language Proficiency

Students must meet the department's foreign language standards before applying for the final oral defense. Requirements include:

1. Holding a bachelor's degree (or higher) from an English-speaking country, recognized by the Ministry of Education, with advisor approval.
2. Achieving a passing score in an official English proficiency test (e.g., GEPT, TOEIC, TOEFL, or IELTS). Standards are based on the latest equivalency chart.
3. Presenting an English paper at an international conference or delivering an English oral presentation with Q&A within the department.

Article 8: Final Oral Defense

Upon meeting candidacy, publication, and language requirements, and with advisor approval, students may apply for the final oral defense of their dissertation, conducted per university regulations.

Article 9: Miscellaneous

Matters not covered in these guidelines will be handled per university doctoral program regulations and examination rules.