

Requirements and Reminders for the PhD Qualification Exams
of the Department of Material Science and Engineering,
National Chung Hsing University

Drafted on 1996/10/02
Amended and approved at Dept. meeting 2010/06/30

I. Guidelines for the PhD Qualification Exams:

1. Students must pass the qualifying exams within three years after enrollment (excluding the period of students' temporary withdrawal from school during which they are not allowed to take the exams) or they will be ordered to quit school. No exams will be provided during the period of students' temporary withdrawal from school.
2. The Qualifying Exams include the following topics:

◎Fundamental of Diffraction	◎Electrode Kinetics
◎Thermodynamics of Solids	◎Principles of Electron Microscopy
◎Interface in Materials	◎Advanced Diffusion in Solids
◎Defects in Materials	◎Solid State Physics (I)
3. Students must pass the final exams of three of the above courses as the PhD Qualification Exams.
4. PhD qualifying exams are combined with the final exams for the above courses. Students should register for the above-mentioned qualifying exams at the department office three weeks prior to the final exam of the subjects.
5. If a course does not offer a final exam, students may request a qualifying exam from the previous instructor of the course.
6. Students must rank among top 50% of the class for each course to pass the qualifying exam. For instructors choosing to pass any students falling short of the above threshold, an explanation must be submitted to the Academic Committee for review and approval. If there are less than 3 students taking the qualifying exam, the department may assign faculty members to design the exam questions. The result will be submitted to Departmental meeting for approval.
7. Students currently in the PhD. Program (including students holding a master's degree or enrolled in a joint-master's and doctoral program) who have taken the above courses and received passing scores pursuant to Article 6 may apply to waive the qualifying exam during exam registration period in the first semester of their study. (Applicable to courses launched after the 2010 academic year)

II. Reminders:

1. In addition to a dissertation, students in PhD programs should obtain a minimum of 18 credits, including:
 - (1) A minimum of 12 credits from courses offered by the Department
 - (2) A maximum of 3 credits from undergraduate elective courses
 - (3) **Colloquium is a required course.**

2. Prior to dissertation defense, students must have two full papers published in SCI* with a total of 4 points or above, and be the first author for at least one of the papers.

(1) Students may choose from the two options listed below and submit the Table for Accumulated Publication Points for PhD Degree Assessment at the Department of Material Science and Engineering at NCHU as attached:

A. SCI ranking

- a. An SCI paper written in a selected field with the top 25% ranking (3 points)
- b. An SCI paper written in a selected field with the top 50% ranking (2 points)
- c. An SCI paper written in a selected field with the bottom 50% ranking (1 point)

B. Points accumulated for Impact factor. (Must provide the most updated data for the year of application)

Note: Only half of the assigned points are accepted for the communication, letter or short notes of a journal.

(2) Students who have been granted a patent: 2 points (invention); 0.5 points (utility model)

(3) International proceedings: 0.5 points (maximum 1 point)

(4) Domestic journal: 1 point (maximum 2 points)

(5) If a student's dissertation and patent are within the same subject area, only one work can be considered for point accumulation.

(6) Dissertation authorship and patent ownership (after advisor): 1 point for first author/owner; 0.5 points for second author/owner; 0.25 points for third author and so on.

* (Note):

A. The journal article should directly relate to doctoral dissertation

B. Advisor as co-author

C. The paper should specify as published by Department of Material Science and Engineering at National Chung Hsing University