Course Requirement for Ph.D. Student

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Institute of Information System and Application, NTHU

A.   **Coursework**: students have to complete at least 18 credits with at least 12 credits from required courses of ISA. Students entering Ph.D. program without master degree have to complete 30 credits with no less than 24 credits from the required courses in ISA. Thesis and seminar credits are not counted as credits for the required courses.

- For the first two years, students have to take at least one course of 3 credits from either ISA or CS of 5000-level or higher in each semester. Undergraduate courses of 4000-level will be considered after the permission of the advisor and the director of ISA.
- After passing all the qualifying exams, students MUST take *Thesis* course every semester.

B.   **Qualifying Exam**

- The Qualifying Exam (QE) is in written test. Each subject takes 100 minutes. Students have to pass 3 of the following 5 subjects including *Operating System*, *Computer Architecture*, *Algorithm*, *Data Structure*, *Probability Theory*.
- The result of each subject exam only consists of "Passed" or "Not Passed."
- Qualifying period: full-time students have to pass the QE within 5 semesters after enrollment. Non-full-time students have to pass the QE within 7 semesters after enrollment. The semester during the students' suspension year of their study will not be considered. However, each student can take each subject exam at most twice.
  Note: during suspension years, the taken-QE results, times, and semester-count will also be considered.
- Each subject exam is generally held in the first or second week of the Fall semester and Spring semester. Students can freely choose any subject exam in different semesters.
- QE exemption by passing the courses
  i.   Students can exempt the QE subject by passing the corresponding course from either ISA or CS: *Operating System*, *Computer Architecture*, *Algorithm*, *Data Structure*, *Probability Theory*.
  ii.   Not only students shall pass the course, but also the grade should be ranked top 25% in the class, to claim passing the subject.
  iii.   Students have to pass the courses within qualifying period.
  iv.   The result of the course taken within five years can be accepted.
- If students only pass 2 subjects within qualifying period, the way to compensate the QE is, at least 2 papers should be accepted by noted journals before taking thesis oral defense.
- For transfer student, one of the options below MUST be selected before the QE in the current semester:
  i.   The QE of the same subject from his/her original institute will be qualified: the timing he/she start in NTHU, and the times he/she took QE will also be considered.
  ii.   The QE of the same subject from his/her original institute will NOT be qualified: full-time students should pass the QE within 5 semesters after transfer; non-full-time students should pass the QE within 7 semesters after transfer.
- Master students are also permitted to take exam in the QE. It will be counted and will be kept in their records. If they claim that the subject exam is only for the purpose of waiving the required course before exam; as a result, it will not be counted for the QE.

C. **Prerequisite**: students who have not taken the courses of *Operating Systems*, *Database*, *Probability and Statistics*, and *Data Structure* have to complete these four courses before graduation in spite of these 4 courses are not considered as the mandatory credits for graduation.

D. **Language Requirement**: should be passed within 5 years after enrollment, and before thesis oral defense.
   - For students whose native language is not English: minimum TOEFL score of 87(IBT), or TOEIC score of 785, or GEPT High-Intermediate level (both first and second round).
   - For students with a degree from a university located in a native English speaking country, which is recognized by the Ministry of Education, can be exempted from the language requirement.

E. **Thesis Advisor**
   - Each student is required to select a thesis advisor.
   - Thesis advisor MUST be a faculty member of ISA, whose title should be assistant professor or above.
   - A student is allowed to select one co-advisor with rank of assistant professor or above.
   - A student is not permitted to change his/her advisor within 12 months before graduation.
   - Changing advisor can be permitted in writing by both the new advisor and the previous one, and should be approved by the ISA office.

F. **NTHU-Professors-Only Oral Defense**
   - The NTHU-professor-only oral defense committee should consist of 3-5 members (including advisor).

G. **ISA Academic Committee**
   - After meeting one of the options below, the review application can be passed to *ISA Academic Committee*
     i. At least one thesis is accepted by noted journals
     ii. Students passing only 2 QE subjects but having 2 journal papers accepted by noted journals
   - The application should be submitted to ISA Academic Committee before 15th of every month.

H. **Final Oral Defense**
   - The committee of not-NTHU-professor-only oral defense should consist of 5-9 members (including advisor), of which at least 1/3 must be in NTHU and at least 1/3 must be out of NTHU.
   - Students may apply for oral defense only with approval from ISA Academic Committee after completing the NTHU-professor-only oral defense.
   - Committee can require the students to demonstrate their implementation.
   - The grade is determined by the average grades from the committee members in attendance. If 1/3 of the committee gives the grade less than 70, the defense will not be considered as "passed". Students who do not pass the oral defense and do not exceed time limit of being admitted to Ph.D. program, can hold the oral defense again in the next semester or next academic year. If the second oral defense still fails, students lose their Ph.D. candidacy.

I. If a Ph.D. student without a master degree does not pass the thesis oral defense, he/she can still be rewarded with a master degree with comparable master qualification in ISA.

J.   These regulations were discussed and approved in the ISA Affairs Meeting.

Addition Note:

1. In accordance with Article 62 Paragraph 8, student status will be suspended permanently by NTHU if students fail all courses (course "Thesis" not included) in current semester.
2. Students who are enrolled since the academic year 2015 have to sign up for the online course "Academic Research Ethics Education" in the first year. Students MUST pass the course before his/her oral defense.