

National Chiao Tung University
Department of Applied Mathematics
Academic Regulations for Doctoral Degree

Revised on: March 12 '11; May 7 '12
Applicable to students enrolling in 2013 or thereafter

I. Thesis Advisor

1. The Department invites applications for doctoral studies in one of the following three divisions: “Analysis and Geometry,” “Combinatorics,” and “Mathematical Modeling and Scientific Computing.” Transfer from one division to another will not be accepted after the student’s enrollment into the doctoral program.
2. A doctoral student is expected to identify his or her perspective advisor(s) within two academic years from the time of initial enrollment into the doctoral program (or within the first four enrolled semesters). In order to continue to register as a doctoral student beyond the first two academic years (from the time of initial enrollment), the student has to obtain the approval of his or her choice of advisor from the curriculum committee.

A thesis advisor should be a professor in the Department. (If the original advisor resigns from the Department after the student has passed the qualifying examination, the current advisor may designate the original advisor to continue the supervision of the student’s course work and thesis.) However, a student may choose to have his or her course work and thesis to be co-advised simultaneously by a faculty member from another department (or another university) and a full-time faculty member from the Department.

For a doctoral student in the division of “Analysis and Geometry” or that of “Combinatorics”, a co-advisor from another department (or another university) has to be either a faculty member of a department of mathematics, applied mathematics, mathematical physics or related field at another university. (As an additional requirement, a co-advisor should also be in charge of a National Science Council project in the past five years).

For a doctoral student in the division of “Mathematical Modeling and Scientific Computing”, a co-advisor from another department (or another university) can be a faculty member who works in any other academic area (However, such a co-advisor has to be in charge of a National Science Council project or an Industrial Liaison Program in the past five years).

Any future change of (thesis) advisor has to be approved by the curriculum committee. In the case when the original (thesis) advisor disagrees with the student’s request for the change of advisor, the curriculum committee would have to convene a meeting to settle down the conflict.

II. Term of Study

Full-time Doctoral students are required to finish their studies within three to seven years; part-time students are required to finish their studies within three to eight years. Students with outstanding academic performance may apply for graduation after the two-year study. Full-time doctoral students should study full-time at the Department in general. Part-time doctoral students may reduce the study-hours up to half of that of a full-time student based on permissions from their (thesis) advisor and the Department chair.

III. Course Work and Credits

Based on those credits which were earned (by a student) through taking required graduate level courses offered by the Department prior to the student’s enrollment into the doctoral program, the student can make a formal request to the Department for an exemption from the course requirements of the doctoral degree (Note however that such credits used in the exemption will not count towards the graduation-credits of the doctoral study).

In addition, the student has to keep in mind that any past course work which may be used for obtaining an exemption must be the one which was completed with outstanding academic record (and with an approval letter from the professor who instructed or supervised that past course work to be submitted to the Department).

A final decision upon the student’s request for an exemption from the course requirements (including the handling of special circumstances) will be made by the curriculum committee.

Recipients of the Ph.D. scholarships are identified by the curriculum committee. According to regulations set up by the Ministry of Education, those students receiving scholarships or grants from the Ministry of Education will have to provide services of at least 4 hours per week to the department. The duty and performance of each scholarship's recipient will be assigned and evaluated by the curriculum committee.

IV. Thesis

1. Requirements for admission to Ph.D. candidacy:

(A) The completion of 18 credits is required in general. (However, the completion of 30 credits is required for a student who has been approved for the direct admission into the doctoral program while pursuing his or her Master degree. The completion of 36 credits is required for a student who has been approved for the direct admission into the doctoral program while pursuing his or her bachelor degree). The list of required courses is not specified here and will be demonstrated elsewhere.

(B) The student is required to pass the qualifying examination. The application form of the qualifying examination, and the way in which it will be conducted will be specified at the appropriate time.

2. A Ph.D. candidate fulfilling all the following requirements can make a formal request (to the curriculum committee) for taking the doctoral degree examination.

(A) During the term of study, the Ph.D. candidate should have instructed a course of 3 or more credits, or acquired another kind of teaching experience acknowledged by the curriculum committee. (For part-time students, teaching experience acquired outside of the University is also accepted).

(B) The completion of the doctoral dissertation.

(C) For those Ph.D. candidates who have just studied for four years (not including suspended terms), the accepted journal paper(s) authored (or co-authored) by the Ph.D. candidate should meet one of the following two conditions:

(i) One accepted journal paper is of 2.5 points or more.

- (ii) Several accepted journal papers count a total of 3.5 points or more, and at least one accepted journal paper is of 2 points.
- (D) For those Ph.D. candidates who have studied for five years or more, the accepted journal paper(s) authored (or co-authored) by the Ph.D. candidate should meet one of the following two conditions:
- (i) One accepted journal paper which is of 2 points or more.
 - (ii) Two accepted journal papers which together count a total of 2.5 points or more and at least one of them is of 1.5 points.
- (E) To apply for graduation, those Ph.D. candidates who have just studied for two years should first gain the approval from the qualification panel (panel members should be academic scholars who conduct research in the relevant fields in the Nation, and must be appointed by the curriculum committee).

V. Graduation

1. A Ph.D. candidate passing the doctoral degree examination is qualified for a doctoral degree. A student who fails to pass the doctoral degree examination but has not yet reached the maximal duration of his or her term of study in the doctoral program will be allowed to retake the examination before the expiration of his or her term of study. The doctoral degree examination can only be retaken once. Students failing the doctoral degree examination twice will have to quit their doctoral programs.
2. The student's doctoral degree examination should be conducted by the doctoral degree examination committee which consists of five to seven committee members (including the advisor) suggested by the advisor. Any individual which is selected as a member in the doctoral degree examination committee should have the minimal academic qualification either as an assistant professor, or an assistant researcher at Academia Sinica. The list of committee members (as suggested by the advisor) has to be first approved by the curriculum committee, and then finalized by the University president. For the organization of the doctoral degree examination committee, the number of committee members from the University and the number of those from other academic (or research) institutes should be both at least one-third of the total number of members in the examination committee. The

advisor must attend the student's doctoral degree examination, but the advisor can not be the chair of the examination committee.

VI. Prologue

1. Any regulations or rules not being indicated above shall be processed according to related rules which pertain to the degree-awarding law, and the University Master and Ph.D. degree-awarding policy.
2. The regulations as demonstrated above are prepared by the Department curriculum committee and effective immediately after the review by the college curriculum committee and, then, by the University curriculum committee in the respective academic affair meetings. Any future revision(s) of this guideline shall follow the same procedure.
3. In case of discrepancy between the English or Chinese version, the Chinese version shall prevail.