National Chiao Tung University Department of Applied Mathematics Master's Program Regulations

Revised: March 2011, April 2012, May, September, November 2015, October 2017, April 2018, March 2019 (Applicable to old students)

1. Program Groups: The master's program is divided into "Analysis and Geometry" and "Combinatorial Mathematics" groups. Students cannot change groups within the first year of admission. To change groups, students must complete six credits of mandatory courses from the original group (three credits per semester) and apply during the second semester of the first academic year, subject to approval by the Curriculum Committee.

2. Thesis Advisor Selection: Master's students must select a thesis advisor before the second semester begins, approved by the Curriculum Committee to continue registration. The advisor should ideally be a faculty member from this department. If an external advisor is needed, a department faculty member must co-advise, with assistance from the department head if necessary. To change advisors, students must submit a written application to the department, effective upon notifying the original advisor without needing their consent. Advisors wishing to terminate their advising relationship must submit a written request to the department, which will notify the student. The department will assist in finding a new advisor if needed. Research results obtained under the original advisor's guidance can only be used for the thesis with the advisor's consent.

3. Duration of Study: The study period for master's students is two to four years, and for part-time students, two to five years. Students must complete 24 credits. Exceptionally outstanding students may apply for direct entry into the doctoral program or apply for graduation in one year. Applications for one-year graduation are reviewed by a special qualifications committee organized by the Curriculum Committee, consisting of scholars from relevant fields. Full-time study is required for regular students, while part-time students may reduce on-campus time with the consent of the advisor and department head, but it must be at least half-time.

4. Course Credit Exemption: Credits from graduate courses taken before admission, not counted towards undergraduate graduation credits, may be exempted. The number of exempted credits is determined by the Curriculum Committee, with a maximum of six credits for courses not taught by departmental faculty.

5. Degree Examination Application: Master's students may apply for the degree examination upon completing required courses and the thesis and passing the academic research ethics education test. Students must complete a "thesis originality comparison" for the examination committee's reference. The committee is composed of three to five members (including the advisor), with at least one-third being external members, approved by the Curriculum Committee and appointed by the university president.

6. Degree Conferral: Students who pass the degree examination will be awarded the master's degree. Students who fail but are still within their study period may retake the exam once. A second failure results in dismissal.

7. Direct Entry to Doctoral Program: Master's students wishing to enter the doctoral program directly must apply during the doctoral entrance examination registration period and take the same exams as other candidates. Upon passing, they must follow the university's application procedures.

8. Transfer from Doctoral to Master's Program: Students transferring back to the master's program from the doctoral program will be subject to review and approval by the

Curriculum Committee and the university.

9. Course Requirements:
   a. Common Required Courses: Colloquium (two semesters) and complete the academic research ethics education course by the end of the first semester.
   b. Individual Required Courses:
   - Analysis and Geometry Group: Real Analysis I (3 credits), and one of the following courses (3 credits): Real Analysis II, Ordinary Differential Equations I, Ordinary Differential Equations II, Partial Differential Equations I, Partial Differential Equations II, Modern Algebra I, Modern Algebra II, Advanced Probability Theory.
   -Combinatorial Mathematics Group: Topics in Discrete Mathematics (two semesters), Graph Theory (3 credits), Introduction to Combinatorics (3 credits).

10. Other Matters: Unaddressed issues follow the university's regulations for the conferral of master’s and doctoral degrees.

11. Implementation and Amendments: These regulations are formulated by the department’s Curriculum Committee, reviewed by the college and university curriculum committees, and implemented after approval by the Academic Affairs Meeting. Amendments follow the same process.