

# National Chiao Tung University Department of Mechanical Engineering Masters Program Requirements

Approved by Department faculty meeting, June 21, 1995  
Amended and approved by Department faculty meeting, January 16, 2002  
Amended and approved by Department faculty meeting, October 13, 2004  
Amended and approved by Department faculty meeting, February 23, 2005  
Amended and approved by Department faculty meeting, March 16, 2005  
Amended and approved by Department faculty meeting, September 19, 2007  
Amended and approved by Department faculty meeting, October 14, 2009  
Amended and approved by Department faculty meeting, April 13, 2011  
Amended and approved by Department faculty meeting, February 29, 2012  
Amended and approved by Department faculty meeting, February 27, 2013  
Amended and approved by Department faculty meeting, March 18, 2015  
Amended and approved by Department faculty meeting, September 23, 2015  
Amended and approved by Department faculty meeting, March 14, 2018

## I. Legal Foundation:

These graduations regulations for masters degree candidates (hereafter referred to as "graduate students") of National Chiao Tung University (hereafter referred to as "the University") Department of Mechanical Engineering (hereafter referred to "the Department" ) are formulated in compliance with the National Chiao Tung University Regulations for Master and Doctoral Degrees Conferment.

## II. Admission Channel:

Admission channels for the Department's master's degree are:

- (1) Recruitment and testing: Applications are opened to those with at least a bachelor's degree (include graduating students and the equivalent). The University has an open recruitment, and admission into the Department's masters program will be based on one of the following:
  1. Admission by recommendations (hereafter referred to as "recommended student").
  2. Admission by testing.
- (2) Bachelor's to Master's: Admission into the Department's masters program is based on the Department's Bachelor's to Master's program regulations,
- (3) Dual Degree: For graduate students enrolled in the department's Masters Program through the Dual Degree Program policies of this university and other universities.
- (4) Others: Admission into the Department's masters program is based on the University's regulations for recruiting graduate students.

### **III. Transfer from Other Departments:**

- (1)The Department does not accept transfer graduate students from other institutes or departments.
- (2)Graduate students in the Department are not permitted to transfer to other groups.

### **IV. Time to Degree:**

- (1)The Department masters program must be completed in not less than one year and not more than four years. Employed students are allowed a one-year extension.
- (2)The above time limitation for program completion does not include leave of absence. Graduate students are allowed one semester, one academic year or two academic years of leave of absence, but accumulated absence must not exceed two academic years.
- (3)Upon deadline for time to degree, graduate students who have not fulfilled graduation requirements must drop out.

### **V. Graduation Requirements:**

- (1)To graduate from the Department's masters program, students must fulfill the following requirements:
  1. Graduation credits: At least 24 credits (excluding credits for English language study courses), but graduate students of the **Energy and Thermofluids** Group must choose at least two courses of the following core courses: Applied Math, Viscous Hydrodynamics, Heat Convection, Heat Conduction and Thermal Radiation, Introduction to Turbulence, Micro and Nano Energy Transfer, Combustion Fundamentals.
  - 2.Seminar Discussion Courses: A Seminar Discussion course must be taken every semester during the program (dual degree and those approved for study abroad, with the exception for the period studying overseas). Those who have not graduated after four semesters are allowed a maximum of four semesters of Seminar Discussion course.
  - 3.Passed a masters program exam and submitted an Oral Defense Committee Review Report.
- (2)A score of less than 70 for graduate students is a failing grade, and no credit will be awarded for that course.
- (3)Credits, course and other relevant requirements for graduation are based on the graduation regulations for the year of admission into the masters program. Please refer any questions to the Teaching and Curriculum Committee.

### **VI. Advisor:**

- (1)Graduate students in the Department must confirm their choice of advisor within 2 weeks after the beginning of the first semester, and submit a proof of confirmation signed by the advisor to the Department for records. If an advisor cannot be confirmed by the deadline, an extension is allowed until

- before the second semester. If a student cannot confirm an advisor after the extension, the Teaching and Curriculum Committee will handle the matter.
- (2) Advisors must be full-time or adjunct instructors in the Department. However, if the advisor is an adjunct instructor, another full-time instructor from the Department must act as the joint advisor.
  - (3) Each instructor in the Department may only advise up to four graduate students per year (this does not include joint advising), of whom not more than three are recommended students. Special circumstances for additional students are subjected to the approval of the Teaching and Curriculum Committee.
  - (4) For joint advising, a joint advisor agreement for the proposed thesis must be submitted for approval by the current advisor, joint advisor and Teaching and Curriculum Committee, and sent to the Department for records before the oral defense.
  - (5) Where the thesis advisor and the graduate student is or was the other party's spouse, a relative by blood within the third degree, or a relative through marriage, the relationship of thesis advisor and graduate student may not be established.
  - (6) Changing advisor:
    1. Changing advisor form must be submitted to the department office by the student or original advisor, and is approved by the new advisor and the department chair. Changing advisor is allowed only once.
    2. The student must return all facilities, equipment, and resources from the original advisor.
    3. Publication and citation that include concepts, theories, and discoveries from the original advisor is prohibited unless approved by the original advisor.
    4. A new thesis proposal must be re-submitted to the department office when changing advisor, except for the original advisor resigning or retiring.
    5. Any dispute regarding change of advisor will be referred to the Teaching and Curriculum Committee, and settled by the Department faculty meeting.

## **VII. Credit Transfer and Course Waiver:**

Students who have taken graduate courses prior to admission may apply for credit transfer or course waiver according to the Department's masters program credit transfer application procedure.

## **VIII. Thesis Proposal:**

- (1) Graduate students in the Department must submit their thesis proposal for review at least 6 months before the oral defense. The Department will organize the oral defense committee. However, the thesis proposal review for dual degree is not subjected to this deadline, but will be determined by the thesis review committee.

- (2)The committee comprises at least 3 members (including the advisor), and is convened by the advisor.
- (3)Based on the graduate student's learning and thesis proposal, the committee must make recommendations to the advisor and student.
- (4)Students must submit a masters thesis proposal review form to the Department for records within one month of approval of their thesis proposal.

#### **IX. Masters Degree Exam Committee:**

- (1)The Department's masters degree Exam Committee comprises 3-5 members from the Department's on-campus and off-campus scholars and experts whose area of specialty corresponds to the student thesis. In addition, they must have the following qualifications and be recommended for appointment by the University president; the president will appoint a committee member as convener, but the advisor cannot be the convener:
  1. had previously served as professor or associate professor.
  2. a member of the Academia Sinica or had previously been a researcher or associate researcher at the Academia Sinica.
  3. has a doctoral degree, academic achievement, or assistant professorship.
  4. has qualification in a rare or unique field, and attained academic or professional achievements.
- (2)Qualification for Items 3 and 4 are determined by the Academic Committee.
- (3)Spouse of the graduate students, blood relatives thrice removed or by marriage are not permitted to serve on the masters degree Exam Committee.

#### **X. Degree Exam:**

- (1)The Department's graduate students may apply for the masters degree exam upon completion of required courses and credits, and thesis review approval.
- (2)Students who can fulfill required courses and credits at the end of the current semester may apply for an early masters degree exam upon submission of thesis proposal and recommendation by the advisor. Upon course and credit completion, the student may apply to be conferred the masters degree. However for students who fail to complete the required courses for the semester, the their degree exam results will be invalid.
- (3)The advisor will arrange the date and time for the degree exam. A hard copy of the Masters Thesis Oral Defense Letter of Recommendation must be submitted to the Department two weeks before the test, and the University president will issue a signed letter of appointment for the exam committee to form a Degree Exam Committee to conduct the exam.
- (4)The Department's masters degree exam includes thesis exam and thesis review:
  1. Thesis Exam:
    - (1)Conducted orally, with written test when necessary.

- (2) In principle, the oral defense is opened to the public. The date, time, place and thesis topic must be announced at least one week before the defense.
- (3) Initial draft for the thesis must be submitted to the Exam Committee for review at least 7 days before the oral defense.
- (4) At least 3 degree Exam Committee members must be physically present (including advisor) for the exam to proceed, and no representative is permitted.
- (5) The Exam Committee must clearly state the direction and key areas for the student to make necessary corrections to the thesis.
- (6) The total score for the Degree Exam is 100, and 70 is the passing grade. There is only one evaluation, the final score being the average of the scores given by the committee members. However, if more than one-third of the committee members present give a failing grade, then the final score is a failing grade, and an average score will not be taken.
- (7) If the Degree Exam Committee finds any acts such as plagiarism or cheating in the thesis, a failing grade is given. If such an act is discovered and proven after the degree is conferred, the degree will be revoked and the diploma recovered.
- (8) On the same day that the Department graduate students complete their thesis exam, they must submit their degree exam result form, oral defense report from each committee member present and a list of oral defense fees to the Department.

## 2. Thesis Review:

- (1) Upon passing their thesis exam, the Department's graduate students must make the necessary corrections as indicated by the Degree Exam Committee and return the corrected thesis to each committee member for review.
  - (2) The thesis review will not be graded; however, to pass, it must be approved by at least two-thirds of the Exam Committee.
  - (3) The passing score obtained for the thesis is the degree exam score, and Exam Committee members present at the exam will sign the Thesis Oral Defense Committee Review Report.
- (5) Graduate students must complete the following within a month of passing their thesis exam and review:
1. Submit the Thesis Oral Defense Committee Review Report to the Department.
  2. Upload a digital version of their thesis abstract and full-text to the National Chiao Tung University Dissertations and Theses Upload System according to National Chiao Tung University Library Dissertation Abstracts and Full-text Digital File Archiving Standard, and after review and approval by the library, print hard copies of the thesis.

- (6) In principle, the Department's masters theses (including abstract) are written in Chinese or English, and must comply with the National Chiao Tung University Thesis Formatting Requirements.
- (7) Except for students approved by the Center for Teacher Education to continue taking educational courses, the Department's graduate students who have passed their thesis exam and approved in their thesis review must submit their thesis grade and a copy of their Thesis Oral Defense Committee Review Report for records at the Office of Academic Affairs within the week.

## **XI. Graduation:**

- (1) Department graduate students who have passed the masters Degree Exam, fulfilled the masters graduation requirements and submitted their Thesis Oral Defense Committee Review Report will be recommended to the University for conferment of masters degree.
- (2) Following review and approval by the library, graduate students must log in to the graduation system in the University's Office of Academic Affairs Registrar Group and print out the graduation procedure form, have it signed by the advisor, and submit it to the Department together with the following documents:
  - 1. Thesis digital file approval notice from the library.
  - 2. Two hard copies of the thesis (in green paperback cover): one copy will be shelved at the University library, and the other copy will be collected by the Office of Academic Affairs and sent to a Ministry of Education designated archive.
  - 3. Thesis full text digital CD: The Department will keep the full-text CD version of thesis.
  - 4. Other required documents.
- (3) The Department defines the semester of masters graduation as the semester in which the student submitted the thesis exam grade and Thesis Oral Defense Committee Review Report.
- (4) Department graduate students who passed their thesis exam before January 31 or July 31, but are unable to complete their thesis review and submit their Thesis Oral Defense Committee Review Report by the second week of the following semester must register for that semester.
- (5) Department graduate students who have passed their thesis review and submitted their Thesis Oral Defense Committee Review Report, but have not completed their graduation procedure by the following semester are regarded as having graduated.
- (6) Graduate students who fail to submit their Thesis Oral Defense Committee Review Report within the required time to degree will be dropped out.

## **XII. Regulation Amendments**

- (1) Matters not noted in these regulations will be dealt with according to relevant statutes and regulations of the Ministry of Education and the

University. Any questions will be referred to the Teaching and Curriculum Committee, or decided by the Department faculty meeting.

- (2) These regulations are established by the Department faculty meetings, and implemented following review and approval by college and University curriculum committees and subsequent approval by the Academic Affairs meeting; and likewise for amendments.

These Regulations are adopted in Chinese, which shall prevail in case of any discrepancy between the English translation and the Chinese original.