

National Chiao Tung University
Institute of Management of Technology

Policies and Procedures of Master Degree Program

Passed at the Committee of Institute Affairs (6 October 1999)
Amended at the Committee of Institute Affairs (28 April, 2000)
Amended at the Committee of Institute Affairs (21 June, 2001)
Amended at the Committee of Institute Affairs (31 August, 2001)
Amended at the Committee of Institute Affairs (14 January, 2002)
Amended at the Committee of Institute Affairs (29 September, 2004)
Amended at the Committee of Institute Affairs (26 May, 2005)
Amended at the Committee of Institute Affairs (22 March, 2006)
Amended at the Committee of Institute Affairs (7 June, 2006)
Amended at the Committee of Institute Affairs (12 April, 2007)
Amended at the Committee of Institute Affairs (26 March, 2008)
Amended at the Committee of Institute Affairs (19 March, 2009)
Amended at the Committee of Institute Affairs (28 April, 2009)
Amended at the Committee of College Affairs (14 May, 2009)
Amended at the Committee of Institute Affairs (29 March, 2010)
Amended at the Committee of Institute Affairs (22 March, 2011)
Amended at the Committee of Institute Affairs (18 April, 2012)
Amended at the Committee of Institute Affairs (27 March, 2013)
Amended at the Committee of Institute Affairs (27 March, 2014)

【Study】

Article 1.

The Regulations are stipulated for the purpose of assisting Master Degree Program of Management of Technology students' study-related matter.

Article 2.

The Master Degree Program students must fulfill the following requirements:

1. Period of study: The period of study is limited from one to five years. A master student who fails to pass the oral defense or complete all required courses within the maximum period of study must drop out of NCTU.
2. Minimum graduation credits: 42 credits. (Includes the 3 credits of MBA Thesis).
3. Complete the four prerequisites or pass the credit transfer. Please refer to the article 3 for details.
4.
 - I. Required Courses 18 Credits :
 - a. International Marketing (3 credits)
 - b. Bussiness Policy & Strategic Management (3 credits)
 - c. Financial Strategies and Management (3 credits)
 - d. Industry Analysis and Innovation (3 credits)
 - e. Seminar on Enterprise Management and Ethics (3 credits)

f. MBA Thesis (3 credits)

II. Required elective courses (3 credits) :

One quantitative methodology related course is required.

III. Special field (12 credits required. Courses are divided into five fields. Each student selects one specialized field and chooses four courses from that field.)

A. Industry Analysis and Technology Policies

- a. Industry Analysis and Innovation
- b. Competitive Strategy of Emerging Industry
- c. Macro-Strategic Management
- d. Science and Technology Policy of National Innovation System
- e. Industrial Organization and Science & Technology Law
- f. Marketing Management of High-Technology Enterprises
- g. Transfer and Evaluation of Technology

B. Management of Technology Enterprises

- a. Valuation of Firm and Value-Based Management
- b. Transfer and Evaluation of Technology
- c. Marketing Management of High-Technology Enterprises
- d. Technology Forecasting & Impact Assessment
- e. Entrepreneurship and Venture Capital
- f. Value Strategy of High Tech Firm
- g. Industry Analysis and Innovation

C. Technology Management Model and Simulation

- a. Mathematical Modeling
- b. Scientific Computing
- c. High-Tech Industry Management Model
- d. Optimal Technological Theory of the Semiconductor Industry
- e. Artificial Intelligence
- f. Transfer and Evaluation of Technology
- g. Technology Forecasting & Impact Assessment

D. Technology Foresight and Industry Study

- a. Technology Forecasting & Impact Assessment
- b. Transfer and Evaluation of Technology
- c. Industry Analysis and Innovation

- d. Technology Foresight & Policy
- e. Entrepreneurship and Venture Capital
- f. Valuation of Firm and Value-Based Management
- g. Game Theory and Industrial Competition Strategy

G. General Technology Management

- a. All the courses offered by IMOT

5. Elective Course (9 credits , six of these credits can be obtained by taking courses in other NCTU departments / institutes or accredited foreign institutions)

6. Passing the Oral Defense for a Thesis and four hard copies of the thesis should be submitted .

Article 3.

The Master Degree Program requires four prerequisites, including statistics, economics, business administration / management, accounting. The prerequisites shall not count in each student's graduation credits. The Master Degree Program recognizes the prerequisites which is studied in Institute of Management of Technology Program and earned 70 or above. After admission, a master student can submit the exemption application in accordance with her/his transcripts of record in undergraduate program, or for the subject which is selected in the admission examination. A student who does not be approved for her/his exemption application shall pass all prerequisites in summer programs or formal semesters before submitting her/his master's thesis draft oral defense, or s/he shall study them in the semester which s/he applies the master's thesis draft oral defense.

Article 4.

The Master Degree Program shall organize the "Professors' Research and Interests Session" within one month after the first year master students' registrations. The Master Degree Program professors will describe their research directions, interests, and specialized fields.

Article 5.

After each student's admission, the Master Degree Program shall designate one course adviser for assisting her/his course selection.

【Adviser Application】

Article 6.

Master's thesis topic and adviser application:

Before the end of the third semester (The semesters of Leave of Absence and Retain Study Status must not be counted), a student shall invite her/his thesis adviser, fill out "Thesis Adviser Application Form" (Form C01), and submit it to Institute of Management of Technology for approval. Otherwise, the Institute must inform and remind the student. If a student suffers difficult circumstance, s/he should apply for thesis adviser arrangement by the Institute. Without any thesis adviser, a student's course selection shall obtain her/his course adviser's approval first. After inviting thesis adviser, a student's course selection shall obtain the thesis adviser's approval first. Whether it is the advisor or the student who asks to cancel the thesis instruction, both should first communicate with each other for agreement. The "Change Adviser Application Form" (Form C08) can be filled out and sign, or it can also be signed by the original adviser first, and then the student seeks another Institute of Management of Technology teacher's agreement for serving as her/his new adviser and signing the form, and submits the form to Committee of Institute Affairs for approval. If no any teacher can serve as her/his new adviser, Director of Institute shall arrange the new adviser. Thesis adviser shall be one full-time teacher of Institute of Management of Technology majorly. The adviser can invite experts or scholars in other departments or outside of NCTU who hold qualifications of assistant professors or above for joint guidance. The joint guidance must be approved by Committee of Institute Affairs of Institute of Management of Technology first. Each Institute of Management of Technology teacher can instruct five Master Degree Program students for each term. A teacher can instruct more than five students after obtaining other teachers' quota transfer form. The number of student quota must be counted as 0.5 if s/he receives the joint guidance of two teachers. However, the number of student quota must be counted as 1 if s/he receives the joint guidance of a Institute of Management of Technology teacher and a teacher of other departments or outside of NCTU.

【Graduate Thesis】

Article 7.

An oral defense committee form

According to "National Chiao Tung University Regulations for Master and Doctoral Degrees Conferment", President of NCTU must select members to form an oral defense committee for master degree. The committee must consist of three to five members recommended to the president by the Master Degree Program from among scholars and experts inside and outside of NCTU specializing in the area of research or study of the applicant. These members must fulfill at least one of the following requirements.

1. A member must have been a professor or assistant professor.
2. A member must be a research fellow or must have been a researcher and assistant researcher of Academia Sinica.
3. A member must hold a doctoral degree with outstanding academic achievements or served as an assistant professor, and the criteria of qualification determination are drawn as follows:
 - a. published two papers in ISI(SCI, SSCI), EI, or TSSCI within five years at least.
 - b. hold a doctoral degree and industrial experience for three years or above.
4. A member must have outstanding academic or professional achievements in certain rare or specific fields.
 - a. academic achievements: Published two papers in ISI(SCI, SSCI), EI, or TSSCI within five years at least.
 - b. professional achievements: Served as an executive in government agencies, nonprofit organizations, or the first 1000 enterprise in Taiwan with 20-year working experience at least. The aforementioned experts shall not exceed a quarter of all committee members.

The criteria of qualification determination for 3 and 4 must be drawn by Committee of Institute Affairs of Institute of Management of Technology.

【Thesis Draft Oral Defense】

Article 8.

Master's thesis draft progress and examination

1. Before the master's thesis oral defense, a student shall submit her/his thesis topic, research direction, and the "Thesis Adviser Application Form" (Form C01) to Committee of Institute Affairs of Institute of Management of Technology for approval. A master's thesis draft oral defense in the fall semester must be conducted in midterm of October and midterm of December, and it must be applied before one week prior to the date of oral defense. Moreover, a master's thesis draft oral defense in the spring semester must be conducted in midterm of April.
2. "Master's Thesis Draft Oral Defense Application Form" (Form C02) must be submitted to the Master Degree Program before one week prior to the date of oral defense for publishing it in Institute of Management of Technology.
3. A student whose changed the thesis topic has significant change recognized by her/his adviser must fill out "Change Thesis Topic and Committee Application Form" (Form C10), and s/he shall pass the master's thesis draft oral defense again.

4. Before scheduled the master's thesis draft oral defense, if the student can not attend the oral defense because of serious illness, traffic accident, or other critical or irresistible circumstance, the oral defense can be conducted on another date after the change is approved by Committee of Institute Affairs of Institute of Management of Technology. A student who can not pass the oral defense of her/his master's thesis draft must drop out of NCTU.
5. Oral defense method:
 - (1) A student reports her/his master's thesis draft.
 - a. Prepare copies of slide
 - b. Provide a master's thesis draft to committee members
 - c. The draft must contain the first three chapters of the master's thesis.
 - (2) The oral defense and reply must be conducted openly for Institute of Management of Technology.
 - (3) The committee members of the oral defense for the master's thesis draft must consist of the student's adviser and other 2 or 3 professors, associate professors, assistant professors, experts or scholars.
 - (4) The committee members assess whether the oral defense is passed (Form C03).
6. Master's thesis draft must express the following items:
 - (1) Research issue definition
 - (2) Research objective
 - (3) Literature review of related works
 - (4) Research method and procedure
 - (5) Predicted result
 - (6) Time flow chart
 - (7) Reference list

【Graduate Thesis Oral Defense】

Article 9.

Master's thesis progress and examination

1. A student can submit the "Master's Thesis Oral Defense Application Form" (Form C04) after passing her/his master's thesis draft oral defense and being approved by her/his adviser. A master's thesis oral defense in the fall semester must be conducted from January, and it must be applied before one week prior to the date of oral defense. Moreover, a master's thesis oral defense in the spring semester must be conducted from June.
2. A student shall submit her/his "Master's Thesis Oral Defense Application Form" and

thesis to the Master Degree Program before one week prior to the date of oral defense for publishing it in Institute of Management of Technology.

3. Oral defense methods:

- (1) A candidate shall report the research process and result of her/his thesis.
- (2) The oral defense and reply must be conducted openly for Institute of Management of Technology.
- (3) A candidate can pass the oral defense if the average grade in "Master's Thesis Oral Defense Grading Sheet" (Form C05) of each committee member is more than 70.

4. After collecting "Master's Thesis Oral Defense Grading Sheet" of each committee member, the chairperson shall average the grades and fill out the "Master's Thesis Oral Defense Record Sheet" (Form C06).

5. After completing the required courses and accumulating the minimum graduation credits, passing all qualifying tests pertaining to that program, and submitting their thesis, a master student may apply for an oral defense. After being approved by members of the oral defense committee, NCTU must confer a master degree upon the student.

6. A student who has submitted her/his thesis and who is recommended by the supervisor may apply for an oral defense even if s/he will not complete the required courses and accumulate the minimum graduation credits until the end of the semester. NCTU must confer a master degree upon the student after s/he has completed the required courses and accumulated the minimum graduation credits.

Article 10.

All master degree defense must be conducted orally in accordance with the following rules.

1. All members of an oral defense committee must attend the oral defense in person. No replacement allowed. An oral defense must only be organized when no less than three committee members, including two full-time or part-time (joint) professors at least, attend the oral defense for the master degree.
2. President of NCTU must appoint a committee chairperson from among the committee members. The adviser of candidate can not be the chairperson.
3. The passing grade and full marks of the oral defense are 70 and 100, respectively. Evaluation must be conducted once according to the average of scores given by the members attending the oral defense. Nonetheless, a master candidate is deemed failed, and no average score should be calculated, when the scores given by half or more members attending the oral defense are below the passing grade. Likewise, a doctoral candidate is deemed failed and no average score calculated when the score given by a third or more members attending the oral defense are below the passing grade.

4. A candidate is deemed failed when plagiarism or cheating is discovered in the thesis/dissertation and confirmed by the oral defense committee.
5. A student who passes the oral defense before January 31 or July 31 but fails to complete the thesis examination nor submit the "Thesis Review Letter Issued by Oral Defense Committee" within two weeks in next semester still needs to registration in the next semester. In case of a student failing to submit the "Thesis Review Letter Issued by Oral Defense Committee" within the maximum period of study, the achievement of the thesis examination shall be deemed failed and he/she must drop out of NCTU.
6. A student who passes the oral defense and completes the thesis review, except those students whose study education program needs to study education courses continuously and stay at a school approved by the Center for Teacher Education, all departments (graduate institutes and degree programs) shall submit the copies of achievements of the oral defense and "Thesis Review Letter Issued by Oral Defense Committee" to the Office of Academic Affairs for registration within one week. The graduation semester shall be the semester staying at school for submission of achievements of the oral defense and "Thesis Review Letter Issued by Oral Defense Committee". A student who has submitted an achievement of the oral defense and "Thesis Review Letter Issued by Oral Defense Committee" but is still not in the process of leaving NCTU across the new semester, his/her student status shall be deemed as graduated.

Article 11. Graduation

1. If a student completes the minimum graduation credits, has excellent performance, and plans to graduate within one year, s/he can submit her/his application for the oral defense after being examined and approved by Committee of Institute Affairs of Institute of Management of Technology and Committee of Master Degree Program of College of Management, and then being submitted to Council of Academic Affairs for approval.
2. Theses and dissertations (and their abstracts) must be written preliminary in Chinese and comply with the NCTU Thesis and Dissertation Formats. A student is required to post an electronic version of the abstract and thesis/dissertation on the university website after passing the oral defense. The website address is www.lib.nctu.edu.tw/etd/.
3. A student must also submit four copies of her/his thesis/dissertation (one collected in the Master Degree Program, one transferred to her/his adviser, one displayed in the library, and one submitted to the Dean of Academic Affairs for collection by other units as specified by the MOE).

4. Complete the graduation procedure.

Article 12.

NCTU will cancel the master degree that has been conferred to a student and must request s/he to return the certificate issued when plagiarism or cheating is discovered and confirmed in the thesis/dissertation.

【Leave of Absence】

Article 13. Leave of Absence

1. Students may file applications for Leave of Absence based on the unit of one semester. For undergraduate applications, the consent from the legal representatives is required.
2. Leave of Absence shall be for two school years on accumulated basis in principle. In case of rehabilitations for serious illness upon expiry of the periods of approved absence, students can apply to extend the Leave of Absence by submitting the applications to the Committee of Institute Affairs and Council of Academic Affairs for approvals.
3. In the event of military service during the Leave of Absence period, a copy of the military draft shall be submitted to apply for extension of Leave of Absence. Upon completion of the military service, the military release order shall be submitted within the legal period to apply for readmission to the school. The military service period shall be excluded from the Leave of Absence.
4. Any student filing for Leave of Absence based on pregnancy, childbirth, or raising of child under three years old shall submit justification issued by a contracted metropolitan hospital of National Health Insurance Administration or above, or the birth certificate of the child. The Leave of Absence shall be excluded from the maximum period of Leave of Absence allowed.
5. Other than graduate students in the Masters or PhD program who have completed the number of credits before the end of the current semester, any students applying for Leave of Absence during a semester for the current semester shall complete the procedure before the start of the examinations for the current semester as determined by the school calendar.

Article 14.

Any matter that is not fully provided for under these Regulations shall be in accordance with "NCTU Regulations for Master and Doctoral Degrees Conferment."

Article 15.

This Regulations are passed by the Committee of Institute Affairs, examined by the Curriculum Committee Organization of College of Management and the Curriculum Committee Organization, and submitted to Council of Academic Affairs for approval before implementation. The same procedure shall be applicable in the event of any amendment.