

# National Chiao Tung University

## Department of Transportation and Logistics Management

### Graduation Requirements of the Master Degree program for Foreign Students

#### 1. Period of Study

- a. Time required to complete the degree is ranging from 1 to 4 years, depending on the student progress.
- b. Student, who has published papers on SCI, SSCI, TSSCI, EI, or Journal Paper with equivalent level during the course of study, can apply for early graduation.

#### 2. Requirement for graduation

A master student must earn a minimum of 30 course credits (“Research Seminar” not included), with the following requirements:

- a. A master student must earn 18 credits for required courses provided by the department, including 9 credits for Core courses, 3 credits for Statistical and Data Analysis related courses, and 3 credits for Optimization related courses. The course list is given below.

(I) Three of the following twelve core courses should be selected

| Courses taught in English           | Courses taught in Chinese                                |
|-------------------------------------|--|
| Transportation Projects Evaluation  | Transportation Risk Management                           |
| Transportation Economics and Policy | Transportation System Analysis                           |
| Sustainable Transportation Planning | Travel Demand Analysis                                   |
| Intelligent Transportation Systems  | Global Supply Chain Management                           |
| Transportation Safety               | Transportation and Distribution Optimization             |
| Logistics Operation Planning Models | Maritime, Air and Intermodal Transportation Optimization |

(II) Statistical and Data Analysis related courses:

One of the following six professional courses should be selected:

| Courses taught in English   | Courses taught in Chinese |
|-----------------------------|---------------------------|
| Transportation Econometrics | Multivariate Analysis     |
| Stochastic Processes(IEM)   | System Simulation         |
|                             | Data Science Methods      |
|                             | Big Data Analytics        |

(III) Optimization related courses:

One of the following four professional courses should be selected:

| Courses taught in English | Courses taught in Chinese |
|---------------------------|---------------------------|
| Heuristics                | Network Modeling Analysis |
| Linear Programming(IEM)   | Mathematical Programming  |

- b. A master student must earn 9 credits for courses provided by the College of Management.
  - c. A master student must enroll “**Research Seminar**” for every semester during the study. Students for dual-degree programs and those who have already completed “Research Seminar” for four times are not included.
  - d. A foreign student should pass the TOCFL (Test of Chinese as a Foreign Language) test basic level (Band A) before graduation. Otherwise, the student should complete at least 4 credits of Chinese language courses held by a language institute in a university, and these credits are not included in the graduation credits.
  - e. A master student must complete a master thesis and pass the oral defense.
3. Thesis Advisor
- a. A student has to seek a thesis advisor right after school enrollment.
  - b. The thesis advisor must be a full-time professor of the department. It can be co-adviced by other professors outside the department or university.
4. During the period of study, if a student wishes to change his/her thesis advisor, a written application should be submmited to the department. The change of thesis advisor is effective after the notification to the original thesis advisor. Agreement from the original thesis advisor is not necessary for the change to be effective.
5. If the thesis advisor wishes to terminate the thesis instruction relationship with the student, a written application should be submitted to the department for approval, and the results will be notified to the student by the department. After the termination of the

thesis instruction relationship, the department will assist the student to find a new thesis advisor. The research results related to the ideas or concepts of the original thesis advisor under the thesis instruction can only be used as part of the student's thesis with the agreement of the original thesis advisor.

6. The Graduation Requirements have been approved by the departmental committee, College of Management, and Office of Academic Affairs. Future changes will need to be reviewed and approved by the above three units.
7. For the details not covered in this document, please refer to the graduation requirements of the master degree program for local students.