

國立交通大學電子物理系 105 學年度碩士班修業規定

National Chiao Tung University

Department of Electrophysics

Academic Regulations for Master Program of Academic Year 2016

本經由本系 102 年 11 月 15 日第五次教輔會議修正通過

本案經由本系 102 年 12 月 25 日第四次系務會議通過

本案經由 103 年 4 月 17 日第三次院課程委員會修正通過

本案經由 103 年 5 月 20 日第三次校級課程委員會通過

本經由本系 104 年 10 月 5 日第四次教輔會議修正通過

本經由本系 105 年 4 月 20 日第五次教輔會議修正通過

Amended at the 5th Committee of Teaching and Advisement (15 November 2013)

Amended at the 4th Committee of Department Affairs (25 December 2013)

Amended at the 3rd Curriculum Committee Organization of College of Science (17 April 2014)

Passed at the 3rd Curriculum Committee Organization of National Chiao Tung University (20 May 2014)

Amended at the 4th Committee of Teaching and Advisement (5 October 2015)

Amended at the 5th Committee of Teaching and Advisement (20 April 2016)

1. 入學資格：

- (1) 公立或立案之私立大學或獨立學院或經教育部認可之外國大學各學系畢業具有學士學位，或具有同等學歷之資格，經本校碩士班研究生入學考試通過者。
- (2) 上述各大學院校相關學系成績優異之畢業生或應屆畢業生，經甄試達本校招生委員會所定之最低錄取標準者。
- (3) 符合教育部訂定之「外國學生來華留學辦法」及「國立交通大學接受外國學生修讀學位暨選讀學分辦法」者。
- (4) 逕讀博士學位但因故中止修讀博士學位之學生。
- (5) 具有有效保留入學資格者。

Article 1. Qualification of Admission:

- (1) Students who have graduated from domestic public or private universities, colleges, or institutes registered in the Ministry of Education, or overseas universities, colleges, or institutes recognized by the Ministry of Education, who have acquired the bachelor degree or the equivalent education level, and who pass the admission examination of master program of NCTU.
- (2) Undergraduate students who have graduated or graduate in the current year with outstanding grade from all departments and graduate institutes aforementioned, and who fulfill the admission criteria of the master program of NCTU through the recommendation examination.
- (3) International applicants who comply with the "Regulations Governing Study by Foreign Students in Taiwan" stipulated by the MOE and the "NCTU Regulations for Admission of International Students to Degree and

Non-degree Programs."

(4) Students who are admitted to doctoral program directly but stop studying because of some reasons.

(5) Students who have kept valid qualification of admission.

2. 碩士班修業期限一至四年為限，在職研究生之修業年限得增加一年。

Article 2. The minimum and maximum periods of study for maser programs at NCTU must be one to four years. Part-time students may extend the period of study for one more year.

3. 畢業學分：碩士班研究生畢業時至少應修滿 24 學分，其中包含本系所開設專業課程至少 14 學分，專題演講必需修滿 4 學分，提前畢業者，其專題演講學分數需與在學學期數相同。

Article 3. Graduation Credits: A master student should complete at least 24 credits, including 14 or more credits of the professional courses and 4 credits of special study which are all offered by the Department of Electrophysics. For the master student who graduates early, his/her credits of special study should be the same as the number of semesters when he/she has studied.

4. 核心課程：

電子物理組：(1)高等固態物理(2)半導體物理與元件(3)古典力學
(4)電動力學(5)量子力學(6)統計力學。

光電與奈米科學組：(1)量子力學(2)高等固態物理(3)半導體物理與元件
(4)光電子學(5)電動力學(6)雷射導論。

理論物理組：(1)量子力學（一）、（二）(必修) (2)高等固態物理
(3)古典力學(4)電動力學(5)統計力學。

Article 4. Core courses:

Program of Electrophysics: (1) Advanced Solid State Physics, (2) Semiconductor Physics and Devices, (3) Classical Mechanics, (4) Electrodynamics, (5) Quantum Mechanics, and (6) Statistical Mechanics.

Program of Photonics and Nano-Sciences: (1) Quantum Mechanics, (2) Advanced Solid State Physics, (3) Semiconductor Physics and Devices, (4) Optical Electronics, (5) Electrodynamics, and (6) Introduction to Laser.

Program of Theoretical Physics: (1) Quantum Mechanics (I)(II)(Required) (2) Advanced Solid State Physics, (3) Classical Mechanics, (4) Electrodynamics, and (5) Statistical Mechanics

5. 應修學分：

(1) 理論物理組研究生必須修滿量子力學（一）、（二）兩課程學分，並至少

須在本所修滿該組 2 科不同名稱之核心課程；電子物理組與光電與奈米科學組研究生至少須在本所修滿該組 3 科核心課程。

- (2) 所修外系所所開與本系所開相近內容之課程，其學科及學分得申請辦理抵免，但專題演講及其他不同名稱之課程，不得抵免。抵免課程不得包含原學位之應修最低畢業學分。
- (3) 所修外系所所開與本系所開相同名稱之課程至多抵免 9 學分，本系所開之課程至多抵免 21 學分。辦理時，依本系抵免學分作業規定填具申請表，並經本系教學與輔導委員會審查同意。
- (4) 入學後，選修外系所學分至多採計 6 學分，教育學程之學分不予採計。
- (5) 碩士班前二年，每學期必須選修有學分數之專題演講。
- (6) 抵免學分申請應於入學後，校方申請抵免學分截止前 2 週申請辦理。

Article 5. Required credits:

- (1) A master student of Program of Theoretical Physics should complete the Quantum Mechanics (I) and (II), and two core courses with different names of his/her Program in Department of Electrophysics. Master students of Program of Photonics and Nano-Sciences and those of Program of Theoretical Physics should complete three core courses of his/her Program in Department of Electrophysics.
- (2) The completed courses and credits of the subjects offered by other departments or graduate institutes which the contents are similar to the courses of Department of Electrophysics can be applied for credit transfer, but the special study and other subjects with different names cannot be applied for credit transfer. The courses being applied for credit transfer should not include the minimum graduation credits of the original degree.
- (3) At most 9 credits of the completed courses offered by other departments or graduate institute whose names are the same as the courses of Department of Electrophysics can be applied for credit transfer. Moreover, at most 21 credits of the courses offered by Department of Electrophysics are open to credit transfer. To apply for the credit transfer, the application form should be filled in accordance with the regulation of credit transfer of Department of Electrophysics, and it should be submitted to the Committee of Teaching and Advisement of Department of Electrophysics for approval.
- (4) After admission, at most 6 credits can be calculated for selecting the courses offered by other departments or graduate institutes, and the credits of Education Program should not be adopted.
- (5) Within the first two years of master program, special study with credits should be selected every semester.
- (6) Applications for credit transfer should be submitted after admission and two

weeks before the deadline of NCTU to apply for the credit transfer.

6. 指導教授：

- (1) 研究生應於入學後第一學期結束前選定指導教授，並填具申請表，由教學與輔導委員會審查通過。逾期未辦理者將安排至教學與輔導委員會說明理由，必要時得延長一學期。
- (2) 理論物理組研究生應選定理論物理組教師為指導教授。理論物理組教師成員由教學與輔導委員會認定。
- (3) 更換指導教授，應填具申請書說明理由，並於第二學年第一學期結束前辦理完畢，申請理由須經由原、新指導教授同意、教學與輔導委員會及系主任審查通過。若原指導教授不同意時，應由教學與輔導委員會召集人召集會議審查議決之。理論物理組研究生更換理論組以外的教師為指導教授時，需入學滿一年後始可提出。逾期未辦理者將安排至教學與輔導委員會說明理由，必要時得延長。
- (4) 研究生選擇非本系專任教師為指導教授，需有一位系內專任教師為共同指導教授。並需在申請表中說明原因、研究之題目與內容，由教學與輔導委員會審查通過。

Article 6. Dissertation Adviser:

- (1) A master student should invite a thesis adviser before the end of the first semester since admission. The application form should be filled and submitted to the Committee of Teaching and Advisement for approval. Otherwise, the master student should be arranged to the Committee of Teaching and Advisement to describe his/her reasons, and the schedule can be extended for one more academic year when necessary.
- (2) A master student of Program of Theoretical Physics should invite teacher of the same program to be the thesis adviser. The teachers of Program of Theoretical Physics should be recognized by the Committee of Teaching and Advisement.
- (3) To change the thesis adviser, the application form should be filled to describe the reasons, and it should be submitted before the end of the first semester of the second academic year. The reasons of changing the adviser should be approved by the original and new dissertation advisers, and then it should be approved by the examination of the Committee of Teaching and Advisement and the director of Department of Electrophysics. If the original adviser does not approve the application, the final decision should be made in the meeting conducted by the Committee of Teaching and Advisement. A master student of Program of Theoretical Physics can apply to change his thesis adviser to be the teacher of other programs one year after admission. However, a master

student with overdue application should be arranged to the Committee of Teaching and Advisement to describe his/her reasons, and the schedule can be extended for one more academic year when necessary.

- (4) If the thesis adviser is not a faculty member with full-appointment with the Department of Electrophysics, one such member must be appointed as the co-adviser. Reasons for such occurrence, as well as the research topic and content, should be stated in the application, to be reviewed by the Committee of Teaching and Advisement.

7. 畢業論文口試應在每年7月底以前辦理完畢，條件與程序依本系碩士畢業論文口試程序辦理。

Article 7. The oral defenses for master candidates should be conducted before the end of July, and all of the requirements and procedures should comply with the regulations of the oral defense of master degree of Department of Electrophysics.

8. 研究生之碩士學位考試委員會置委員三至五人，其中系內、外至少一人，指導教授不得為考試委員。系所就校內外學者專家中對研究生所提論文有專門研究，並具備下列資格之一者，向校長推薦，由校長遴聘組成之。

- (1) 曾任教授、副教授或擔任助理教授者。
- (2) 擔任中央研究院院士或曾任中央研究院研究員、副研究員或擔任助理研究員者。
- (3) 獲有博士學位，在學術上著有成就，經系教師評審委員會審核通過者。
- (4) 屬於稀少性或特殊性學科，在學術上或專業上著有成就，經系務會議審核通過者。

Article 8. The committee of the master degree oral defense consist of three to five members, including at least one member from Department of Electrophysics and one from external organization. The adviser of the candidate cannot serve as one of the members. To form the committee, the Department of Electrophysics recommends scholars and experts, who are from NCTU or other external organizations, who specialize in the area of the applicant's research of, and who fulfill at least one of the following requirements. The Principal of NCTU selects members from the recommendation:

- (1) having held the position of professor, associate professor, or assistant professor at one time.
- (2) serving as a research fellow or having s been a researcher, associate researcher, or assistant professor at Academia Sinica.
- (3) holding a doctoral degree, having outstanding academic achievements, and being approved by Faculty Evaluation Committee of Department of

Electrophysics.

(4) having outstanding academic or professional achievements in certain rare or specific fields, and being approved by Committee of Department Affairs.

9. 碩士學位候選人之學位考試，以口試行之，並應依下列規定辦理：
- (1) 口試以公開舉行為原則，須於事前公佈口試時間、地點及論文題目。
 - (2) 學位考試委員應親自出席委員會，不得委託他人為代表，碩士學位考試委員會至少應有委員三人出席始得舉行。
 - (3) 學位考試委員會，由校長指定委員一人為召集人。
 - (4) 學位考試成績，以七十分為及格，一百分為滿分，評定以一次為限，並以出席委員評定分數平均決定之，學位考試有二分之一以上出席委員評定不及格者，以不及格論，不予平均。
 - (5) 論文有抄襲或舞弊情事，經學位考試委員會審查確定者，以不及格論。

Article 9. The degree defenses for master candidates are generally conducted orally. All oral defenses must comply with the following rules:

- (1) All oral defenses must be conducted openly. The time and place of the oral defense and the title of thesis must be announced in advance.
- (2) All members of an oral defense committee must attend the oral defense in person; stand-ins are not permitted. An oral defense for the master degree may only take place when attended by at least three committee members.
- (3) The Principal of NCTU must appoint a committee chairperson from among the members.
- (4) The passing grade and full marks of the oral defense are 70 and 100. The results should be produced from a single evaluation based on the average of the scores given by the members present. Nonetheless, a master candidate is deemed failed and no average score should be calculated when the scores given by half or more of the members present are below the passing grade.
- (5) A master candidate is deemed failed when plagiarism or cheating is discovered in the thesis and confirmed by the oral defense committee.

10. 研究生在規定修業期限內未能通過學位考試或未能完成應修課程者，應令退學。

Article 10. A graduate student who fails to pass the oral defense or to complete all the required courses within the maximum period of study is required to drop out of NCTU.

11. 碩士學位論文(含摘要)並須符合「國立交通大學學位論文格式規範」。學位考試通過後一個月內應將論文摘要及全文電子檔上網建檔(依照「國立交通大學圖書館學位論文摘要及全文電子檔建檔規範」辦理)，並繳交二冊(一冊本校圖書館陳列，另一冊由教務處彙轉教育部指定之皮藏單位)。

Article 11. Master theses (including abstracts) must comply with the NCTU

Format for Thesis/Dissertation. A student is required to post an electronic version of the abstract and thesis on the university website within one month of passing the oral defense (see NCTU Library Abstract, Thesis and Dissertation Electronization Specification for details). The student is also required to submit two hard copies of the dissertation (one displayed in the library and the other submitted to the Office of Academic Affairs for transmission to appropriate archival units as specified by the MOE).

12. 本規定由系務會議通過後，經學院課程委員會、校級課程委員會、及教務會議核備後，於次學年度入學新生開始實施，修訂時亦同。

Article 12. After the Regulations are passed by the Committee of Department Affairs, approved by the Curriculum Committee Organization of College of Science, the Curriculum Committee Organization of NCTU, and the Academic Affairs Meetings, they are applicable to students admitted in the next academic year. Subsequent revisions are subject to the same procedure.

13. 本規章未盡事宜，悉依國立交通大學碩士學位及博士學位授予作業規章及有關教育法令辦理之。

Article 13. Matters not provided herein must be subject to the "National Chiao Tung University Regulations for Master and Doctoral Degrees Conferment" and other education-related laws and regulations.

14. 本修業規定由系(或所、專班)務會議訂定，經學院課程委員會及校課程委員會審查，再送教務會議核備後實施，修訂時亦同。

Article 14. The Regulations are stipulated by the Committee of Department (Institute, or Program) Affairs, examined by the Curriculum Committee Organization of College of Science and the Curriculum Committee Organization of NCTU, and submitted to the Academic Affairs Meetings for approval before they are implemented. Subsequent revisions are subject to the same procedure.