

國立陽明交通大學物理研究所 114 學年度碩士生修業規章
Academic Regulations for Master's Students of National Yang Ming Chiao Tung
University Institute of Physics in Academic Year 2025

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第一條 入學資格

Article 1 Admission Qualifications

一、碩士班入學考試：(請依當年度招生簡章之規定)

凡在公立或已立案之私立大學或獨立學院或教育部認可之國外大學畢業獲有學士學位，或具有同等學歷，經台聯大入學考試錄取者。

(一) 筆試：100%

(二) 科目：近代物理；普通物理；應用數學。

1. Master's Program Entrance Examination: (Please follow the current year's admissions guidelines)

Bachelor degree graduates of a public university, a registered private university or independent college, or a foreign university recognized by the Ministry of Education; or those who have the equivalent qualifications and have passed the University System of Taiwan's entrance examination are eligible.

(1) Written examination: 100%

(2) Subjects: Modern Physics; General Physics; Applied Mathematics.

二、碩士班推薦甄試：(請依當年度招生簡章之規定)

凡大學院校各學系畢業生或應屆畢業生其大學各學期「學業平均成績」之平均在七十五分以上為原則，並備有助理教授以上之推薦函二封，經本所甄試考試錄取者。

(一) 資料審查 50%；面試 50%

(二) 繳交資料：報名表、自傳及讀書計劃各一篇、大學歷年成績單(含名次)正本一份，其他如大學物理學力測驗成績亦可附上。

2. Recommendation and Screening Examination for Master's Programs: (Please follow the current year's admissions guidelines)

Undergraduate students who graduate from any department of university/college or in the current year with an average of at least 75 in each semester of their studies, with two letters of recommendation by assistant professors or those higher in rank and have passed the screening examination of the Institute are eligible.

(1) Document review: 50%; Interview: 50%

(2) Documents to be submitted: An application form, an autobiography, a study plan, official transcripts for all semesters of undergraduate program (with ranking), and other documents such as the Physics result in the General

Scholastic Ability Test.

三、碩士班轉所申請：

碩士班研究生修業滿一學期以上，經原系所同意後，得申請轉入本所。轉所以一次為限。

(一) 繳交資料：申請表、大學及研究所歷年成績單(含名次)正本一份、其他有助於審查之文件影本。

(二) 轉所申請，經本所招生工作小組會議審查通過並送教務長核定之。申請程序於開學前提出並經核定，於當學期生效；於學期中提出申請並經核定者，次學期生效。

3. Transfer of Institute Application for Master's Students:

After completing at least one semester of master's studies, graduate students may apply for transfer to the Institute, with the consent of their former department/institute. Each student is limited to transfer their institute once.

(1) Documents to be submitted: An application form, official transcripts for all semesters of undergraduate and master's programs (with ranking), and photocopies of other supporting documents.

(2) The application for transfer of institute will be reviewed and approved by the admission working group of the Institute and submitted to the Dean of Academic Affairs for approval. An application submitted and approved prior to the start of the school shall take effect in the current semester, while an application submitted and approved in the mid-semester shall take effect in the following semester.

第二條 修業年限、學分

Article 2 Years of Study and Credit Requirements

一、碩士班一般生修業年限以一至四年為限，至少應修 19 學分。本所暫不收在職生，如未能於規定修業期限內通過學位考試或未能完成應修課程者，應令退學。

1. The minimum and maximum study periods for master's programs must be one to four years, and the minimum graduation credits are 19. At the moment, the Institute does not enroll in-service students. Students who fail to pass the degree examination or to complete all the required courses within the specified period are required to drop out of NYCU.

二、抵免學分之規定：抵免學分依本校學生抵免辦法提出申請，繳交申請單、成績單及課程相關資料，經所課程委員會會議通過，送教務處複核。抵免上限為 18 學分。

2. Credit transfer regulations: Students should submit an application for credit transfer in accordance with the Credit Transfer Regulations. The submitted application should include an application form, transcripts for all semesters, and other course-related documents. The applications should be approved by the Curriculum Committee of the Institute and submitted to the Office of Academic Affairs for examination. Students are allowed to transfer up to 18 credits.

第三條 論文指導教授及選課

Article 3 Dissertation Advisor and Course Requirements

一、論文指導教授

- (一) 碩士班研究生隨時可申請「碩士論文研究方向及指導教授」，但最遲必須在入學第二學年開學第一週前提出申請。逾期未敦請者，提交所務會議討論。
- (二) 本所學生須由本所專任教師任論文指導教授。若選定講座教授或合聘教授擔任指導教授，必須有本所專任教師共同指導。指導教授若退休，退休兩年內仍可繼續指導，惟須有本所專任教師共同指導。
- (三) 指導教授欲終止指導關係，應以書面文件向學生事務委員提出申請，審查結果由所長通知研究生。
- (四) 本所學生更換指導教授，應填具申請書說明理由，申請理由須經由新指導教授同意、學生事務委員及所長審查通過，並於通知原指導教授後生效。在原指導教授提供原始構想或概念及受指導下所獲得之研究成果，須經原指導教授同意，始得作為學位論文。

本條文第二款追溯適用本所在學學生。

1. Thesis advisor

- (1) Master's students may submit an application for the Master's Thesis Research Direction and Advisor at any time, but the application must be submitted within the first week after the second academic year starts. Applications received past the deadline will be submitted to the Institute Affairs Meeting for discussion.
- (2) The dissertation of a student of the Institute must be advised by a full-time faculty member of the Institute. Students who invite a chair professor or jointly-appointed professor to be their advisor must be co-advised by a full-time faculty member of the Institute. If the advisor retires, they may continue to advise for up to two years post-retirement, provided that there is a full-time faculty member of the Institute serving as a co-advisor.
- (3) Advisors who wish to terminate the advising relationship should submit a written request to the Student Affairs Committee. The Institute Director will notify the graduate student of the review result.
- (4) Students who wish to change their advisor should fill out an application form stating the reasons. The reasons stated must be approved by the new advisor, and reviewed and approved by the Student Affairs Committee and the Institute Director. The application shall take effect after the former advisor is notified. Students must have the consent of the former advisor to use the research findings obtained under the original idea or concept provided and advised by them as the student's degree thesis.

Paragraphs (2) of this Article apply retroactively to students enrolled in the Institute.

二、選課

- (一) 研究生選修任何課程均需指導教授同意，新生尚未擇定指導教授者由導師協助指導選課。
- (二) 必修課程
 1. 必修：
量子力學(一)、書報討論 4 次、學術研究倫理教育(依本校學生學術研究倫理教育課程實施辦法規定修課)、性別平等教育(依本校性別平等教育線上課程實施要點規定修課)。
 2. 必選：
 - (1) 量子力學(二)、電動力學(一)、古典力學、統計力學(一)、固態物理

(一)、粒子物理(一)、高等量子力學中必選二科。

- (2) 電動力學(二)、原子與分子物理(一)、統計力學(二)、固態物理(二)、高等固態物理(一)、量子場論(一)(二)、宇宙學簡介、生物物理學、半導體物理及元件(一)(二)、半導體製程技術、固態光學、物理光學中必選一科。

備註一：修習書報討論4次並及格。少於4學期畢業者不在此限，但其在學期間每學期必須依規定修習書報討論並及格。

備註二：除非本所當學年度之必修或必選課程未開，或經課程委員會同意，否則不得至外系所修課。

2. Course requirement

- (1) Graduate students must have the consent of their advisor for the courses to be taken. New students who have not yet selected an advisor will be assisted by their mentor for course selection.

- (2) Courses required for graduation

A. Required courses:

Quantum Mechanics (I), Four seminars, Academic Research Ethics Education (In accordance with the NYCU Students' Academic and Research Ethics Education Program Implementation Rules.), Gender Equality Education (In accordance with the NYCU Implementing Guidelines for the Gender Equity Education Online Course).

B. Required elective courses:

- a. Choose two from Quantum Mechanics (II), Electrodynamics (I), Classical Mechanics, Statistical Mechanics (I), Solid State Physics (I), Particle Physics (I), Advanced Quantum Mechanics.
- b. Choose one from Electrodynamics (II), Molecular Physics (I), Statistical Mechanics (II), Solid State Physics (II), Advanced Solid State Physics (I), Quantum Field Theory (I) (II), Introduction to Cosmology, Biophysics, Semiconductor Physics and Devices (I)(II), Semiconductor Process and Technology, Optical properties of solids, Physical Optics.

Remark 1: Take four seminars, with all grades higher than the passing grade. Students whose study period is shorter than four semesters do not need to follow this regulation, but they should complete and pass the seminar for each semester during the master's program.

Remark 2: Unless the required or required elective courses are not offered by the Institute in the current academic year or under the approval of the Curriculum Committee, students should not select courses outside of the Institute.

三、研究生選修教育學程應知會指導教授。

3. Graduate students should inform their advisor for taking the Teacher Education Program.

第四條 碩士學位考試

Article 4 Master's Degree Examination

- 一、學位考試規定依本校研究生學位授予作業規章之規定，但所內有另行規定者，則依本所之規定。

1. The degree examination should follow the "Regulations for Master and Doctoral

Degrees Conferment” of NYCU, unless otherwise prescribed by regulations stipulated by the Institute.

二、碩士班研究生申請學位考試，至遲應於口試日前兩周提出申請。畢業論文口試於每學期學位考試日程內舉行，如需延期，第一學期至遲須於元月三十一日前，第二學期至遲須於七月三十一日前舉行。論文考試舉行前，碩士班研究生應完成論文原創性比對報告並供考試委員參考；於論文考試結束後，由指導教授於學位考試成績資料表簽核確認。著作彙編之學位論文應依本校著作彙編之學位論文應行注意事項辦理。

2. Master's students should submit the application for degree examination at least two weeks before the oral defense date. The oral defense of thesis should be conducted within the degree examination schedule specified for each semester. Those who fail to do so are required to have it completed no later than January 31 for the first semester, and no later than July 31 for the second semester. Before the examination, master's students should complete the thesis originality comparison report and submit it to the Examination Committee for reference. After the examination, the advisor should sign the Degree Examination Result Form for confirmation. Thesis by publication shall meet NYCU Rules for Thesis by Publication.

三、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。

3. All oral defenses must be conducted in an open manner. The time and place of the oral defense, as well as the title of dissertation, must be announced in advance.

四、碩士學位考試委員會置委員三至五人，其資格由所教評會審核之，並由單位主管簽請校長核發考試委員暨召集人聘函。本所學位考試委員至少須兩人，指導教授不得兼任召集人。

(一) 現任或曾任教授、副教授、助理教授。

(二) 中央研究院院士、現任或曾任中央研究院研究員、副研究員、助研究員。

(三) 獲有博士學位，且在學術上著有成就。

(四) 研究領域屬於稀少性、特殊性學科或屬專業實務，且在學術上或專業上著有成就。

碩士班研究生之配偶、前配偶或三親等內之血親、姻親，不得擔任其碩士學位考試委員。

4. The Master's Degree Examination Committee should be composed of three to five members, whose qualifications should be reviewed by the Teacher Evaluation Committee. The head of the unit should then submit a request to the University President for the approval of the appointment letter for the member of Examination Committee and the convener. At least two personnel from within the Institute should be appointed as the committee members. Advisors should not be the convener.

(1) A current or former professor, associate professor, or assistant professor.

(2) An academician of Academia Sinica, a current or former researcher, associate researcher, or assistant researcher of Academia Sinica.

(3) A doctoral degree holder with outstanding academic accomplishments.

(4) Specializes in the field of study that is considered a rare or special discipline or with professional practice, and is with outstanding academic or professional accomplishments.

The master's students' spouses, ex-spouses, or those who are related to the students

by blood or marriage within the third degree of consanguinity are not allowed to serve as a member of the Master's Degree Examination Committee.

- 五、學位考試委員應親自出席委員會，不得委託他人為代表，至少應有委員三人出席，始得舉行。
5. All members of a Degree Examination Committee must attend the oral defense in person. Stand-ins are not permitted. An oral defense for master's degree should be attended by at least three committee members.
- 六、碩士論文考試成績以 B-(百分制七十分)為及格，A+(百分制一百分)為滿分，出席委員如有逾二分之一以上委員評定不及格者即以不及格論；論文考試成績以出席口試委員記名評定分數平均決定之。
6. The passing grade for the Master's Oral Defense is B- (70 points on a 100-point scale), with A+ (100 points on a 100-point scale) being the top grade. The oral defense is deemed "failed" when the scores graded by more than half of the present members are below the passing grade. The results should be determined by the average signed scores graded by the present members.
- 七、碩士學位考試不及格而其延長修業年限尚未屆滿者，得於次學期至修業年限內申請重考，重考以一次為限，重考不及格者，即令退學。
7. Students who fail the oral defense and have not reached the extended limit of study period may apply for a retake in the following semester or within their extended study period. Each student is limited to one retake. Students who fail the retake of the oral defense are required to drop out of NYCU.
- 八、論文通過口試者由口試委員明示論文修改方向及要點，做為學生修改論文之依據，學生修改論文後應提交論文審查，論文審查至少須經三分之二考試委員同意始為通過。修改後之論文定稿應完成論文原創性比對報告並經指導教授確認。論文審查不另評分，論文審查通過者，由出席論文考試之委員簽署「學位論文審定同意書」。完成論文審定者，論文考試成績即為學位考試成績。
8. Students who have passed the oral defense should revise their thesis according to the revision direction and main points indicated by the oral defense members. Students should submit the revised thesis for review and the revision must be approved by at least two-thirds of the oral defense members to pass the degree examination. After the thesis is finalized, students should complete the originality comparison report and confirm it with their advisors.
The revised thesis will not be further graded during the review process. After students passing the thesis review, the oral defense member present will sign the Authorization of the Oral Thesis Examination Committee. For those who have completed the process of thesis review, the thesis examination result will be the degree examination result.
- 九、學位考試通過後，應於考試當學期繳交「學位考試成績資料表」至註冊組，第一學期需於 1 月 31 日前繳交；第二學期需於 7 月 31 日前繳交。
通過學位考試之研究生，應繳交學位考試成績資料表、學位論文紙本、學位論文原創性比對報告、學位論文學術倫理暨原創性比對聲明書，將論文摘要及全

文電子檔上網建檔，並完成畢業離校程序後，註冊組始得發給學位證書。

學位論文紙本之繳交期限為舉行學位考試日的次學期上課開始日最後一個工作日，逾期未繳交論文紙本且未達修業年限者，次學期仍應註冊。

修業年限屆滿者，未於年限屆滿當學期繳交學位考試成績資料表或未於次學期上課開始日最後一個工作日前繳交紙本論文，應予退學。

9. After passing the degree examination, students are required to submit the Degree Examination Results Form to the Registration Section in the semester in which the examination is taken, by January 31 for the first semester and by July 31 for the second semester.

Students who have passed the degree examination should submit the Degree Examination Results Form, the hardcopy of the degree thesis, the originality comparison report, the Dissertation Academic Ethics and Originality Comparison Statement, and submit the thesis abstract and full-text electronic files online, and after completing the graduation and leaving school procedures, the Registration Section will issue a degree certificate.

The hardcopy of the degree thesis should be submitted by the last working day of the semester in which the degree examination is taken, before the day of class start of the following semester. Nevertheless, students who have not submitted the hardcopy of the thesis by the deadline and are within the study period should register their study status in the following semester.

Students who have not submitted the Degree Examination Results Form by the semester in which the limit of study period has reached or have not submitted the hardcopy of thesis by the last working day before the day of class start of the following semester are required to drop out of NYCU.

- 十、學位論文(含摘要)以中文或英文撰寫為原則，並須符合本校學位論文格式規範。學位考試通過後應將論文摘要及全文電子檔上網建檔(依照本校圖書館學位論文摘要及全文電子檔建檔規範辦理)，並繳交論文二冊(平裝一冊本校圖書館陳列，平裝一冊由國家圖書館收藏)。

10. Degree theses (including abstracts) must be written in Chinese or English and must conform to the degree thesis format of NYCU. After passing the degree examination, students are required to upload the electronic file of the thesis abstract and full-text article to the Internet (in accordance with the Regulations for Archiving Electronic Files of Degree Thesis/Dissertation Abstracts and Full-text Articles in National Yang Ming Chiao Tung University Libraries), together with two additional hardcopies submitted (a copy in softcover each for display in NYCU Library and for collection at the National Central Library).

第五條 本修業規章乃依據本校研究生學位授予作業規章第二條，各研究生修業規章經所務會議、學院課程委員會及校級課程委員會通過後實施，修正時亦同。

Article 5 The Regulations are formulated based on Article 2 of the Regulations for Master and Doctoral Degrees Conferment of NYCU. The academic regulations for graduate students will be implemented after being reviewed and approved by the Institute Affairs Faculty Meeting, both Curriculum Committees of the College and NYCU; the same shall be done upon any amendment thereto.