

國立臺灣科技大學產學創新學院智慧製造科技研究所博士班修業規章

Doctoral Program Academic Regulations of the Graduate Institute of Intelligent Manufacturing Technology, College of Industry-Academia Innovation, National Taiwan University of Science and Technology.

113 年 7 月 15 日第 18 次所務會議修正通過

Amended in the 18th Institute Affairs Meeting, July 15, 2024

完整修訂紀錄置於法規後

Complete Revision History was moved to the end of the regulations

第一條、入學資格

- 一、國內經教育部立案之公私立大學校院或符合教育部採認規定之外國大學校院畢業，獲得碩士學位，或具有報考博士班之同等學力資格，經本校博士班甄試及入學考試合格錄取者，得進入本所修讀博士學位。
- 二、本校及國立臺灣大學系統學士班應屆畢業生或碩士生，經本校博士班逕博招生考試合格錄取者，自下一學期起得進入本所修讀博士學位。
- 三、本校研究所博士班學生修業滿一學期以上，經原系所同意後，再經本所所長邀請相關領域教師進行討論，決定是否准予轉入。
- 四、其他入學資格將依國家重點領域產學合作及人才培育創新條例、大學法、主管機關及本校相關規定辦理。

Article 1: Admission Qualifications

1. Graduates from public or private universities and colleges in Taiwan, or foreign universities and colleges recognized by the Ministry of Education, who have obtained a master's degree or possess equivalent qualifications to apply for a doctoral program, and have passed the university's doctoral entrance examination, may be admitted to the doctoral program at this institute.
2. Graduating students from bachelor's or master's programs at this university or the National Taiwan University System who pass the university's direct doctoral admissions exam may be admitted to the doctoral program starting the following semester.
3. Doctoral students from this university's graduate institutes who have completed at least one semester of study, with consent from the original department, and after discussion with faculty from relevant fields invited by the institute director, may be allowed to transfer into this program.
4. Other admission qualifications will be handled according to Innovation Act for Industry-Academia Collaboration and Talent Cultivation in National Key Fields, University Act, the competent authorities, and the relevant regulations of this university.

第二條、修業年限

- 一、本所博士班研究生修業期限 2 年至 7 年為限。
- 二、逕行修讀博士班學位研究生之修業年限，自修讀博士學位起悉照博士班之規定。

Article 2: Duration of Study

1. The duration of study for doctoral students at this institute is limited to a range of 2 to 7 years.
2. For students directly admitted to the doctoral program, the duration of study will follow the regulations of the doctoral program starting from the beginning of their doctoral studies.

第三條、課程學分規定

- 一、本所博士班研究生於畢業前至少須修滿專業課程 18 學分，其中須包含本所必修智慧製造導論，及至少修習本所三類領域(工業數據科學、智慧製造與營運、機器人工程與自動化技術)各 1 門課程及學院必修產學創新大師講座課程；修業期間應至少通過論文研討課程 1 學期，並完成博士論文；修習論文研討、專題討論及企業實習等三類課程不計入專業課程之 18 學分中。
- 二、逕行修讀博士班學位研究生至少應修畢 30 學分(不包括論文研討、企業研發實習課程及學位論文研究)。
- 三、學術研究倫理課程為必修教育課程，但不計入專業學分，課程教學方式及成績評定依本校規定辦理。
 - (1) 相關規定與資訊請至本校「學術研究倫理課程報名」系統查詢
<https://ae.cge.ntust.edu.tw/>
 - (2) 本課程成績未達及格標準之學生，不得申請學位考試。
- 四、依本校第 151 次教務會議決議，自 98 學年度入學之博士生及碩士班一般生(不含外籍生與在職專班生)均應必修英文 4 學分。若學生持有入學前兩年內或入學後通過之全民英檢中級複試或相同等級之其他英語測試成績證明、擁有英語系國家學位獲得結業証書者，或曾以英文發表論文其英文能力優良經教授推薦且經系所審查委員會審核通過者。亦可抵免必修英文 4 學分。

Article 3: Course Credit Requirements

1. Doctoral students at this institute must complete at least 18 credits of professional courses before graduation, which must include the required course "Introduction to Intelligent Manufacturing" and at least one course from each of the three specialized field (Industrial Data Science, Intelligent Manufacturing and Operations, Robotics Engineering and Automation Technology), as well as the mandatory "Special Topics on Industry-Academy Innovation" course. During their studies, students must also complete at least one semester of the thesis seminar course and complete their doctoral thesis. Courses such as thesis seminars, special topic discussions, and industry internships do not count toward the 18 credits of professional courses.
2. Students directly admitted to the doctoral program must complete at least 30 credits (excluding thesis seminars, industry internships, and thesis research).
3. The Academic Research Ethics course is a required educational course but does not count toward professional credits. The course teaching methods and grading will be handled according to the university's regulations.
 - (1) Relevant regulations and information can be found on the university's "Academic

Research Ethics Course Registration" system:

<https://ae.cge.ntust.edu.tw/>

- (2) Students who do not meet the passing standard for this course may not apply for the degree examination.
4. **(Local Students Only)** According to the resolution passed at the 151st Academic Affairs Meeting, starting from the 98th academic year, doctoral students and general master's students (excluding international students and in-service program students) are required to complete 4 credits of English. Doctoral students at this institute who write their doctoral thesis in English may be exempted from the 4-credit English requirement. Students who pass the intermediate level of the General English Proficiency Test (GEPT) or an equivalent English proficiency test, or who hold a degree from an English-speaking country, may also be exempted from the required 4 English credits.

第四條、學分抵免

- 一、重考、重新申請入學或依照法令規定先修讀學分後考取修讀學分之研究生得申請抵免，抵免學分數以應修畢業學分數 1/2 為限(論文研討不得抵免)。
- 二、本所學分抵免方式，悉依本校「學生抵免學分辦法」辦理；研究生入學前所修之與本所相關領域課程學分，且不計入其前一級學位畢業學
- 三、分始得申請，申請時請繳交各科成績單及課程內容說明。
- 四、申請抵免科目限五年內(含)所修且成績達 70 分(等第制 B-)以上。
- 五、在碩士班已修畢之課程，如於修讀博士班期間重覆選修將不得計算在畢業學分內。

Article 4: Credit Exemption (**Local Students Only**)

1. Graduate students who retake courses, reapply for admission, or have earned credits in accordance with legal provisions before admission may apply for credit exemption. The maximum number of credits that can be exempted is half of the required graduation credits (thesis seminars cannot be exempted).
2. Credit exemption at this institute will be handled according to the university's "Credit Exemption Regulations." Graduate students may apply for exemption for courses related to the institute's fields of study taken prior to admission, as long as those credits were not counted toward the completion of the student's previous degree. When applying, students should submit transcripts and course syllabi.
3. Applications for credit exemption can only be made for courses taken within the last five years (inclusive) with a grade of 70 or higher (B- or equivalent).
4. Courses that have already been completed in a master's program and are repeated during doctoral studies will not count toward graduation credits.

第五條、論文指導規定

- 一、博士班研究生在新生辦理報到後，應於本所規定時間內確定指導教授，繳交「博士班學生指導教授同意函」。論文指導教授以選擇本所專任(或合聘)教授、副教授、助理教授為原則。指導教授可敦聘校外產業界專家擔任共同指導教授，該人士須具現任之大學專任助理教授以上之資格或為本所兼任教授、副教授、助理教授資格。

教師與研究生具有配偶、三親等內之血親或姻親，或曾有上述關係者，不得擔任其論文指導與共同指導教授。指導教授及共同指導教授 1 位除外，不列入學生論文計點之共同作者。

- 二、本所博士班學生欲選外系所或外校老師為共同指導教授時，須經指導教授與所長同意。
- 三、本所博士班學生無法覓得指導教授或指導教授因生病、辭職、出國或其他因素無法再繼續指導時，本所將提供必要之協助。
- 四、本所博士班學生如擬終止論文指導關係或更換指導教授，應以書面通知本所及原指導教授及完成各項交接事務且完成簽署新指導教授同意函流程後生效。
- 五、指導教授欲終止指導關係，應以書面文件向本所提出申請，審查結果由本所通知博士班學生。終止指導關係後，本所得協助該生另覓指導教授。
- 六、簽訂更換指導教授同意函之日期至口試日期計算須相隔一年以上，若有未符合規定欲申請畢業者，須經所長邀請相關領域教師討論審議核可。
- 七、本所博士班學生由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，須經指導教授同意，始得公開發表或作為學位論文使用。

Article 5: Thesis Supervision Regulations

1. After doctoral students have completed their registration, they must confirm their thesis advisor within the prescribed time by the department and submit the "Doctoral Student Advisor Consent Form." The thesis advisor should ideally be a full-time (or jointly appointed) professor or associate professor of the department. The advisor may invite an external industry expert to serve as a co-advisor, who must hold the current position of a full-time associate professor or higher at a university or be qualified as an adjunct professor or associate professor of the department. Faculty members who are spouses, within three degrees of blood or marital relation, or have had any of these relationships with the student, are not allowed to serve as the thesis advisor or co-advisor. The thesis advisor and one co-advisor, if applicable, are excluded from being counted as co-authors of the student's thesis.
2. If a doctoral student wishes to choose an advisor from another department or institution as a co-advisor, prior approval must be obtained from both the thesis advisor and the department chair.
3. If a doctoral student is unable to find a thesis advisor or if the thesis advisor is unable to continue supervision due to illness, resignation, going abroad, or other factors, the department will provide necessary assistance.
4. If a doctoral student wishes to terminate their thesis supervision relationship or change advisors, they must notify both the department and the current advisor in writing, complete all handover procedures, and submit a new advisor consent form before the change takes effect.
5. If a thesis advisor wishes to terminate the supervisory relationship, they must submit a written application to the department, and the result of the review will be communicated to the doctoral student. After the termination of the relationship, the department will assist the student in finding a new advisor.

6. The date of signing the advisor change consent form must be at least one year before the oral defense. If a student wishes to apply for graduation without meeting this requirement, they must have the relevant faculty members from the field discuss and approve the request, as invited by the department chair.
7. The original concept or ideas provided by the thesis advisor, along with the research results obtained under their guidance, must be approved by the advisor before they can be publicly presented or used in the thesis.

第六條、博士學位候選人資格考核規定

依本所博士學位候選人資格考核實施辦法辦理。

Article 6: Regulations on Doctoral Candidate Qualification Review

The qualification review for doctoral candidates shall be conducted in accordance with the implementation regulations of this department.

第七條、博士學位考試規定

- 一、博士班學生須先經第六條博士學位候選人資格考核通過。
- 二、博士候選人提出畢業申請時，需已於 SCI 或 SSCI 期刊發表至少 2 篇論文，並發表至少 1 篇國際研討會論文。
- 三、舉行學位考試之學生應完成「論文原創性比對」，供學位考試委員參考。
- 四、博士學位論文(含摘要)需以英文撰寫，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。
- 五、本所博士班學生需於預計學位考試前一年之學位考試截止日前將論文題目及研究目的送交本所審查是否與本所專業領域相符，經審核通過者，得提出論文申請博士學位考試，如未依規定提交審查不得申請博士學位考試。通過博士學位考試，並符合博士班學生修業規定且繳交論文紙本者，由本所報請學校授予博士學位。
- 六、學位考試成績不及格，其修業年限尚未屆滿者，得於次學期或次學年重考，重考以一次為限；重考成績仍不及格者，應令退學。
- 七、已申請學位考試之研究生，若因故無法於該學期內完成學位考試，本所將於次學期第一個工作日將未舉行考試之名單提交註冊組。
- 八、博士班學生提出之學位論文有違反學術倫理情事時，根據本校相關規定辦理。

Article 7: Doctoral Degree Examination Regulations

1. Doctoral students must first pass the doctoral candidate qualification review outlined in Article 6.
2. When applying for graduation, doctoral candidates must have published at least 2 papers in SCI or SSCI journals and at least 1 paper in an international conference.
3. Students taking the degree examination must complete a "Thesis Originality Comparison" for reference by the examination committee.
4. The doctoral thesis (including the abstract) must be written in English and comply with the university's thesis format specifications. After passing the degree examination, the

thesis abstract and full text in electronic form must be uploaded and archived online.

5. Doctoral students must submit their thesis title and research objectives to the department for review one year before the expected degree examination deadline, to ensure alignment with the department's professional field. If the review is approved, the student may apply for the doctoral degree examination. Failure to submit for review according to regulations will result in the inability to apply for the doctoral degree examination. After passing the doctoral degree examination and meeting the academic requirements, the student must submit a paper copy of the thesis. The department will then request the university to confer the doctoral degree.
6. If a student fails the degree examination but has not yet reached the maximum duration of study, they may retake the exam in the following semester or academic year. A student may retake the examination only once; if they still fail after retaking, they will be dismissed.
7. If a student who has applied for the degree examination is unable to complete the examination within the semester, the department will submit the list of students whose examinations were not held to the registration office on the first working day of the next semester.
8. If a doctoral student's thesis is found to violate academic ethics, the matter will be handled in accordance with the university's relevant regulations.

第八條、博士學位考試委員資格規定

- 一、博士班學生之博士學位考試委員會置委員五至九人，由本所就校內外學者專家中對博士班學生所提論文之研究領域有專門研究，並具備下列資格之一者，經指導教授與所長初步同意後，陳請校長同意組成，校內外委員均各須佔三分之一(含)以上；學生之配偶、前配偶或三親等內之血親、姻親，不得擔任其博士學位考試委員。
- 二、現任或曾任教授、副教授者。
- 三、擔任中央研究院院士、現任或曾任中央研究院研究員、副研究員。
- 四、獲有博士學位，在學術上著有成就者，或在專業實務或技能上著有成就者。
- 五、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者。
- 六、前項第三款、第四款資格之認定基準，由本所訂定之。

Article 8: Qualifications for Doctoral Degree Examination Committee Members

1. The Doctoral Degree Examination Committee for doctoral students shall consist of 5 to 9 members. These members will be selected from scholars and experts within and outside the university who have specialized research in the field of the student's thesis. They must meet at least one of the following qualifications. After obtaining preliminary approval from the thesis advisor and department chair, the list will be submitted to the president of the university for final approval. The committee must include at least one-third of members from both internal and external institutions. The student's spouse, ex-spouse, or blood relatives or in-laws within three degrees of kinship are not allowed to serve as members of their doctoral degree examination committee.

2. Currently or formerly a professor or associate professor.
3. Serving or having served as an academician, researcher, or associate researcher at Academia Sinica.
4. Holding a doctoral degree with significant academic achievements or having notable accomplishments in professional practice or skills.
5. Engaged in research in a rare, specialized discipline or professional practice, with significant achievements either academically or professionally.
6. The criteria for determining qualifications in items 3 and 4 will be established by the department.

第九條、畢業與離校

- 一、至本校圖書館之博碩士學位論文數位全文系統，上傳論文全文，等待圖書館審核論文後方可下載論文授權書兩式。
- 二、至本校「學生資訊系統」登入填寫「畢業生離校手續單」及「應屆畢業生流向問卷調查」後下載並列印紙本離校手續單，持紙本離校手續單依指示跑離校流程。
 1. 本所辦公室：繳交平裝本論文兩本
 2. 本校圖書館：繳交精裝本論文一本(紅色皮革)、論文授權書兩式

Article 9: Graduation and Departure Procedures

1. Upload the full text of the thesis to the university library's digital thesis and dissertation system. After the library reviews and approves the thesis, you may download two copies of the Thesis Authorization Form.
2. Log in to the university's "Student Information System" to complete the "Graduation Clearance Form" and the "Graduate Exit Survey." Download and print the hard copy of the clearance form and follow the instructions to complete the departure process:
 - (1) Department Office: Submit two paperback copies of the thesis.
 - (2) University Library: Submit one hardcover copy of the thesis (red leather binding) and two copies of the Thesis Authorization Form.

第十條、本規章未盡事宜，依本校相關規定辦理。

Article 10: For matters not covered in these regulations, refer to the relevant university policies.

第十一條、本規章由本所所務會議訂定實施，修正時亦同。

Article 11: These regulations are established and implemented by the Institute Affairs Meeting, with the same procedure applied to any amendments.

規章修訂紀錄 Complete Revision History：

111 年 9 月 7 日第 2 次所務會議制訂

Passed at the 2nd Institute Affairs Meeting, September 7, 2022

112 年 3 月 8 日第 6 次所務會議修正通過

Amended in the 6th Institute Affairs Meeting, March 8, 2023

112 年 4 月 12 日第 7 次所務會議修正通過

Amended in the 7th Institute Affairs Meeting, April 12, 2023

113 年 7 月 15 日第 18 次所務會議修正通過

Amended in the 18th Institute Affairs Meeting, July 15, 2023