

國立東華大學材料科學與工程學系博士班修業要點
Materials Science and Engineering, National Dong Hwa University
Degree Requirements for the PhD Program

93.09.09 93 學年度第 1 學期第 1 次系務會議修訂
95.01.17 94 學年度第 1 學期第 5 次系務會議修訂
97.09.25 97 學年度第 1 學期第 1 次教務會議通過
98.05.06 97 學年度第 2 學期第 3 次系務會議通過
98.06.11 97 學年度第 2 學期第 2 次教務會議通過
99.04.27 98 學年度第 2 學期第 2 次系務會議通過
99.06.09 98 學年度第 2 學期第 2 次教務會議通過
101.02.29 100 學年度第 2 學期第 1 次系務會議通過
101.03.07 100 學年度第 2 學期第 1 次教務會議通過
105.11.16 105 學年度第 1 學期第 2 次系務會議通過
106.05.31 105 學年度第 2 學期第 2 次教務會議通過
106.05.31 105 學年度第 2 學期第 2 次教務會議通過
108.11.27 108 學年度第 1 學期第 2 次系務會議通過
109.4.13 108 學年度第 2 學期第 1 次院務會議修訂通過
109.6.10 108 學年度第 2 學期第 2 次教務會議修訂通過
109.11.18 109 學年度第 1 學期第 2 次系務會議通過
109.12.14 109 學年度第 1 學期第 2 次院務會議修訂通過
109.12.30 109 學年度第 1 學期第 2 次教務會議通過
112.03.29 111 學年度第 2 學期第 1 次系務會議通過
112.04.25 111 學年度第 2 學期第 2 次院務會議修訂通過
112.06.07 111 學年度第 2 學期第 2 次教務會議通過
113.06.06 112 學年度第 2 學期第 1 次系務會議通過
114.06.04 113 學年度第 2 學期第 2 次教務會議修正通過

一、法源依據：

本要點依據本校學則、博士班、碩士班研究生學位考試辦法及相關法規訂定。

I. Legal foundation

These requirements have been formulated in accordance with NDHU - Academic Regulations, the guidelines for the exam of degrees for Ph.D. and Master programs and other relevant laws and regulations.

二、入學資格：

- (一) 凡在公立或已立案之私立大學或獨立學院，或是經教育部認可之國外大學研究所主修材料或其他相關學科獲有碩士學位，經本校博士班研究所招生考試錄取者（含甄試），得進入本系博士班修讀博士學位。
- (二) 外國學生得依本校「外國學生入學辦法」之規定申請入學。
- (三) 學生符合本校「學生逕修讀博士學位作業規定」規定者，得逕修讀博士學位。
- (四) 申請轉系所組學生，依本校「學生轉系、所辦法」之規定辦理。

II. Admission requirements

- i. Applicants with a Master's degree in Materials Science (major) from a public or accredited private university or independent academy or a foreign university which has been approved by the Ministry of Education or students in their graduation year or with equivalent academic qualifications will be admitted to the Ph.D. program of the department after passing the entrance exam for the programs (including a screening test).
- ii. Applications submitted by foreign students are handled in accordance with the regulations stated in Admission Guidelines for Foreign Students.
- iii. Students meet the criteria of the NDHU Guidelines for direct admission to Ph.D. Programs and may directly enroll in those programs.
- iv. Transfer students from other departments are handled in accordance with the Guidelines for Department Transfer.

三、修業年限：

二至七年為限，但在職研究生，得延長其修業年限二年。

III. Program length

2 to 7 years, the maximum program duration may be extended by 2 years for part-time graduate students.

四、修課及學分抵免規定：

(一) 詳如本系博士班課程規劃表。

(二) 本校博士生均須完成「學術研究倫理教育課程」並達及格標準，或提出「學術研究倫理教育」相關課程之修課通過證明（須經系所認定抵免）。出示修課證明始得申請學位考試；未完成本課程者，不得申請學位考試。

IV. Program requirements

- i. Based on the curriculum plans for Ph.D. programs of the department.
- ii. The Ph.D. students have to complete the "academic research ethics education" course and pass the requirement, or file "academic research ethics education" related-courses that you have earned the course-credits already (The admission of course credit is determined by the department committee). Only by showing proof that you have earned the credit, you are eligible to apply for the master-degree examination. If you have unfinished the course, you are not eligible to apply for the master-degree examination.

五、關於指導教授之規定

(一) 指導教授必須為本系助理教授（含）以上之專任教師擔任。若有特殊原因，

得經系務會議通過，選非本系之專任教師為共同指導教授。

(二) 指導教授之選定須於入學後一年內完成，並繳交指導教授同意書。

(三) 變更指導教授需經原指導教授、新指導教授及系主任之書面同意。

V. Regulations regarding thesis supervisors

- i. Thesis supervisors have to be selected from the full-time faculty of the department and have to be at least assistant professors. Under special circumstances, joint supervising professors may be selected from the full-time faculty of other departments upon approval by the Department Affairs Committee.
- ii. Thesis supervisors have to be selected within one year after enrolment and letters of consent by the professors have to be submitted.
- iii. If thesis supervisors have to be replaced, written permission has to be obtained from the original supervisor, the new supervising professor, and the department dean.

六、博士學位之取得

分研究計畫考試、期刊發表及博士學位考試三個階段。

VI. Award of PhD degrees

Divided into the following three stages: thesis proposal exam, journal publications, and degree exam.

七、研究計畫考試：

(一) 研究計畫考試以書面報告與口試方式考核，並依下列規定辦理：

1. 研究生應於開學前一週經指導教授同意後提出申請，且於研究計畫考試前公佈口試時間、地點及論文題目。
2. 研究計畫考試委員會成員必須為助理教授(含)以上專任教授或有類似研究職務且具博士學位之人員，由本系系務會議推選三名委員(不得包括指導教授)組成，委員應親自出席研究計畫考試。
3. 委員的評核結果分為通過、有條件通過及不通過。評核結果如為有條件通過者，應依據評核之綜合意見修改研究計畫，並於考試後一個月內經指導教授簽名認可後，再送考試委員審核回覆通過。本考試採多數決，需 2/3(含)以上委員同意通過，始通過本研究計畫考試。
4. 研究生通過研究計畫考試後，始可申請博士學位考試。
5. 論文有抄襲或舞弊情事，經研究計畫考試委員會審查確定者，以不及格論。

6.研究計畫考試成績不及格，而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。

(二) 博士班研究計畫考試應於入學後的三年內完成，否則應予退學。

VII. Thesis Proposal Exam

- i. The Thesis Proposal Review is administered as a thesis proposal and an oral proposal in accordance with the following regulations:
 - (A) Graduate students should submit applications with the approval of the supervisor before the final exam of the semester before the Thesis Proposal Exam.
 - (B) The members of the Thesis Proposal Review Committee must be assistant professors (including) full-time professors or personnel with similar research positions and a doctoral degree. They are composed of three members elected by the Department's Teaching and Curriculum Committee. The Thesis Proposal Review committee members are required to personally attend the oral exam and may not commission others to serve as substitutes. Qualifying committee members must not include the supervising professor.
 - (C) The evaluation results of the Thesis Proposal Review are divided into pass, conditional pass and fail, and the majority vote is adopted. If more than 2/3 (inclusive) pass, it is passed; if more than 2/3 (inclusive) pass conditionally, it is conditionally passed; if more than 2/3 (inclusive) fail to pass, it is not passed; if 1/3 pass, 1/3 pass conditionally, 1/3 failed, it is conditionally pass.
 - (D) If the evaluation result is conditionally passed, the research plan should be revised according to the comprehensive opinions of the evaluation. It must be approved by the advisor within one month after the exam, and then send to the exam committee for review and confirm comments replies satisfied, the research plan exam can be considered as pass.
 - (E) Graduate students can apply for the doctoral degree examination only after they pass the Thesis Proposal Review.
 - (F) If plagiarism or fraud is detected in the thesis by the degree exam committee, the exam is considered failed.
 - (G) Students who have failed their degree exams and haven't reached the maximum program duration may retake the exam in the next semester or academic year. Students who fail their exam a second time will be expelled.

- ii. The Thesis Proposal Review has to be completed within three years after enrolment.
Failure to do so will result in expulsion.

八、論文發表

- (一) 博士班研究生所發表之論文，必須是該生在本系博士班就讀期間之研究成果，並以本系全銜刊登。
- (二) 申請博士學位考試其研究成果必須在國際期刊發表或被接受，依計點標準規定，畢業要求之總點數必須超過 6 點（含）以上，其中至少含一篇署名為第一作者且是以東華大學名義發表的 A 級 SCI 論文。
- (三) 計點標準
1. 期刊分類依照本所教師升等時之期刊分類。SCI 論文依 Journal Citation Report 之 “Subject Category” 分類，依據各領域之 Impact Factor 排序區分為 A、B 二級，所發表之論文在該領域排名前 50% 者列為 A 級，排名後 50% 者列為 B 級。
 2. SCI 列名之 A 級期刊 3 點。
 3. SCI 列名之 B 級期刊 2 點。
 4. 發明專利，0.5 點，新型專利，0.5 點。
 5. 國際會議論文，0.2 點；國內會議論文，0.1 點。
 6. 國內期刊：指材料科學與中國工程學刊二種，0.5 點。
 7. 國際 proceeding、論文或專利內容重覆者，擇一較高點數計算。
 8. 4~7 總計不得超過 1 點。
 9. 論文或專利作者，指導教授除外，第一位作者以全點計算，第二位以全點之 1/2，第三位以全點之 1/4，依此類推。

【註】期刊分類標準，依本系教師升等辦法中之規定辦理。

VIII. Thesis publication

- i. The thesis published by Ph.D. candidates has to be the result of the student's research while being enrolled in the Ph.D. program at this department and has to be published with the full name of the department.
- ii. Before the student is eligible to apply for the degree exam, his/her thesis has to be published or accepted by an international journal. The student also has to accumulate a total of at least 6 points to qualify for graduation. One of the published articles has to appear in a class-A SCI journal with the student as the first author and be published in

the name of the university.

iii. Point award criteria

- (A) Journal categories are identical to those used for promotion evaluations of the department. SCI papers are classified according to the "Subject Category" of the Journal Citation Report and are divided into A and B according to the ranking of Impact Factor in each field. Published papers ranked in the top 50% of the field are classified as A-level, and those ranked in the bottom 50% are classified as B-level.
- (B) Three points are awarded for a full paper that is listed as an A-class journal in the SCI.
- (C) Two points are awarded for a full paper that is listed as a B-class journal in the SCI.
- (D) 0.5 points are awarded for invention and utility patents.
- (E) 0.2 points and 0.1 points are awarded for international conference papers and national conference papers, respectively.
- (F) 0.5 points are awarded for articles published in national journals such as Materials Science and the Journal of the Chinese Institute of Engineers.
- (G) If papers, articles, or patents are published more than once, points will be awarded according to the highest criteria.
- (H) The total for items 4-7 may not exceed 1 point.
- (I) The first author of an article or patent will be awarded the full number of points, while the second and third author will be awarded 50% and 25% of the available points, and so on.

[Note] Journal categories are based on the regulations stated in the Department Guidelines for Faculty Promotions.

九、博士學位考試

- (一) 博士學位論文（含摘要）須符合國立東華大學學位論文格式規範。學位考試通過後應將論文摘要及全文電子檔上網建檔(依照國立東華大學圖書館學位論文摘要及全文電子檔建檔規範辦理)，並繳交論文三冊(一冊系收藏，二冊本校圖書館陳列及彙轉教育部指定之度藏單位收藏)。
- (二) 博士學位考試委員會置委員五至九人，校外委員至少佔三分之一以上，委員需具備下列資格之一者，由系主任提請校長遴聘之。博士班研究生之配偶或三親等內血親或姻親，不得擔任其博士學位考試委員。

1. 現任或曾任教授、副教授者。
2. 中央研究院院士、現任或曾任中央研究院研究員、副研究員。
3. 獲有博士學位，在學術上有成就者。
4. 研究領域屬於稀少性或特殊性學科，且在學術或專業上有成就者。

前項第三款、第四款之提聘資格認定標準，由本系教師評議委員會審核之。

(三) 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、地點及論文題目並安排大型場所容納聽眾。
2. 學位考試委員應親自出席學位口試，不得委託他人為代表，博士學位考試委員會至少應有委員五人出席，出席委員中需有校外委員三分之一以上時始得舉行。
3. 學位考試委員會由委員互推一人為召集人；但指導教授不得擔任召集人。
4. 學位考試成績，以七十（B-）分為及格，一百分（A+）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，有三分之一以上出席委員評定不及格者，以不及格論。
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，並送本校學生獎懲委員會議處。
6. 學位考試成績不及格，而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。
7. 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，應於學校行事曆規定學期結束日之前報請學校撤銷該學期學位考試之申請。逾期未撤銷者，以一次不及格論。

(四) 學位考試成績不及格，而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。

(五) 指導教授應確認研究生論文題目與內容符合本系所專業領域。

(六) 博士班研究生應提交論文相似度比對報告，有關比對報告需依本系論文相似度比對標準規定辦理。

IX. Degree exam

- i. The Ph.D. thesis (including the abstract) has to conform to the NDHU format guidelines for academic theses. Upon successful completion of the degree exam, the thesis abstract and the complete digital file have to be uploaded and archived in accordance with the relevant library guidelines. The student also has to submit three copies of the thesis (one copy will be stored in the department, the second copy will be displayed in the library, while the final one copies are forwarded and stored in archives designated by the Ministry of Education)

- ii. The Ph.D. degree exam committee consists of 5 to 9 members. External examiners have to make up at least 1/3 of the committee members. Committee members have to meet one of the criteria stated below and are appointed by the President on the request of the Department Dean. Spouses, third-, second-, and first-degree blood relatives, and relatives by marriage are not eligible to serve as exam committee members.
 - (A) Current or previous tenure as professor or associate professor
 - (B) Appointment as an Academician at Academia Sinica, current or previous appointment as a research fellow
 - (C) Current or previous tenure as associate professor or appointment as an associate research fellow at Academia Sinica with outstanding academic achievements
 - (D) Ph.D. degree holders with outstanding academic achievements
 - (E) Representatives of rare or unique fields of study with outstanding academic or professional achievements

The qualification criteria for appointment based on items 2 to 5 are determined by the Faculty Evaluation Committee of the department.

- iii. The degree exam is administered as an oral exam in accordance with the following regulations:
 - (A) The oral exam is a public event. The exam time, location, and thesis topic have to be announced in advance and the exam is held in a venue with a large capacity.
 - (B) The degree exam committee members are required to personally attend the oral exam and may not commission others to serve as substitutes. A minimum of five committee members have to be present during the exam. External examiners have to make up at least 1/3 of the attending committee members.
 - (C) One of the committee members other than the supervising professor serves as convener.
 - (D) The passing grade for the degree exam is 70 (B-), while the full score is 100 (A+). Scores are only assessed once and the final score is the average of the scores awarded by each attending committee member. If students receive non-passing grades from at least 1/3 of the attending committee members, the exam is considered failed.
 - (E) If plagiarism or fraud is detected in the thesis by the degree exam committee, the

exam is considered failed and the student will be penalized by the NDHU Student Disciplinary Committee.

(F) Students who have failed their degree exams and haven't reached the maximum program duration may retake the exam in the next semester or academic year. Students who fail their exam a second time will be expelled.

(G) Students who have already submitted an application for their degree exam and are unable to attend the exam in the respective semester for certain reasons should petition the university to withdraw their applications before the end of the semester as specified in the event calendar. If students fail to withdraw their applications, the exam is considered failed.

iv. Students who have failed their degree exams and haven't reached the maximum program duration may retake the exam in the next semester or academic year. Students who fail their exam a second time will be expelled.

v. The thesis advisor should confirm that the topic and content of the graduate thesis are in line with the professional field of the department.

vi. Doctoral students should submit a thesis similarity comparison report, and the relevant comparison report should be handled in accordance with the department regulations on thesis similarity comparison.

十、本校對已授予之博士學位，如發現論文有抄襲或舞弊情事，經調查屬實者，則撤銷其學位，追繳其已發之學位證書。

X. If it is discovered that students who have been awarded Ph.D. degrees have committed plagiarism or fraud in the composition of their thesis, their degree will be revoked and already handed out diplomas have to be returned upon verification of fraud allegations.

十一、本要點如有未盡事宜，依教育部有關法令及本校學則、規章辦理。

XI. Matters not specified in these guidelines are handled in accordance with relevant Ministry of Education decrees and university regulations and rules.

十二、本要點經系務會議、院務會議通過，並送教務會議審議通過後公告實施。

XII. These guidelines and all amendments are subject to ratification by the Department/College Affairs Committee and the Academic Affairs Committee before they are made public and implemented.