

國立中央大學

地球科學學系地球物理博士班修業辦法

99.06.14 系務會議通過
101.01.10 系務會議修訂通過
102.03.05 系務會議修訂通過
103.09.29 系務會議修訂通過
106.05.17 系務會議修訂通過
112.09.12 系務會議修訂通過
112.11.21 院課程會議通過
113.03.20 教務會議核備

第一條 本辦法依本校「博士班、碩士班研究生學位考試細則」規定訂定之。

This guideline has formulated on the National Central University Rules Governing the Master's and Doctoral Degree Qualifying Exam and Thesis Defense.

第二條 修業年限以二至七年為限；在職進修研究生未在規定修業期限修滿應修課程或未完成學位論文者，得再延長修業年限一年。

The study period is limited to two to seven years. If part-time doctoral students cannot finish the required courses or degree thesis in allotted time, the duration can be extended one year at most.

第三條 應修規定

- 一、 畢業學分： 修業期間至少須修滿 18 學分， 含專題討論 4 學分及專題演講；逕修讀博士學位者則須修滿 34 學分。
- 二、 應修課程
 - (一) 修業期限的第一及第二學年須修習四學期的「專題討論」及「專題演講」必修課程，另須於博士班資格考前通過「理論地球物理學」課程。上述課程，遇特殊狀況經系主任簽核同意後，得順延至次學期補修。
 - (二) 參加產學合作培育博士級研發計畫者(以下稱產博)，除必修四學期的「專題討論」及「專題演講」，另外須通過「產業專題研究」 4 學分。
 - (三) 至少須修習本系學分達畢業規定的二分之一(含必修、必選學分)，非選修本系之學分則由指導教授決定，至多認定畢業學分的二分之一。
 - (四) 逕修讀博士學位者，自轉入博士班起，其修課應依上述規定辦理。
- 三、 學分抵免依照本系「研究生學分抵免辦法」 規定辦理。

Regulations of courses:

I. The minimum credit for graduating is 18 credits, including 4 credits for 'Seminar' and 'Colloquium'; for those pursuing a direct Ph.D. degree, a total of 34 credits are required.

II. Required courses

a. During the first and second years of the program, students are required to complete the four-semester mandatory courses of 'Seminar' and 'Colloquium'. In addition, they must pass the course 'Theoretical geophysics' before the qualification examination for the doctoral program. In the case of special circumstances, with the approval of the department chair, the mentioned courses may be postponed and taken in the following semester for makeup.

b. Participating in the Industry-Academia Cooperative Research and Development Elite Ph.D. Programs (referred to as the Industry Ph.D. Programs) are required to pass the additional course 'Industrial Research Project' for 4 credits, in addition to the mandatory four-semester courses of 'Seminar' and 'Colloquium'.

c. Students are required to complete at least half of the credits specified by the department's graduation requirements, including both required and elective credits. The remaining non-departmental credits will be determined by the advisor, with a maximum allowance of half of the total graduation credits.

d. Students pursuing a direct Ph.D. degree must adhere to the aforementioned regulations for their course requirements from the time of admission to the doctoral program.

III. Courses credit waiver will be processed based on the National Central University Course Credit waiver Guidelines.

第四條 論文指導規定

- 一、指導教授確認單最遲須於入學第一學期開學一週內繳交，經系主任簽章後存查。
- 二、指導研究生之名額規定如下，【外國學生】不在此限：
 - (一) 每位主聘教授每屆至多指導二名。
 - (二) 佔 0.5 員額之合聘教授每屆可指導一名。
 - (三) 不佔員額的合聘教授或兼任教授，每屆至多指導一名，並須與系上專任教授共同指導。
- 三、選定指導教授後，如擬更換指導教授，須簽署更換指導教授申請單，經系主任簽准後存查。
- 四、特殊事由提案至系務會議處理。

Thesis Guide:

I. The document of adviser confirmation should be submitted in the first week of the first semester then approved by the director. International students are not included.

II. The quota regulations for supervising graduate students are as follows, International and double degree program students are not included.

a. Each primary-employed professor can guide two students as limitation each year.

b. The joint appointment professor with 0.5 personnel quota can only guide one student as limitation.

c. The joint appointment or adjunct appointment professor with no personnel quota can guide one student but merely be a co-adviser with a primary employed professor.

III. After selecting an advisor, if you intend to change your advisor, you must sign a request for changing the advisor. After it is approved by the department chair, it will be recorded for reference.

IV. In special cases, it should be approved in the institute conference.

第五條 資格考試

- 一、資格考試為筆試，應於入學修業第五學期開學前通過，至多以兩次為限，如遇出國進修、研究或其他不可抗拒之因素，而無法如期參加者，應向學系提出申請提報至考試委員會，經同意後得順延至下次考試。
- 二、應於本系規定時間內經指導教授確認組別後提出申請，考試結果由本系公佈，其成績標準如下：
 - (一) 成績未達 50 分者，視為不通過。第二次資格考試成績未達 50 分者，應予退學。
 - (二) 成績在 50-69 分者，應補修本系認可之課程(由系主任、課程委員及指導教授評量)或參加第二次考試。

(三) 成績達 70 分者或補修通過本系認可之課程者，即通過資格考，成為博士學位候選人。

三、資格考試之考試範圍涵蓋「地球物理學」及「地質學」，共分【地物組】及【地質組】兩卷

(一) 地物組：地球物理題目佔 80%、地質題目佔 20%。

(二) 地質組：地球物理題目佔 20%、地質題目佔 80%。

(三) 命題比重：題庫與四本參考書各佔 50%，四本參考書如下

i. Fundamentals of Geophysics --- William Lowrie

ii The Solid Earth --- C. M. R. Fowler

iii Earth : an introduction to physical geology --- Edward J.

Tarback and Frederick K. Lutgens

iv Physical Geology --- Twelfth Edition / Charles C. Plummer, Diane

H. Carlson

四、逕修讀博士學位生未通過資格考試者，依本校「學生逕修讀博士學位辦法」規定辦理。

Qualifying Examination:

I. The qualification examination is in written form. The qualification examination must be passed by the beginning of the fifth semester of enrollment, with a maximum of two attempts allowed. In the event of factors such as studying abroad, research, or other uncontrollable circumstances that prevent a student from taking the qualification examination as scheduled, they must submit a request to the examination committee and, upon approval, may postpone the examination to the next scheduled date.

II. The qualification examination should be applied for within the department's specified timeframe, after confirmation of the examination group by the advisor. The examination results will be announced by the department, and the grading criteria are as follows:

a. Those who score below 50 are considered to have failed. Those who score below 50 in the second qualification examination will be required to withdraw from the program.

b. Those who score between 50 and 69 points should either take additional courses approved by the department (evaluated by the department chair, curriculum committee, and advisor) or participate in a second examination.

c. Those who achieve a score of 70 or above or pass the courses approved by the department are considered to have passed the qualification examination and become doctoral degree candidates.

III. The scope of the qualification examination covers 'Geophysics' and 'Geology,' divided into two papers: the Geophysics Group and the Geology Group.

a. Geophysics Group: Earth physics questions account for 80%, and geology questions account for 20%.

b. Geology Group: Earth physics questions account for 20%, and geology questions account for 80%.

c. Weighting of the questions: The question bank and four reference books each account for 50%. The four reference books are as follows:

i. Fundamentals of Geophysics --- William Lowrie

ii The Solid Earth --- C. M. R. Fowler

iii Earth : an introduction to physical geology --- Edward J. Tarback and Frederick K. Lutgens

iv Physical Geology --- Twelfth Edition / Charles C. Plummer, Diane H. Carlson

IV. Students pursuing a direct Ph.D. degree who do not pass the qualification examination shall follow the regulations outlined in the 'University's Regulations for Direct Ph.D. Degree Students.'

第六條 進度報告

須於學位考試前二個月提出學位論文進度報告，並經論文指導委員會審核通過後，送交進度報告審定書至系辦公室存查。

Progress report

You must submit a thesis progress report two months before the degree examination, and after it is reviewed and approved by your thesis advisory committee, submitting the progress report approval document to the department office for record.

第七條 學位考試

- 一、依照本校「博士班、碩士班研究生學位考試細則」規定辦理。
- 二、申請學位論文考試前，應已同時滿足以下條件：
 - (一)通過資格考試並成為博士學位候選人半年以上。
 - (二)通過學位論文進度報告滿兩個月。
 - (三)發表至少三篇與學位論文相關之 SCI 期刊論文或發表至少一篇 SCI 第一作者之期刊論文。
- 三、以產博身分入學者，學位考試之口試委員須至少有二位產業專家(含產業共同指導教授)，其認定資格依本校「博士班、碩士班研究生學位考試細則」規定辦理。
- 四、學位考試一律在中央大學校內舉行。

Degree examinations

I. The degree exam will be processed based on the National Central University Rules Governing the Master's and Doctoral Degree Qualifying Exam and Thesis Defense.

II. Before applying for the thesis defense examination, the following conditions must be satisfied simultaneously:

- a. Have passed the qualification examination and been a doctoral degree candidate for at least six months.
- b. Passing the thesis progress report at least two months in advance.
- c. Publish at least three SCI journal papers related to the thesis or publish at least one SCI first-author journal paper.

III. For students entering as industry professionals, the oral examination committee for the degree examination must include at least two industry experts (including co-advisors from industry), and their qualification shall be determined in accordance with the 'Doctoral and Master's Degree Examination Regulations for Graduate Students' of this university.

IV. Degree examinations will all be held on the premises of National Central University.

第八條 畢業離校系所檢核

- 一、應依規定製作論文及 A0 直式海報，其論文電子檔及 A0 海報紙本，須繳交系辦公室。
- 二、離校前應清理研究室及研究室所使用之空間及設備，歸還所借用之各項設備及物品。
- 三、本系「畢業離校系所同意書」須經指導教授簽名確認後，繳交系辦公室，始可向學校辦理離校手續。

Graduation and Departure Departmental Check

I. You are required to prepare your thesis and an A0 portrait-style poster according to the regulations. The electronic file of your thesis and a printed copy of the A0 poster should be submitted to the department office.

II. Before leaving the campus, you should tidy up your research room and the space and equipment used the rooms and return all borrowed equipment and items.

III. The ' Department of Earth Sciences Application Form for Leaving School' must be signed and confirmed by the advisor before submitting it to the department office. Only then can the departure procedures from the school be initiated.

第九條 本規定如有未盡事宜，依教育部及本校有關規定辦理。

If there're any imperfections in these regulation, they shall be handled in accordance with the relevant regulations of Ministry of Educations and National Central University.

第十條 本辦法經系務會議、院課程會議通過，並送教務會議核備後實施，修正時亦同。

This regulation has been approved by the departmental affairs meeting and Institute-level meeting. It will be implemented after being submitted to the academic affairs meeting for approval, and it will be revised at the same time.