

國立臺灣師範大學數學系博士班修業規定

Academic Regulations for Doctoral Program Department of Mathematics, NTNU

103 年 10 月 2 日 103 學年度第 1 次系務會議修正通過

Approved in the 1st Department Affairs Council meeting on October 2, 2014

104 年 1 月 15 日教務處備查

Reported to Office of Academic Affairs on January 15, 2015

104 年 5 月 28 日 103 學年度第 4 次系務會議修正通過

Approved in the 4th Department Affairs Council meeting on May 28, 2015

104 年 6 月 18 日教務處備查

Reported to Office of Academic Affairs on June 18, 2015

108 年 6 月 20 日 107 學年度第 4 次系務會議修正通過

Approved in the 4th Department Affairs Council meeting on June 20, 2019

108 年 7 月 11 日教務處備查

Reported to Office of Academic Affairs on July 11, 2019

109 年 3 月 16 日 108 學年度第 3 次系務會議修正通過

Approved in the 3rd Department Affairs Council meeting on March 16, 2020

109 年 3 月 16 日理學院 108 學年度第 2 次院課程委員會會議修正通過

Approved in the 2nd Curriculum Planning Committee of College of Science meeting on March 19, 2020

109 年 4 月 22 日 108 學年度第 2 次教務會議修正通過

Approved in the 2nd Office of Academic Affairs meeting on April 22, 2020

壹、本要點依據本校「學位授予暨研究生學位考試辦法」訂定之。

Article I This regulation is established in accordance with the "Directions for Implementing Master and PhD degree examination of NTNU".

貳、本系博士班授予學位名稱為理學博士 (Doctor of Philosophy, Ph.D.)。

Article II Degree title is conferred as Doctor of Philosophy, Ph.D.

參、修課規定：

Article III Course Requirements:

一、修畢本系博士班課程至少 22 學分。

The completion of 22 credits is required in general.

二、碩士生逕讀博士班學位者，應修習包含原博士班規定之必選修學分數，至少 34 學分 (含碩士班一年可採計之學分)；學士班逕讀博士班學位者，應修習包含原博士班規定之必選修學分數，至少 40 學分。

Those who are accepted via Direct-Admissions from Master program should complete 34 credits (credits obtained in one-year Master program included). Those who are accepted via Direct-Admissions from undergrad

program should complete 40 credits.

三、博士班修業科目表如附表。

Please refer to the table of required subjects.

四、博士生修習的課程由修課委員會參考該生背景與研究方向建議之。數學教育組系選修學分須包含 9 學分碩士班等級以上（含大碩合開課程）數學專業課程。

Required courses are advised by the Advice of Course-taking Committee based on each graduate student's background and research interests.

Those who are in the Math. Edu. Section should take at least 9 credits from professional mathematics courses (including BA/MA joint course or above).

五、數學組及數學教育組博士生之修課委員會於該生入學後第一學期之研究生教務會議推舉三至五位專任教師組成，其中數學教育組之修課委員會至少一名數學組專任教師。

For Ph.D. students of Mathematics and Mathematics Education Sections, 3-5 full-time faculty members will be elected as the members of the Advice of Course-taking Committee after Graduate Academic Affairs meeting is held within the semester the student enrolls. For Mathematics Education Section, at least one member of the committee is from the full-time faculty of Mathematics Section.

六、修習並通過學校規定之必修學術倫理課程。

Complete and pass Academic Research Ethics Course which is compulsory.

肆、資格考試規定：

Article IV Qualifying Examination:

一、博士班研究生入學後，得申請博士學位候選人資格考試。考試於每年四月或十月舉行，考試前一個月提出申請。四月考試者，三月二十日為申請截止日；十月考試者，九月二十日為申請截止日。

After enrollment of doctoral degree/program, student could apply a qualification examination of Ph.D. candidate. The examinations take place in April or October every year. It should be applied one month in advance. For taking an examination in April, it should be applied by 20th March. For taking an examination in October, it should be applied by 20th September.

二、博士學位候選人資格考試委員會由本系研究生教務會議每年推舉三至五位專任教師組成，任期一年得連任之。

The committee of qualification examination of Ph.D. candidate is made up of the 3 – 5 full-time faculty members, who are elected by the Department Academic Affair Meeting for graduate students. Term of member service is one year with a renewable tenure.

三、博士學位候選人資格考試科目：

Subjects of Qualifying examination of Ph.D. candidacy:

(一) 數學組-筆試：

The subjects of written examination for Mathematics Section are as follows:

實變分析、幾何與拓樸、近世代數、機率與統計、微分方程
(常微分方程或偏微分方程)、組合學等六科中選考其中二科
(考試範圍、內容與參考書目另訂之。)

TWO subjects from Real Analysis, Geometry & Topology, Modern algebra, Probability and Statistics, Differential equation (ODE or PDE), and Combinatorics. The coverage and reference books are established separately.

(二) 數學教育組：

The subjects of examination for Mathematics Education Section are as follows:

1. 立場論文考試 Position Paper Examination

- (1) 立場論文界定：立場論文的主題應為數學教育中重要的議題。論文應包含該議題的內容及重要性，針對該議題所涉及的各種不同立場之理論或方法學加以評析論述，提出筆者的立場並論述此立場的優點與限制。論文字數（包含內文、參考文獻、圖表及附錄等）不得超過二萬字。

The theme of position paper should be significant issues among Mathematics Education. It should cover the content and importance of the theme, elaborate different aspects or stances regarding the theme and give some comments, conclude with certain position and make arguments including its advantages and limitations. The number of words (including main texts, references, figures, tables, appendices) should not exceed 20,000.

- (2) 立場論文考試採口試方式，可於資格考試申請期限內提出申請，口試每年以四月及十月各一次為限，除非有不可抗拒之理由，經本委員會同意取消或延期，否則提出口試申請後，需於考試該月完成口試，未完成者視為不通過。

It is evaluated by oral examination. It should be applied within the period of Qualification examination of Ph.D. candidate. The oral examinations take place once in April and once in October every year. It could be canceled or postponed by the

committee if any reasons other than events of force majeure occurs. Otherwise, once an oral examination is applied, it should be completed in the same month. In anyone who can't complete, he/she will be considered to not pass.

- (3) 立場論文考試評分包含 a.議題內涵、b.立場闡述、c.文獻選擇、d.論點呈現。

Areas of evaluation are (a)value of the themes, (b) positions elaborations, (c) literature reviews, (d) arguments developments.

- (4) 立場論文考試結果：得分 70 分以上(含)視為通過。

Result: It is considered as passing if a score of 70 or above is given.

2. 研討會論文發表 Paper published at conference :

須於國際數學教育相關學術研討會發表一篇論文，經資格考試委員會審查通過。

One paper should be published at an international Math. Education-related academic conference, and also be approved by the committee of qualification examination.

四、考試委員聘任 Appointment of Examiner :

- (一) 數學組：筆試命題與閱卷委員由資格考試委員會遴選聘任。

Mathematics Section: The drafter-grader are appointed through election of the committee of qualification examination.

- (二) 數學教育組：立場論文考試委員三人，由應試學生之指導教授推薦三至五人名單，經資格考試委員會確認聘任。

Mathematics Education Section: The Advisor shall nominate 3-5 members, and 3 of them should be appointed by the committee of qualification examination as the examiner for position paper examination.

五、數學組以及數學教育組博士生應於第三學年結束前通過資格考試。未於前述規定時間內通過資格考試者予以退學。

Graduate students of Mathematics & Math. Edu. Sections should pass Qualifying examination before the 3rd academic years ends. If not, this student will be expelled.

六、博士班研究生經本系研究生教務會議確認通過本條之資格考試規定，為博士學位候選人。

Once a doctoral student is confirmed by the Department Graduate Academic Affair Meeting that he/she meets this Article. He/She is considered as a Ph.D. candidacy.

伍、博士論文研究計畫考試：

Article V Thesis research proposal examination:

- 一、博士班研究生須通過資格考試後，始得申請論文研究計畫考試，論文研究計畫考試不得與學位考試在同一學期完成。

After passing the qualification examination, a thesis research proposal examination could be applied. The dissertation research project examination cannot be taken place in the same semester of degree examination.

- 二、博士論文研究計畫考試須於學期結束前一個月提出申請並於學期結束前完成考試。

Application of Thesis research proposal examination should be submitted one month before a semester ends and completed by it ends.

- 三、博士研究計畫考試委員會由指導教授會同系主任推舉三至五位校內(外)學者(含指導教授)組成。

The member of doctoral research proposal examination committee consists of 3-5 in or off-campus scholars (including the advisor), who are elected by the advisor and the Chair.

- 四、論文研究計畫考試採口試方式。

It is evaluated by oral examination.

陸、論文演講：

Article VI Presentation:

博士班研究生在博士學位考試前，須就其博士論文內容在系上做一次公開的演講。

Doctoral students should give one public thesis presentation at the Department before doctoral degree examinations.

柒、博士學位考試：

Article VII Doctoral degree examination:

- 一、博士研究生符合下列各項規定者得申請博士學位考試：

Graduate students who meet one of the following requirements could apply doctoral degree examination:

- (一) 博士班修業滿三學期或逕行修讀博士學位並已在博士班修業滿三學期者。

Complete three semesters of doctoral program or three semesters of doctoral programs (who is accepted via Direct-Admissions of PhD Degree)

- (二) 完成第參條之修課規定。

Meet the requirements in accordance with Article III.

(三) 通過博士學位候選人資格考試。

Pass the qualification examination.

(四) 通過博士論文研究計畫考試。

Pass the Thesis research proposal examination.

(五) 論文發表規定 Requirements of paper publishing :

1. 數學組發表至少一篇論文於 SCI 等級期刊 (論文被接受視同發表)。

For Mathematics Section, at least one paper should be published on SCI or equivalent journals (accepted papers are considered as published).

2. 數學教育組發表至少一篇論文於科技部 (原國科會) 論文期刊等級 2 以上之期刊, 論文被接受可視同發表。

For Mathematics Education Section, at least one paper should be published on MOST level 2 or above journals (accepted papers are considered as published).

(六) 已完成博士論文初稿者。

Those who has finished the preliminary version of the doctoral thesis.

二、符合前項申請資格者, 得於每年五月二十日或十一月二十日以前向本系申請博士學位考試。

Those who meet the requirements mentioned above should submit application documents for applying Doctoral degree examination by 20th May or Nov.

三、博士學位考試委員, 應對修讀博士學位學生之研究領域有專門研究, 並具有下列資格之一:

Examiners of Doctoral degree examination should have particular studies in the student's research interests, and also have qualifications mentioned below:

(一) 現任或曾任教授、副教授。

Serve as associate professors or professors currently or before.

(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。

Academicians, were or are Research Fellows or Associate ones.

(三) 獲有博士學位, 且在學術上著有成就。

Who obtained PhD degree(s) and make significant academic achievements.

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

Who pursue studies in a rare or specialized field, and make significant academic or professional achievements.

四、前款第(三)目及第(四)目資格之認定基準，由指導教授提出書面資料後，由系主任核定之。

Determination of Qualification Criteria, in accordance with clause (3) & (4), is approved by the Chair based on the profile documents submitted by Thesis Advisor.

捌、本規定未盡事宜，悉依補充說明或相關法令辦理，並自 109 學年度起入學者適用。

Article VIII If this regulation is anywhere incomplete, students should consult with the related rules set by the University and MOE. The regulation is applicable to the graduate students who enrolled after the academic year of 2020 (included).

玖、本規定經系務會議及院相關會議通過，送教務會議審查，修正時亦同。

Article IX This regulation will be enforced after approval by the Department Affair & Curriculum Planning Committee of College of Science meetings, and being reviewed at the Academic Affairs meetings. Any revision must follow the same procedure.

英文版僅供參考，若有歧義，以中文版為準。

These regulations were translated from the original Chinese. In the event of any discrepancies between the two versions, the Chinese always takes precedence.

附表：國立臺灣師範大學數學系博士班修業科目表

Annexed table: Subjects of Doctoral students at the Department of Mathematics

壹、畢業學分數 Graduation credits：

班別 Admitted by	組別 Section	系必修學分 Required credits	系選修學分 Selective credits	畢業最低總學分 Minimum graduation credits
博士班 PhD Admissions	數學組 Math.	4 學分 4 credits	18 學分 18 credits	22 學分 22 credits
	數學教育組 Math. Edu.			
碩士選讀 博士班 Direct Admission from master	數學組 Math.	4 學分 4 credits	30 學分 30 credits	34 學分 34 credits
	數學教育組 Math. Edu.			
學士選讀 博士班 Direct Admission from undergraduate	數學組 Math.	4 學分 4 credits	36 學分 36 credits	40 學分 40 credits
	數學教育組 Math. Edu.			

貳、系必修課程 Required courses：

本系博士班必修課程為「數學研究趨勢」，課程得重複修習，研究生應修 4 學期，各 1 學分。

Doctoral students should take the course “Trend of Mathematics Research” as one of the required courses. The course should be completed in 4 semesters and is counted as 1 credit for each semester.

參、系選修課程 Selective courses：

本系博士班課程分為分析、代數、幾何、應用數學、統計、數學教育等六大領域，其中分析、代數、幾何、應用數學、統計等領域列為數學專業課程。

Doctoral courses are form six divisions: Analysis, Algebra, Geometry, Applied mathematics, Statistics, and Math. education. The former 4 divisions are math. professional courses.

註 1：碩士選讀博士班者，畢業學分數含碩士班一年可採計之學分。

For those who are admitted by Direct Admission from master, their graduation credits include transfer credits of one-year master program.

註 2：數學教育組系選修學分須包含 9 學分碩士班等級以上（含大碩合開課程）數學專業課程。

Math. Edu. doctoral students should take extra 9 credits of math. professional courses for Master level (including BA/MA joint course or above).