

國立交通大學生醫科學與工程博士學位學程研究生入學與修業辦法

National Chiao Tung University

Policies and Regulations for the Ph.D. Degree Program in Biomedical Science and Engineering

102 年 9 月 10 日 臨時學程籌畫委員會擬定
Drafted on Sept. 10, 2013, Temporary Program Planning Committee
104 年 1 月 12 日學程會議修訂第四條、第五條
Amended Items 4 & 5 on Jan. 12, 2015, Program Committee Meeting
107 年 4 月 3 日學程會議修訂第七條
Amended Item 7 on April 3, 2018, Program Committee Meeting
108 年 5 月 8 日學程會議修訂第一條、第四條、第十三條
Amended Items 1, 4, and 13 on May 8, 2019, Program Committee Meeting

一、學程與學程委員會：The Program and the Program Committee

1. 學程：本學程係由本校跨生科、電機、資訊、理、工、光電等六個學院，依據教育部所核定之「生醫科學與工程博士學位學程（Ph.D. Degree Program of Biomedical Science and Engineering）」（以下簡稱本學程），共同設立。本學程分為甲、乙兩組，甲組為臨床醫師與牙醫師之研究生；乙組為臨床醫師與牙醫師以外之研究生。

The program is a cross-college doctoral degree program that spans across the colleges of Biological Science and Technology, Electrical and Computer Engineering, Computer Science, Science, Engineering, and Photonics. It is established upon the approval by the Ministry of Education for the Ph.D. Degree Program of Biomedical Science and Engineering, hereinafter called the program. The program is divided into two divisions. Division A is composed of graduate students from clinicians and dentists while Division B for students not of those disciplines.

2. 本學程由本校生科、電機、資訊、理、工及光電等學院專任教師共同負責，並組成學程委員會，其依本校與本學程相關辦法辦理本學程博士研究生入學與修業工作。學程委員會設置要點另訂之。

The Program Committee comprises full-time faculty members from the Colleges of Biological Science and Technology, Electrical and Computer Engineering, Computer Science, Science, Engineering, and Photonics, and takes charge of the program affairs. It handles the admission and the curriculum of the program abiding to the relevant university regulations. The bylaws regarding the committee set-up are regulated separately.

二、入學方式：Admission

1. 入學考試：依本校博士研究生招生相關辦法辦理。
Entrance Examination: To implement the examination abiding to the NCTU Regulations for Master's and Doctoral Degrees Conferment

2. 逕讀博士學位：依本校學生逕修讀博士學位相關作業規定辦理。

Direct Ph.D. Track: The detailed procedures and requirements should abide by the NCTU Direct Pursuit of Ph.D. Degree Regulations.

三、修業年限：一般生為二至七年；在職生為二至八年。休學不計入年限。

Study Period: Limited to two to seven academic years for full-time Ph.D. students, and two to eight academic years for part-time Ph.D. students. Any leave of absence taken will not count towards the total.

四、必修課程： Core Courses and Credits Required:

1. 生醫科學與工程特論（3 學分）
Special Topics in Biomedical Sciences and Engineering (3 credits)
2. 博士班書報討論（需修滿 2 學分）
Special Topics Seminar for Ph.D. (2 credits)
3. 專題演講（需修滿 4 學分）
Departmental Seminar (4 credits)

五、課程與學分要求： Courses and Credits Required for Graduation

在規定修業年限內需修滿 15 學分（不含專題演講及論文研究）；逕行修讀博士學位者至少應修滿 30 學分（含專題演講與碩士班所修課程學分，但不含碩班論文研究）

Within the study period, students must have completed at least 15 academic credits, excluding the courses of “Departmental Seminar” and “Thesis in Biological Science and Technology.” Students in the direct-Ph.D. track must have completed at least 30 credits, which may include the “Departmental Seminar” and course credits obtained in the master’s degree program but not the credits of “Thesis in Biological Science and Technology.”

六、抵免或抵修學分： Credit Exemption

1. 抵免或抵修學分依本校學生抵免或抵修學分辦法辦理，由學程委員會審定之。
Credit exemption will be processed in accordance with the related university regulations and approved by the Program Committee.
2. 研究生可抵免或抵修學分之總數，以應修畢業學分數三分之一為上限。
The maximum exempted credits should not exceed the one-third of the total credits required for graduation
3. 未盡事宜，悉依相關規定辦理。
Any other outstanding issues shall be handled by relevant regulations.

七、選定論文指導教授準則 Guidelines for Choosing Dissertation Advisor:

1. 研究生入學後一學期內必須選定論文指導教授。研究生須選定本校生科、電機、資訊、理、工、光電等學院系所專任助理教授以上之教師為論文指導教授；研究生亦可選定上述以外院系所專任助理教授以上或本校合聘之校外教師為論文指導教授，但為學生修業事務之服務與管理，該研究生應另選定至少一位生科、電機、資訊、理、工、光電等學院系所專任助理教授以上之教師為其論文共同指導教授，並於本學程委員會會議中核備通過。

By the end of their first semester after enrollment, students must have chosen their advisors, who should possess the qualification as a full-time assistant professor or above in any of the Colleges of Biological Science and Technology, Electrical and Computer Engineering, Computer Science, Science, Engineering, and Photonics.

Though students may also have qualified full-time faculty from the other colleges other than those mentioned above or university collectively appointed faculty from other schools be their advisors, these students must have at least one qualified faculty from the colleges mentioned above to be their dissertation co-advisor to help deal with the required study material. Approval from the Program Committee must be obtained for these cases.

2. 甲組研究生得在指導教授同意與協助下，選定一位以上在其服務機構中具行政院教育部教師資格之醫師為校外共同指導教授。

Under the permission and help of the advisor, a student in Division A may choose a physician who serves in the same organization as the student and possesses the teacher qualification certified by the Ministry of Education, the Executive Yuan, to be the co-advisor outside the university.

3. 研究生或指導教授任何一方，因故欲取消關係，施行細則如下，並追溯適用本所在學學生：

If either the student or the advisor wants to terminate the mentor-student relationship, the guidelines below should be followed: (applies to all current students of the Institute)

- (1) 研究生於就讀期間，如擬更換論文指導教授，應以書面文件向本系所務聯席會議提出，並於通知原指導教授後生效，無須經原指導教授同意。

If a graduate student wants to terminate the mentor-student relationship with her/his advisor, she/he must submit a written application to the Joint Meeting of Department & Institute Affairs. The termination will take effect when the advisor receives the notice. It is not necessary to get the advisor's approval.

- (2) 指導教授欲終止指導關係，應以書面文件向本系所務聯席會議提出申請，審查結果由本系所務聯席會議通知研究生。終止指導關係後，本所得協助研究生另覓指導教授。

If it is the advisor who wants to terminate the mentor-student relationship, she/he should also submit her/his request in writing to the Joint Meeting of Department & Institute Affairs. The Meeting will notice the student about the review result. After terminating the relationship, the Institute shall assist the student to find a new advisor.

- (3) 研究生依本準則申請更換指導教授時，在原指導教授提供原始構想、概念或受指導下所獲得之研究成果，皆不可公開發表或作為學位論文。但經原指導教授書面同意者不在此限。

After the student terminates the relationship with the previous advisor, all the research results achieved with the previous advisor's idea, concept, or guidance cannot be published nor retained in the student's dissertation for academic degree unless a written permission is given from the previous advisor.

- (4) 未盡事宜，悉依【國立交通大學論文指導教授與研究生互動準則】辦理之。

“NCTU Guidelines for the Interaction between Thesis Advisor and Graduate Students” shall prevail in case of any outstanding issues herein.

八、博士候選人資格考核：分審查及口試

Assessment for Ph. D. Candidacy:

Qualification Assessment and Oral Ph.D. Qualifying Examination

1. 審查 Qualification Assessment:

- (1) 候選人當於考試前修滿必修課程，其成績必需在 70 分以上。
Students must have completed required core courses and scored 70 or above before taking the Qualifying examination.
- (2) 經指導教授同意後，繳交博士論文研究計畫及初步成果之書面報告，以及其他成為候選人值得參考之書面資料。
Students must turn in the dissertation research proposal, preliminary research results, and/or other valuable printed reference materials under the permission of the advisor.

- (3) 一般生研究生第三年結束前（休學不計入年限）需發表 SCI 論文總點數 2.0 以上(含)或 SCI 領域學門在前 20%之論文一篇；在職生第五年結束前（休學不計入年限）需發表 SCI 論文總點數 2.0 以上(含)或 SCI 領域學門在前 20%之論文一篇。

For full-time students, it is required to have accumulated at least 2.0 points of publications based on the SCI impact factor, or to have published a paper in the top 20% journal in related SCI area of study by the end of their third year of study (not counting leaves of absence) and for part-time students by the end of the fifth year (not counting leaves of absence).

2. 口試 Oral Ph.D. Qualifying Examination:

- (1) 一般生應於修業第三年內完成，在職生應於修業第五年內完成。

Full-time students should pass the examination by the end of their third year of study, while part-time students should pass by the end of their fifth year of study.

- (2) 經指導教授同意後，提出包括有初步研究成果之研究計畫書，以及其他書面資料。口試舉辦前三週須通過審查，提出口試申請和組成論文研究指導委員會(至少五位)。

With advisor's permission, the student should submit the research proposal with preliminary results and other printed materials approved three weeks prior to taking the oral examination. At the same time, the student should have submitted the oral exam application and have assembled a dissertation advisory committee with at least five members.

- ## 3. 資格考核未通過 Failure on the Assessment for Ph.D. candidacy :
- 未能通過資格考核者，包括審查或口試，得於一年內再補考一次。

The students who fail the assessment (either the qualification assessment or the oral qualifying examination) for Ph.D. candidacy may retake the candidacy assessment once within a year.

- ## 九、一般生研究生在入學後四年內（休學不計入年限），未能通過博士候選人資格考核者，應予退學；在職生研究生入學後六年內（休學不計入年限），未能通過博士候選人資格考核者，應予退學。

Full-time doctoral students who have not passed the assessment for Ph. D. candidacy within four years of study (not counting leaves of absence) will be expelled; part-time students who have not passed the assessment within six years of study (not counting leaves of absence) will also be expelled.

- ## 十、博士候選人欲申請博士學位考試前須通過英文能力測試，下列辦法得任選一種：

Ph.D. candidates must pass the requisite English proficiency before taking the degree examination. Students can select one of the following to meet the requirement:

1. 托福成績達以下之一：紙筆測驗 550 分、電腦化測驗(CBT)達 213 分、網路化測驗(iBT)達 79 分。

A TOEFL grade that meets one of the following: 550 on paper, 213 on CBT, or 79 on iBT.

2. 多益測驗(TOEIC)成績達 750。

A TOEIC score of 750 or higher

3. 修習本校科技英文或論文寫作或讀、寫類之英文課程達 2 學分，且成績均達 70 分以上。

Completed at least 2 credits on technical English, thesis writing, or other related English reading/writing courses, with grades of 70 or above.

4. 通過本學程委員會認可相關單位舉辦之英文能力測試，包括口試及筆試，並獲頒發英文能力證明。

Obtained a certificate from any English proficiency test (including oral and writing) offered by the organizations acknowledged by the Program Committee.

十一、博士學位考試：Doctoral Degree Examination

1. 博士候選人經其論文研究指導教授同意，組成論文研究指導委員會(至少五位，並敦請校長遴聘其中一位為召集人)，完成研究論文者，得申請學位考試。

With the permission of the dissertation advisor and after having composed the Dissertation Advisory Committee (with at least five members; the University President will be tasked with selecting one as chair member), a Ph.D. candidate may apply for the doctoral degree examination upon the completion of the dissertation.

2. 論文內容至少須含有二篇已被接受於有評審制度之國際性學術期刊，並應註明本校為其所屬單位，其本校之指導教授為該論文共同作者。期刊論文之 SCI 總點數需達 4.0 以上，且至少其中有一篇論文 SCI 點數需達 2.0 以上，並為第一作者。

The dissertation should include at least two academic papers that have been accepted in the international journals with a peer review mechanism. The papers should also be published under the name of NCTU, with one NCTU advisor as a co-author, and with a total of accumulated points of 4.0 or above on the SCI impact factor. At least one of the papers should have 2.0 or above on the SCI impact factor and the student should be the first author.

3. 博士候選人欲申請博士學位考試前須將其論文摘要、歷年成績單、資格考核通過資料、已發表之論文及第一外國語文能力證明，送交學程系所辦公室審閱，經學程主任同意後，始得提出博士學位考試申請。

Prior to the degree examination, a Ph.D. candidate must turn in the abstract of the dissertation, a complete transcript, the materials of passing candidacy assessment, the published academic paper(s), and the proof of English proficiency to the program office. Upon the approval of the Program Director, the student may apply for taking the degree examination

4. 博士論文考試成績以論文內容及口試成績綜合評定，以出席委員無記名評定分數平均決定之，評定以一次為限，以 70 分為及格。但有三分之一（含）以上委員評定不及格者，即以不及格論。不及格者，在修業年限未屆滿前，得於次學期或次學年申請重考，重考以一次為限，仍不及格者，應予退學。

The grade of the doctoral degree Examination will be based on the student's dissertation contents and oral defense. The score will be averaged out by Degree Examination Committee members who are present, and will be given only once, with 70 being the qualifying grade. If one-third or more of the Committee members regard the examination as a failure, then the student fails the exam. Those who have failed but not reached the limit of their study period are eligible to apply for retaking the examination in the second semester or the following academic year, with a limit of one retake. Students who still fail will be expelled.

5. 逕行修讀博士學位研究生修業期滿，通過資格考核但未通過博士學位考試，其博士學位論文經博士學位考試委員會決定合於碩士學位標準者，得授予碩士學位。

Direct-Ph.D. program students who have passed the assessment of Ph.D. candidacy but failed the doctoral degree examination by the limit of study period may be conferred a master's degree if the Doctoral Degree Examination Committee agrees the dissertation meets the standard of a master's degree thesis.

- 十二、本辦法未盡事宜，本學程委員會悉依本校學則、博士學位授予作業規章及其他相關規章、規定或實施細則辦理。

Items not stated herein are subject to the NCTU Academic Regulations, the NCTU Master's and Ph.D. Degree Conferment Regulations, and related education laws.

- 十三、本辦法經本學程委員會會議通過後，經生物科技學院課程委員會與校級課程委員會審查通過，再送教務會議核備後實施，修訂時亦同。

The policies and regulations stated herein have been approved by the Program Committee Meeting, confirmed by the Curriculum Committee of the College of Biological Science and Technology and the Curriculum Committee of the University. They are implemented upon the validation of the Academic Affairs Meeting of the university. The same shall be applicable in the event of any amendment.

