## 國立交通大學生物科技學院產業博士班研究生入學與修讀辦法

# National Chiao Tung University College of Biological Science and Technology

# Policies and Regulations for the Ph.D. Degree Program in Industrial Development

105年10月4日生技產業研發菁英博士學位學程委員會會議制訂

Drafted on October 4, 2016, Meeting of the Program Committee of the Elite Ph.D. Degree Program in Biotechnology Industrial R&D

106年4月12日生技產業研發菁英博士學位學程委員會會議修改

Revised on April 12, 2017, Meeting of the Program Committee of the Elite Ph.D. Degree Program in Biotechnology Industrial R&D

107年4月12日生物科技學院課程委員會會議修改

Revised on April 12, 2018, Meeting of the Curriculum Committee of the College of Biological Science and Technology

107年10月29院課程會審議

Approved on October 29, 2018, Meeting of the Curriculum Committee of the College of Biological Science and Technology

一、入學方式:招考對於生物科技產業發展具有興趣及潛力的學生,依本校博士班研究生招生辦法辦理。

Admission: In accordance with the NCTU Regulations for Master's and Doctoral Degrees Conferment to recruit students with high potential and interest in the development of biotechnology industry.

- 1. 招生考試:依本校博士班研究生招生辦法辦理。
  - 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作業規定辦理。
  Direct Ph.D. Track: The detailed procedures and requirements should abide by the NCTU Direct Pursuit of PhD Degree Regulations.
- 二、選指導教授準則 Guidelines for Choosing Dissertation Advisors:
  - 1. 每位教師收授研究生人數上限,由本院系所務聯席會議訂定。

The maximum number of graduate students allotted to each faculty will be determined by the Joint Meeting of Department & Institute Affairs.

2. 入學後第一學年結束前必須選定指導教授(須具本院專任助理教授以上之資格)。逾期未選定指導教授者由所長暫代之。

By the end of their first academic year, students must have chosen their advisors, who should possess the qualification as a full-time assistant professor or above in the College. The chairman of the Institute will serve as the advisor for students who miss the deadline.

3. <u>研究生或指導教授任何一方</u>,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 professor wants to terminate the mentor-student relationship, the guidelines below should be followed: (applies to all current students of the Institute as well)

(1) 研究生於就讀期間,如擬終止論文指導關係或更換論文指導教授,應以書面文件向本系所務聯席會議提出申請,並於通知原指導教授及完成各項交接事務後生效,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 come into effect when the advisor gets the notice and the student completes all transaction work needed. 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負指導教授。

If it is the advisor who wants to stop 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 notify the student about the review result. After terminating the relationship, the Institute shall assist the student in finding a new advisor

(3) 研究生依本準則申請終止論文指導關係或更換論文指導教授時,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 an academic degree unless written permission is given from the previous advisor.

- (4) 未盡事項,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 other issues.
- 三、修業年限:一般生為二至七年;在職生為二至八年。
  Study Period: Limited to two to seven academic years for full-time doctoral students, and two to eight academic years for part-time doctoral students.

### 四、學分 Credit Requirements:

在規定修業年限內需修滿 15 學分(不含論文研究及專題演講),其中本院課程不得少於 9 學分(即本院以外各系所學分不得多於 6 學分); 逕行修讀博士學位者至少應修滿 30 學分(含碩士班所修課程學分,不含碩博班論文研究及專題演講),其中本院課程不得少於 24 學分。大學逕讀博士學位者,應至少修滿 30 學分,其中本院課程不得少於 24 學分(不含論文研究及專題演講)。

Within the required study period, students must have completed at least 15 academic credits, excluding the credits obtained from "Thesis in the Biological Science and Technology" and "Departmental Seminar" but including at least 9 credits of the courses offered by the College (and no more than 6 credits from the courses offered by other colleges.)

Students in the direct-Ph.D. program must have completed at least 30 credits, excluding the credits of "Thesis in the Biological Science and Technology" and "Departmental Seminar" but including the other course credits obtained in master's degree program. Also, the required credits must contain at least 24 credits of the courses offered by the College.

Students who start to pursue the doctoral degree right after getting the bachelor degree should also have completed at least 30 credits, which should exclude the credits of "Thesis in the Biological Science and Technology" and "Departmental Seminar" but contain at least 24 credits of the courses offered by the College.

- 五、必修課程與畢業學分 Courses and Credits Required for Graduation:
  - 1. 專題演講(需修滿 4 學分)Departmental Seminar (4 credits)

- 2. 博士班書報討論 (需修滿 2 學分) Special Topic Seminar for Ph.D. (2 credits)
- 3. 論文研究(需修滿 2 學分)Thesis in the Biological Science and Technology (2 credits)

#### 六、抵免或免修學分 Credits Exemption:

- 1. 在抵免學分部份,由本院「產業博士班課程委員會」審定之,至多可抵免 6 學分。
- 2. 未盡事宜,悉依相關規定辦理。

### **Credits Exemption**

- a. Credit exemption should be approved by the Curriculum Committee of the Ph.D. Program in Industrial Development and limited to a maximum of 6 credits.
- b. Any other outstanding issues shall be processed abiding by relevant regulations.
- 七、博士候選人資格考核 Assessment for Ph. D. Candidacy:

分審查及口試 Qualification Assessment and Oral Ph.D. Qualifying Examination

- 1. 審查 Qualification Assessment:
  - (1)候選人當於考試前修滿 9 學分(含)以上之課程,其成績必需在 70 分以上。

Students must have completed at least 9 credits and scored 70 or above on all the courses before taking the Qualifying examination.

- (2) 必需通過二學期博士班書報討論。
  - Students must have passed two semesters of Special Topics Seminar (for Ph.D.) before taking the Qualifying Examination.
- (3)繳交博士論文研究計畫及初步成果之書面報告,或加上其他成為候選人值得 參考之書面資料。

Students must turn in the dissertation research proposal and the writing of preliminary research results, and/or other valuable printed reference materials.

- 2. 口試 Oral Ph.D. Qualifying Examination:
  - (1) 時間:一般生於第三年內完成,在職生於第五年內完成。

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

(2) 提出研究計畫及初步成果及其他書面資料。

Students should turn in the research proposal, preliminary research results, and

other reference materials

(A) 時間:考前兩週

Deadline: Two weeks before the oral qualifying examination.

(B) 內容:目的、簡介、方法、成果及其他預期成果。

Contents: Must contain the objectives, abstract, methods, results, and other speculated results of the research.

(3) 先由候選人口頭報告,再由博士資格考審查委員會審查其論文研究成果是否符合博士候選人資格。

A student shall report orally to the Ph.D. Qualifying Examination Committee firstly, and then the committee will assess the research results to see if the student is qualified as a Ph.D. candidate.

(4)與研究論文相關之課程基本內容,得於口試中提出。

Basic knowledge of the course study relevant to the dissertation research may be tested during the oral examination.

(5) 資格考核通過者需呈報本院「產業博士班課程委員會」,未能通過者,得於 一年內再補考一次。

Students who have passed the candidacy examination should be reported to the Curriculum Committee of the Ph.D. Degree Program in Industrial Development; those who failed may retake the examination within a year.

八、博士班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.

九、博士候選人欲申請博士學位考試前必須

Prior to taking the doctoral degree examination, a Ph.D. candidate must satisfy the following requirements:

1. 符合畢業所需學分數

Fulfilled the credit requirements for graduation.

2. 通過英語能力認定。下列辦法得任選一種:

Acknowledgement of English Proficiency. Students can select one of the following to meet this requirement:

(1) 通過系所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 Department and Institute.

(2) 修習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.

(3) 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。

Obtained a TOEFL grade which meets one of the following: 550 on paper, 213 on CBT, or 79 on iBT.

(4) 多益測驗(TOEIC)成績達 750 Had a TOEIC score of 750 or higher.

#### 十、博士學位考試 Doctoral Degree Examination:

- 1. 修業期間所發表論文須至少有一篇為已被接受於有評審制度之國際性學術期刊 (SCI 或經本院「產業博士班課程委員會」認定之),並應註明本院產業博士班 為其所屬單位,且為第一作者,其指導教授為該篇通訊作者。除論文外並且須 提交以下其中一項文件,經本院「產業博士班課程委員會」審核文件內容通 過:
  - (1)正式送件美國專利申請書一份
  - (2)產學合作計畫書一份
  - (3)技術移轉契約書一份
  - (4)成立新創公司之營運企業書一份
  - (5)其他:代表產學貢獻卓越之說明書一份

During the study period, a doctoral degree student should have at least one

academic paper accepted by an international journal with a peer review mechanism (SCI or journals acknowledged by the Curriculum Committee of the Ph.D. Degree Program in Industrial Development). The paper should be published under the name of the Program, with the student as the first author, and the advisor as the corresponding author. In addition, the student should also submit one of the following documents approved by the Curriculum Committee of the Program:

- a. A formal copy of the U.S. patent application
- b. A proposal of industrial and academic cooperation
- c. A contract of technology transfer
- d. A business proposal of a startup company
- e. Others: A detailed explanation regarding to the student's outstanding contributions to the industry and the university
- 2. 博士候選人申請博士學位考試時須將學位考試申請表、學位論文摘要、歷年成 績單、資格考核通過日期、已發表期刊論文、「產業博士班課程委員會」審議通 過文件及第一外國語文能力證明,於口試前兩個月送交系所辦公室查驗,經主 管簽核同意後始得進行博士學位考試。
  - Two months prior to the oral degree examination, a Ph.D. candidate must turn in the application form for the degree examination, the abstract of the dissertation, a complete transcript, the date of passing candidacy assessment, the published academic paper(s), the proof of English proficiency, and the required document(s) approved by the Curriculum Committee of the Program to the department office. Upon the approval of the Program Director, the student may take the degree examination.
- 3. 博士論文考試成績以論文內容及口試(及其他方式之考試)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 in association with the student's dissertation contents and the oral defense (and examinations elsewhere). It will be averaged out by Degree Examination Committee members present and will be given only one time, 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 maximum 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 fail again will be expelled.

4. 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 end of their 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.

十一、本辦法未盡事宜,悉依國立交通大學碩士學位及博士學位授予作業規章及有關 教育法令辦理之。

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

十二、本修業規章由「生技產業研發菁英博士學位學程委員會」會議訂定,經本院課程委員會修訂及經校課程委員會審查,再送教務會議核備後實施,修訂時亦同。

The policies and regulations stated herein have been drafted by the Program Committee of the Elite Ph.D. Degree Program in Biotechnology Industrial R&D, revised by the Curriculum Committee of the home college, and confirmed by the Curriculum Committee of the University. They will be implemented upon the validation of the Academic Affairs Meeting of the university. The same shall be applicable in the event of any amendment.

十三、本修業規定翻譯為英文版本,在文義上如有爭議,以中文版本為準。
These Regulations are adopted from Chinese, which shall prevail in case of any discrepancy between the English translation and the Chinese original.