

# **Study Regulations for Master's Program and In-Service Master's Program, Dept. of Biomedical Engineering, Chung Yuan Christian University**

Approved at the 1st Academic Affairs Meeting,  
2nd semester of the academic year of 2020 on March 17, 2021  
Amended at the 2nd Academic Affairs Meeting,  
2nd semester of the academic year of 2020 on June 30, 2021

Article 1. These Study Regulations have been established by the Department in accordance with the Regulations Governing Various Degree Titles and Recognition of Substitutes for Thesis of the Master's Degree and Graduate Student Examination Regulations of Chung Yuan Christian University.

Article 2. The titles of the Master's Programs in Chinese and English after graduation from the Department are as follows:

<b>Full name in Chinese and English of the Department (Institute, Program)</b>	<b>Title of degree</b>	
	<b>Title in Chinese and English</b>	<b>English abbreviation</b>
生物醫學工程學系	工學碩士	
Department of Biomedical Engineering	Master of Science	M.S.

Article 3. The compulsory subjects and credits required in the Master's Program of the Department are detailed in Table 1. The compulsory subjects and credits required in the In-Service Master's Program of the Department are detailed in Table 2.

Article 4. Course Credits

- I. Compulsory "Seminar" - 2 to 4 semesters, with 1 credit given per semester. Those who complete a degree exam within 2 semesters must take 2 semesters of "Seminar;" those who complete a degree exam within 3 semesters must take 3 semesters of "Seminar;" those who complete a degree exam within 3 semesters or more must take 4 semesters of "Seminar."
- II. 18 credits must be obtained from elective courses and at least 9 credits from department elective courses. Graduate students of the Master's Program are required to take 2 credits of general studies.
- III. Students who did not take Physiology (or related courses) or engineering mathematics (or related courses) at the university for at least 3 credits can take the related courses recognized by the Departments for at least 3 credits.
- IV. Students who have taken equivalent courses can apply for an exemption; however, they must make up the number of credits required.
- V. Students of the In-Service Master's Program who submit technical reports instead of a thesis must take 3 more credits of department elective courses.

Article 5. Thesis Advisor

- I. Graduate students of the Master's Program should select an advisor before the end of their first year of study.
- II. Graduate students of the In-Service Master's Program should select an advisor before the end of their first year of study and decide whether they want to write a thesis or technical reports.
- III. Students who wish to change an advisor for any reason must submit a "Letter of Consent to Change Advisor" at least one academic year before graduation.
- IV. Graduate students should first discuss course selection with their advisor. The list of selected courses and transcripts of records must be signed by their advisor.

Students must have at least 2 discussions with their advisors, which should be recorded in the “Interaction Between Graduate Students and Advisors” or “Brief of Interaction Between Graduate Students and Advisors”, to be submitted to the Department for review. Student records of graduate students must be returned to the Department upon graduation.

**Article 6. Academic Presentation**

Graduate students of a Master’s Program must publish at least 1 domestic or international journal article or conference paper, or file a patent application for an invention. The student must be the first-author for his/her international conference proceeding, with their advisor as one of the co-authors during the study period. The paper must be published under the name of the Department. One paper or conference paper can only be used by one graduate student of a Master's Program for the review of his graduation.

**Article 7. Degree thesis**

- I. A thesis proposal must be submitted one semester before the degree examination and assessed by oral exam.
- II. A thesis must be checked on the thesis comparison system, with a comparison report provided for the reference of the Oral Exam Committee.

**Article 8. Review of Areas of Expertise**

- I. The thesis (proposal) review includes whether or not the student meets the areas of expertise of the Department including: biomedical electronics, biomedical information, biomedical imaging, clinical engineering, biomedical materials, biomechanics, tissue engineering and stem cells, or other biomedical engineering-related expertise.
- II. The Review Committee which checks the areas of expertise is composed of at least 3 advisors and scholars who are experts in the students’ field of study, inside or outside the university. If a thesis submitted prior to a Master degree exam deviates from the original area of expertise, the advisor must reactivate the review mechanism.
- III. In the event of doubt, the Department Chair will convene a review meeting, in which the advisor will be invited to attend. If it is determined that the thesis does not meet the Department's areas of expertise, it must be revised. If a student do not agree with the results, he may submit information and a written explanation to his college for further review.

**Article 9. Technical Report**

- I. Students of the In-Service Master's Program who want to submit technical reports instead of a thesis must submit a technical report plan at least 3 semesters before graduation.
- II. A series of 3 technical reports must be completed before graduation, with at most 1 technical report completed per semester. Technical reports can be reviewed in writing, provided that the final review includes written and oral means.
- III. The review of technical reports is carried out by two (inclusive) or more Review Committee members. The qualifications of a Review Committee members are the same as those of an Oral Examination Committee members.
- IV. The subject and content of a technical report must meet the Department's areas of expertise, with innovative theoretical analysis meet one of the following basic requirements:
  1. Achievement in patent, technology transfer or innovative research and development.

2. Achievement in industrial-academic cooperation, technology application or practical improvement projects with specific contributions.
  3. Case studies of professional technologies or fields that have been compiled into a report that contributes comprehensive and unique insight.
- V. Information required: For review, technical reports written in accordance with Article 10 of the “Regulations Governing Various Degree Titles and Recognition of Substitutes for Thesis of Master's Degree and Graduate Student Examination Regulations” must be submitted.

Article 10. Matters not covered herein shall be subject to CYCU’s relevant regulations.

Article 11. The Regulations have been approved by the Academic Affairs Meeting and shall be promulgated. The same shall apply where the Regulations are amended.

These Regulations are applicable to students of the Master's Program and In-Service Master's Program from the 2021 academic year onward.

Table 1.

Table of Compulsory Subjects and Credits for the <u>Master’s Program, Dept. of Biomedical Engineering</u> , Chung Yuan Christian University (Applicable to students of the Master programs from the 2022 academic year)					
Title		Duration	Course credits	Prerequisite subjects and terms for renewal	
				Title	Restriction
Compulsory subjects of the Department	Thesis	Full	6 (3,3)		
	Book and newspaper discussion	Full	2 (1,1)		
	Introduction to Medical Engineering (1)	Half	2		
	Introduction to Medical Engineering (2)	Half	2		
	Total (credits for theses are calculated separately)		6		
Graduation credits					
Nature		Course credits	Notes:		
1. Compulsory subjects of the Department		6	I. CYCU-Wide Requirements		
2. Elective courses of the Department		18	1. Foreign graduate students, enrolled from the 2016 academic year onwards, must take Chinese language courses and pass the level 1 exam of the Test of Chinese as a Foreign Language (TOCFL) with a certificate obtained before graduation.		
3. Elective general studies for graduate students		2	2. For course-taking and grades, please see the School Regulations.		
Minimum credits required to graduate (credits for theses are calculated separately)		26			

Amended on June 16, 2021 by the 2020-2-4 School Level Curriculum Committee.

Amended at the 2020-2-2 Academic Affairs Meeting held on July 30, 2021.