



# **Handbook for International Master of Science Students**

**Graduate Institute of  
Biomedical Sciences  
College of Medicine  
Chang Gung University**

**Prepared by:  
Course committee of GIBMS, CGU  
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## **Mission, Scopes, and Infrastructure**

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### **Name**

As approved by the Ministry of Education, Taiwan, the official name of the institute is "The Graduate Institute of Biomedical Sciences" (hereinafter referred to as GIBMS), Chang Gung University (hereinafter referred to as CGU).

### **Mission**

We are committed to providing a solid and foundation of training in biomedical sciences and beyond. We empower students to become excellent biomedical scientists in theory, leadership, innovation, and practice.

### **Organization**

There is one director and various committees in our institute. The director is the representation of the institute. The director's responsibilities are to overlook the whole institute, coordinating the intra- and inter- committees. The committees are responsible for setting the guidelines for courses and developing the curriculum and details.

### **Amendments**

All amendments of GIBMS became effective after a full review and approval by the Institute Committee, and announced by the GIBMS website (<http://gibms.cgu.edu.tw/>).

## **Enrollment and Registration**

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Dates for enrollment and registration will be stated in the acceptance letter.

### **Thesis Advisor**

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1. The thesis advisor must be a faculty member of the basic medical sciences departments of the medical college of CGU, GIBMS, or the Department of Biomedicine. Members who are

not affiliated with these institutes/departments can be also served as a thesis adviser after approval by the respective divisional or institutional committee.

2. Responsibilities of the dissertation advisor:

- (1) To guide the student in all academic matters, including course selection, paper assignment, experimental design and execution, and dissertation writing.
- (2) To guide a student's extracurricular activities.
- (3) To attend all committee meetings on the research progress of the student.
- (4) To recommend committee members for student's evaluation.

Note 1. When a student needs to change advisor or the advisor is unable to continue his/her duty, a new advisor will be appointed with the approval by the original advisor, the newly assigned advisor and the Institute Director. The student needs to submit an application form to the GIBMS office for transfer.

Note 2. After approval by the Division Committee, an adjunct faculty member who is actively participating in teaching courses in his/her associated division will be qualified to serve as a thesis advisor.

## **Courses and Credits**

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1. Refer to the Graduate Program PhD Curriculum for the required/elected courses.

2. Required courses:

- (1) Seminar: 4 credits required (one per semester). Students who have completed the MS program in less than 4 semesters and students of the Bachelor-MS program need to complete at least two credits for graduation. To be noted, students can take other credits to fulfill the graduation requirement.
- (2) MS thesis: 6 credits offered after completion and passing of the thesis defense.
- (3) Division required courses: courses can be chosen from the MS Curriculum with the approval of the thesis advisor

3. Completion time, credit requirements and related regulations for graduation

- (1) MS students are expected to complete their studies in one to four years. Extensions may be granted according to Article 16 of the CGU Academic Regulations.
- (2) 24 credits (not including the thesis credits) are required for completion of the MS degree.
- (3) Passing score for all courses and final defense: 70

## **Guideline for Thesis Preparation**

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### **1. Thesis Advisory Committee:**

All students must set up a thesis advisory committee. The committee comprises of 3 members; all members must hold a position equivalent to Assistant Professor/Researcher or above. Committee members are subject to future changes.

### **2. Thesis Proposal and Progress Reports:**

After selecting a thesis advisor, students must present their thesis proposal to a Thesis Advisory Committee before the end of the second semester (7/31 or 1/31) and have a thesis progress report before the end of the third semester (1/31 or 7/31). The thesis adviser may request the student to present his/her thesis progress report at fifth (or more) semester if the student cannot graduate at the end of the forth semester. The passing grade is 70.

### **3. In case the student cannot hold his/her thesis proposal or progress report on time, he/she should apply for postponing it in advance. The application will need to be approved by both the thesis adviser and the Director of GIBMS.**

## **Requirements for Applying for Degree Examination**

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1. Completion of the 24 course units (including the required courses in the respective division).
2. Certificate of completing “Taiwan Academic Research Ethics Education” course.

3. Completion of the thesis requirements such as the thesis proposal, progress report, and participation in the annual thesis poster competition (at least once).

## **Requesting the Degree Examination**

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**Please refer to the “Guidelines for Degree Examination” posted by Graduate Studies Section, Office of Academic Affairs.**

1. Stage one (review all credits):
  - (1) Completion of the “Achievement Review Form”
  - (2) Application period: For the 1<sup>st</sup> semester, from August 1 to November 30. For the 2<sup>nd</sup> semester, from February 1 to April 30.
2. Stage two (oral examination)
  - (1) Completion of “Application Form for Degree Examination”
  - (2) Application period: For the 1<sup>st</sup> semester, from August 1 to December 31. For the 2<sup>nd</sup> semester, from February 1 to May 31.
  - (3) In addition to the guidelines and regulations laid out in the bulletin (Graduate Studies Section, Office of Academic Affairs), students have to complete the requests disclosed in the “Master’s Thesis Oral Defense Application Form” for the GIBMS and provide corresponding records. The graduating students must submit the original copies of papers to the department office and upload the copies to the 035A archive under the online approval process.
  - (4) Submit the examination date to the “University Affairs Information System” and print out the "Overall Score Sheet" and "Score Sheet".

## **Details of the Degree Examination**

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1. All examination-related regulations and implementations are in accordance with the "CGU Master's and Doctoral Degree Examination Implementation Measures" issued by the Office of Academic Affairs.

2. Oral Examination Deadline:

The Degree Examination Application form needs to be completed by the candidate before taking the oral examination. The final Oral Examination evaluation form needs to be submitted to the Office of Academic Affairs before 31st July or 31st January.

3. The Thesis Originality Comparison form:

Candidates need to complete the "Thesis Originality Comparison" form before the Oral Examination and provide the form to the Examiners on the day of Oral Examination.

4. Examination Committee

(1) In principle, the Oral Defense Committee shall consist of 3 Examiners (including External Examiners). However, 4 Examiners are needed if the candidate is supervised by 2 thesis advisors. The thesis advisor is the ex-officio member of the Oral Defense Committee, but cannot serve as the Committee convener.

(2) The members of the Master's degree Oral Defense Committee must hold a position equivalent to Assistant Professor/Researcher or above in the Universities or Research Institutes of Taiwan, ROC.

(3) Once verified, the Oral Defense Committee cannot be changed without a proper reason. If there is a need to change the Oral Defense Committee, the 035B form (Application for the change of the Degree Examination) needs to be submitted.

5. Thesis

The thesis draft, following the approval of the thesis advisor, needs to be delivered to the Examiners two weeks before the examination.

6. Oral Defense

(1) Candidates shall present their dissertation and answer to Examiners' questions at the designated location and time agreed by the Examiners.

(2) The final grade of the oral defense shall be the average of the grades decided by all attending Examiners. A minimum final grade of 70 is needed to pass the oral defense.

In addition, the oral defense is considered failed if 1/2 or more of the attending examiners give a grade of under 70.

- (3) The candidate who has failed the oral defense may retake the oral defense within 3 months during the remaining school years. The candidate shall be expelled from school should he/she fails the second oral defense.
- (4) Following the successful passing of the oral defense, the candidate shall obtain the recommendation letter form of the thesis advisor and the examiners' approval form, and submit the final Thesis.
- (5) If there are any questions, please refer to the "Chang Gung University Master and Doctoral Degree Examination Implementation Measures".

## **Procedure for Graduation**

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### **1. Submitting a Master's thesis**

- (1) The final version of the thesis must be revised in accordance with the suggestions given by the thesis committee.
- (2) Upon finalization, the full version of the thesis in accordance with the graduation thesis format has to be uploaded to the Chang Gung University Library > E-Resources > Thesis/Dissertation. After the approval, the thesis is printed in the prescribed format in paperback. One copy is then sent to the GIBMS, one copy to the library, and one copy to the Office of Academic Affairs (this copy will be transferred to the National Central Library).

### **2. Leaving CGU**

- (1) According to the items listed in "School Leaving Procedure Form" obtained from the University Affairs Information System, go to the relevant offices to complete and verify the procedures.
- (2) Deadline for submitting "School Leaving Procedure Form" to the Office of Academic Affairs is August 15th for graduating in the first semester, or February 15th for the second semester.



- (3) The requirements of GIBMS for School Leaving Procedure are: (i) a completed "Application Form for Students Leaving the Laboratory of GIBMS" (please download the form from the GIBMS website), and (ii) a copy of thesis.

## List of Courses

### GIBMS--Graduate Program Master Curriculum (2020~2021)

Last revised: 2021/04

- I. Students pursuing a Master degree must fulfill a minimum 24 credits of course work and 6 credits of the Master Thesis. All courses listed below and other approved courses offered by the Clinical Medicine Graduate Program in the Division of Clinical Medicine, Graduate Institute of Natural Products, Graduate Institute of Medical Biotechnology and Laboratory Science and the Master Program in Molecular Medicine, can be taken to fulfill the requirements for elective courses.

Division	Biochemistry and Cell Molecular Biology	Microbiology	Physiology and Pharmacology
Required credits	11	8	10
Elective credits	13	16	14

- II. The 6 credits for the “Master Thesis” are given only after completion and passing of the thesis defense.

- III. See “Handbook for International Master of Science Students” for graduation requirements.

Divisions	Required (R) or Elective (E)	Course Title	Credit	Year	Fall semester	Spring semester	Note
General Required Courses	R	書報討論 Seminar	4	1~2	2		Required courses for the first and second year students (a total of 4 credits). A minimum 2 credits are required for students who are awarded a MS degree in less than 2 years. All students need to fulfill total graduation credit units.
Division of Biochemistry and Cellular Molecular Biology	R	高等生化學 Advanced Biochemistry	3	1	3		Starting in 2017, students may take only one as the required courses.
	R	細胞生物學 Cell Biology	3	1	3		Offered jointly by GIBMS PhD and Master programs
	R	分子生物學 Molecular Biology	4	1		4	Offered jointly by GIBMS Ph.D and Master programs.
Division of Microbiology	R	微生物學-細菌學 Microbiology-Bacteriology	2	1	2		Students may select any two as the required courses.
	R	微生物學-寄生蟲學 Microbiology-Parasitology	2	1	2		
	R	微生物學-病毒學 Microbiology-Virology	2	1		2	Offered jointly by GIBMS PhD and Master programs.
	R	免疫學 Immunology	2	1		2	
Division of Physiology and Pharmacology	R	細胞生理暨分子藥理學 Cellular Physiology and Molecular Pharmacology	6	1	6		This requirement can be substituted by Medical Pharmacology (4 credits) or Medical Physiology (4 credits). This requirement is waived for students in MS-Medicine program. All students need to fulfill total graduation credit units.
Division of Biochemistry	E	腫瘤生物學及癌症治療 Cancer Biology and Cancer Therapy	2	1	2		Offered jointly by GIBMS and Dept. of Biomedical Sciences

and Cellular Molecular Biology	E	表觀遺傳學 Epigenetics : Chromatin and Gene Regulation	2	1	2		Offered jointly by GIBMS and Dept. of Biomedical Sciences
	E	分子細胞生物學特論 Special Topics in Molecular and Cellular Biology	2	1		2	Offered jointly by GIBMS and Dept. of Biomedical Sciences
	E	果蠅模型應用於人類疾病研究特論 Drosophila Model and Human Diseases	2	1		2	Offered jointly by GIBMS and Dept. of Biomedical Sciences
	E	幹細胞生物學 Stem Cell Biology	2	1		2	Offered jointly by GIBMS and Dept. of Medical Biotechnology and Laboratory Science (Master program)
	E	先進蛋白質生物標誌偵測定量技術 Advanced Technologies for Biomarker Detection and Quantification	1	1	1		Summer course, class limit: 25 students Offered jointly by GIBMS and Dept. of Biomedical Sciences
Division of Microbiology	E	應用免疫技術 Immunological Techniques	1	1	1		Offered jointly by GIBMS and Dept. of Medical Biotechnology and Laboratory Science (Master program)
	E	應用免疫技術實驗 Immunological Techniques Laboratory	1	1	1		Offered jointly by GIBMS and Dept. of Medical Biotechnology and Laboratory Science (Master program)
	E	生物資料庫管理及應用 Biological Database Management and Applications	3	1		3	Offered jointly by GIBMS and Dept. of Medical Biotechnology and Laboratory Science (Master program)
Division of Physiology and Pharmacology	E	奈米生物技術之醫學應用 Applications of Nanobiotechnology in Medicine	2	1	2		
	E	老化研究特論 Special Topics in Aging Research	1	1	1		
	E	粒線體與細胞凋亡之病生理特論 Special Topics in Pathophysiology of Mitochondria and Apoptosis	2	1		2	
	E	螢光顯微影像之生物應用 Biomedical Applications of Fluorescence Imaging Microscopy	2	1	2		Summer course
	E	螢光顯微影像之生物應用實作 Biomedical Application of Fluorescence Imaging Microscopy	2	1	1		Summer course
Others	E	現代生物技術及分子診斷實驗 The Frontier of Biotechnology in Molecular Diagnosis Laboratory	2	1	2		Summer course, class limit: 35 students
	E	尖端生物技術實驗-分子細胞學 Advanced Biotechnology Laboratory-Molecular Cell Biology	2	1	2		Summer course, class limit: 35 students

Note: Course selection and registration need to be approved and signed by the thesis advisor.