Department of Biomedical Sciences, National Chung Cheng University

Guideline for graduation (for students admitted after **2025**)

I. A minimum of 128 credits is required for graduation, which includes the credits of courses from the following categories:

（1）General education: **28 credits**

（2）Major compulsory courses for major in biomedical sciences: **60 credits**

（3）Major elective courses for major in biomedical sciences: 26 **credits**

（4）Unrestricted selective courses: 14 **credits**

II. The curriculum	Year 1		Year 2		Year 3		Year 4	
(1) General education 28 credits	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring
Ability of Chinese/English course: Chinese Language Knowledge and Application (4 credits of the subtotal courses) English ability training (4 credits of the subtotal courses)	2 2	2 2						
Others: At least one course is required from each of the five categories (1 through 5, total of 5 courses) designated under the General Education Course Program and Information Competence course program. The remaining credits can be fulfilled by taking courses offered from Information Competence course program, General Introductory course program, and all six branches under General Education Course Program.	★ Please refer to "Guideline for Studying General Education at National Chung Cheng University" for more information.. ★Nor can you select Basic Theory Course set by this department, nor select the courses this department not allowed in the sheet of the general courses each department not allowed. ★Please refer to "Guideline for Students Taking Physical Education Courses at National Chung Cheng University" for relevant information.							

◎Note: Social Service Learning courses are required graduation. (no credit)

(2) Major compulsory courses for major in biomedical sciences: **60 credits**

Calculus (3 credits)	3							
Linear Algebra (3 credits)		3						
Conceptual Physics (I)(II) (4 credits)	2	2						
General Chemistry (3 credits)	3							
General Chemistry Laboratory(1 credit)	1							
Biology(I)(II)(6 credits)	3	3						
Experiments on Biology (I)(II) (2 credits)	1	1						
Organic Chemistry(I)(II) (6 credits)		3	3					
Analytical Biochemistry(3 credits)				3				
Biochemistry (I)(II)(6 credits)			3	3				
Experiments on Life Sciences (I)(II)(III) (3 credits)			1	1	1			
Molecular Biology (4 credits)				4				
Medical Virology (2 credits)					2			
Genetics (3 credits)					3			
Medical Microbiology (2 credits)					2			
Cell Biology (4 credits)						4		
Immunology (3 credits)						3		
Seminars(I)(II)(2 credits)							1	1

(3)Major elective courses for major in biomedical sciences: 26 **credits**

1. Major elective courses must include at least 26 credits from the “Biomedical Foundations Cluster” and the “Biomedical Applications Cluster” as designated by the department. A minimum of 12 credits must be completed within each individual cluster."
2. Students of this department who complete 18 credits (inclusive) within the “Biomedical Foundations Cluster” or the “Biomedical Applications Cluster” will be awarded a Certificate of Completion for the respective cluster, subject to departmental review and approval.

Table A. Biomedical Foundation Program

Introduction for Biomedical Sciences Reading (I)(II)	Introduction to Biomedical research
Introduction to Biostatistics	Introduction to Bioinformatics
Introduction to Systems Biology	Proteomic Research
Protein Biotechnology	Structural Biology
RNA Transcriptome	Biophysical Chemistry
Molecular Oncology	Stem Cell Biology
Developmental Biology	Signal Transduction
Experimental Design in Molecular Biology	Biomedical research with model organisms
Epigenomics	Genomics Techniques and its Biomedical Application
Gene editing and synthetic biology	Scientific English Writing and Communication
Critical reading and writing Scientific Papers	Experiments on Special Research Topics(I)(II)

Table B. Biomedical Application Program

Application of Biomedical Science	Anatomy and Physiology
Histology	Human Physiology
Basic Human Anatomy	Introduction to clinical oncology and medical technology
Introductory Pharmacology	Basic Human Embryology
Basic Human Neuroanatomy	Gene and cell therapy
Reproductive Biology	Exploring Neurosceince
Tumor Biology	Morphogenesis and Regenerative Medicine
Cellular Mechanisms of Human Diseases	Nanomedicine
Cancer Gene Therapy	Clinical Molecular Oncology
Introduction to Clinical Molecular Diagnosis	Introduction to Practices in Biomedical Industry
Experiments on Special Research Topics(III)(IV)	

(4) Unrestricted selective courses: **14 credits**

1. These courses can be taken from the specialized courses of the Biomedical Science department and other departments. However, the "Biology" and "Biochemistry" courses offered by other departments will not be included in this department's free elective credits and graduation credits.
2. Overloaded general education courses are not allowed to count into the unrestricted elective and graduation credit in this department.
3. The elective credit of military training (or nursing) course is not allowed to count into unrestricted elective and graduation credit.
4. Student who fails to finish education program (i.e., drop the course) or takes excessive education courses, is unable to count into unrestricted elective and graduation credit.
5. Student who selects Basic English course offered by Language center, is unable to count into unrestricted selective credit in this department and graduation credit. Only the Advanced courses (medium or advanced level English class) can be counted for unrestricted elective credit of the department.
6. Student who selects P.E course credit is unable to count unto unrestricted elective and graduation credit.