

中國醫藥大學 醫學工程學院生物醫學工程學系 選修畢業學分認定表 112 學年度入學適用

China Medical University Department of Biomedical Engineering Elective for Undergraduate Majors (Applicable for 2023-2024 Enrollees)

科目名稱 Course Title	修別 Type	學分 Credits	一年級 Freshman		二年級 Sophomore		三年級 Junior		四年級 Senior		課程分類 Category	備註 Remarks
			上	下	上	下	上	下	上	下		
			1	2	1	2	1	2	1	2		
生物醫學工程臨床及實務概論(Introduction to clinical practice in biomedical engineering)	選(E)	2.0		2.0							系定選修(Departmental Electiv)	
3D列印醫療應用(3D Printing in medical application)	選(E)	2.0			2.0						系定選修(Departmental Electiv)	
生物資訊學(Bioinformatics)	選(E)	2.0			2.0						系定選修(Departmental Electiv)	
仿生物理工程(Biomimicry in physics & engineering)	選(E)	2.0			2.0						系定選修(Departmental Electiv)	
再生醫學與轉譯醫學概論(Introduction to regenerative medicine & translational medicine)	選(E)	1.0			1.0						系定選修(Departmental Electiv)	
專題研究(一)(Independent research (I))	選(E)	2.0			2.0						系定選修(Departmental Electiv)	
細胞生物學(Cellular biology)	選(E)	2.0			2.0						系定選修(Departmental Electiv)	
人工智慧理論(Theory of artificial intelligence)	選(E)	2.0				2.0					系定選修(Departmental Electiv)	
再生醫學(Regenerative medicine)	選(E)	2.0				2.0					系定選修(Departmental Electiv)	
專題研究(二)(Independent research (II))	選(E)	2.0				2.0					系定選修(Departmental Electiv)	
電腦輔助設計與工程(Computer aided design & engineering)	選(E)	2.0				2.0					系定選修(Departmental Electiv)	
藥物傳輸概論(Introduction to drug delivery)	選(E)	2.0				2.0					系定選修(Departmental Electiv)	
生醫光電導論(Introduction to biophotonics)	選(E)	2.0					2.0				系定選修(Departmental Electiv)	
生醫感測器概論(Introduction to biosensors)	選(E)	2.0					2.0				系定選修(Departmental Electiv)	
專題研究(三)(Independent research (III))	選(E)	2.0					2.0				系定選修(Departmental Electiv)	
電子學(二)(Electronics (II))	選(E)	2.0					2.0				系定選修(Departmental Electiv)	
電腦輔助手術(Computer aided surgery)	選(E)	2.0					2.0				系定選修(Departmental Electiv)	
電磁學概論(Introduction to electromagnetics)	選(E)	3.0					3.0				系定選修(Departmental Electiv)	
人工器官導論(Introduction to artificial organs)	選(E)	2.0						2.0			系定選修(Departmental Electiv)	
人因工程(Ergonomics)	選(E)	2.0						2.0			系定選修(Departmental Electiv)	
生物晶片概論(Introduction of biochip)	選(E)	2.0						2.0			系定選修(Departmental Electiv)	
科技論文寫作(Scientific writing)	選(E)	2.0						2.0			系定選修(Departmental Electiv)	
專題研究(四)(Independent research (IV))	選(E)	2.0						2.0			系定選修(Departmental Electiv)	
醫用嵌入式系統(Embedded system in biomedical applications)	選(E)	2.0						2.0			系定選修(Departmental Electiv)	
大數據分析與實作(Big data analytics & practice)	選(E)	2.0							2.0		系定選修(Departmental Electiv)	
生醫光學顯微技術(Biomedical optical imaging techniques)	選(E)	2.0							2.0		系定選修(Departmental Electiv)	
奈米醫學(Nanomedicine)	選(E)	2.0							2.0		系定選修(Departmental Electiv)	
專題研究(五)(Independent research (V))	選(E)	2.0							2.0		系定選修(Departmental Electiv)	
醫工實習(Practice in medical engineering)	選(E)	2.0							2.0		系定選修(Departmental Electiv)	
醫療器材創新設計(Medical device innovation & design)	選(E)	1.0							1.0		系定選修(Departmental Electiv)	
基因藥物與基因治療(Gene drug & gene therapy)	選(E)	2.0							2.0		系定選修(Departmental Electiv)	
專題研究(六)(Independent research (VI))	選(E)	2.0							2.0		系定選修(Departmental Electiv)	
創新創業實務(Innovation & entrepreneurship)	選(E)	1.0							1.0		系定選修(Departmental Electiv)	
輔具設計開發(Assistive devices design & development)	選(E)	2.0							2.0		系定選修(Departmental Electiv)	
合計 選修 總學分(Elective subtotal)		66.0		2.0	11.0	10.0	13.0	12.0	11.0	7.0		

校內注意事項

112學年度入學生畢業學分認定表備註：
一、畢業前必須通過英文鑑定，方能畢業。相關規定依本校「學生英文能力鑑定實施辦法」辦理。

Note of CMU

For students enrolled in the fall semester of 2023:
1. According to the regulation of CMU Students' English Proficiency Assessment, Students must pass the minimal English Proficiency

二、體育課一年級為必修，每學期0學分，不及格不得畢業。大學部二年級以上為選修，每學期一學分。
三、國防軍事訓練改為選修，每週上課2小時為1學分，成績及格者，83年次以前同學以每8堂課折算1日役期(1門課折抵4日役期，2門課折抵9日役期，以此類推)。83年次以後同學每門課折抵2日訓期。

四、通識教育課程分為正式課程及通識教育活動：

(一)正式課程：必修28學分

1. 英文必修4學分

英文課程採分級制，分級以大學指考及學測成績為依據，分級結果於選課前公告。如達該學系英文畢業檢定標準，經所屬學系審核通過，得免修英文4學分，相關細則依「中國醫藥大學英文暨英語聽講必修課程免修學分實施要點」規定辦理。

2. 資訊相關課程 (2學分)

3. 服務學習課程 (1學分)

4. 通識課程 (21學分)

(1) 核心通識課程：至少修習10學分，五大類中至少任選三大類。

A. 語文類：國文、英文進階課程及第二外語課程等。

B. 人文藝術類：文學藝術類、歷史文明類等。

C. 社會科學類：法政類；社會、心理、人類、教育、性別研究類；管理、經濟類等。

D. 自然科學類：基礎科學類；生命科學類；應用科學類；科學技術類等。

E. 運動知能類：如運動心理學、運動生理學、國際賽事分析與博奕事業、運動與健康的學理探討等學術類課程。如屬該學系之必選修課程者，將設限不得認列為通識學分。

(2) 跨學院通識課程：至少須修習跨學院課程4學分。

(二) 通識教育活動：0學分，學生須於在學期間參與至少16小時通識教育中心所認定之演講與校外所舉辦之展演活動；成績以通過/不通過計分。相關細則依「通識教育活動實施要點」規定辦理。

五、服務學習時數：需修習通識必修1學分(可認列18小時服務學習課程)(醫學系、中醫學系另於下學期開設系上必修1學分)之服務學習課程，以及6小時志願服務基礎教育訓練、6小時服務學習講座參與、18小時志工服務(不含服務學習講座)，共計需完成48小時之服務學習時數，始符合畢業資格。

※志願服務基礎訓練由學務處服務學習中心舉辦(另行公告)，其他未盡事宜請詳閱「服務學習課程實施要點」(學務處服務學習中心網頁)。

六、畢業前必須參加校內舉辦之基礎心肺復甦術訓練，方具畢業資格。相關規定依本校「學生基礎心肺復甦術訓練實施要點」辦理。

七、本學分表做為畢業學分認定之依據。

生物醫學工程學系注意事項

一、設立宗旨：培育生物醫學與工程之跨領域專業人才

教育目標：1. 培育具有專業技能的醫學工程人才

2. 培育具有跨領域創新的醫學工程人才

二、112學年度入學新生實施，本系四年制。

最低畢業學分為128學分，

含必修89學分(含系定必修61學分、通識必修28學分)，

選修39學分(需有31學分為本系開設之學分)。

單位主管簽章：

Requirement before graduation.

2. Taking Physical Education Course is compulsory for first year students (0 credits), students must pass to graduate. For second year or above, Physical Education is elective with 1 credit per semester.

3. Defense Education Military Training Course is elective, with 2 hours per week (1 credit).

4. General education courses consist of formal courses and general education activities:

(1) Formal courses: 28 required credits

i. English (4 credits): A level-based class grouping system is adopted based on students' score of the entrance examination. Students who meet the department's English graduation standard and are approved by the department can be exempted from the course.

ii. Technology Information-related courses (2 credits)

iii. Service learning courses (1 credit)

iv. General education courses (21 credits)

Core general education courses: Minimum of 10 credits, with at least three of the five categories. (Language, Humanities and arts, Social sciences, Natural sciences, Sports)

Cross-college general education courses: Minimum of 4 credits.

(2) General education activities: 0 credits. Students must participate in at least 16 hours of activities held by the General Education Center, scores will be marked as pass/fail.

5. Service learning hours: 1 credit of compulsory general education (can be listed in 18 hours of service learning courses) (School of Medicine and Chinese Medicine will offer 1 credit of compulsory course in the 2nd semester), 6 hours of voluntary service basic training, 6 hours participation service-learning lectures, and 18 hours of volunteer service. A total of 48 hours is required to be eligible for graduation.

※ Voluntary service basic training will be held by the Office of Student Affairs (to be announced).

6. Students must participate in the basic cardiopulmonary resuscitation training held by the university before graduation.

7. This list is used as the recognition basis of courses and credits required for graduation

Note of Department of Biomedical Engineering

1. Applicable to the students enrolled in the 2023 academic year.

2. Students must complete a minimum of 128 credits for graduation, including 89 required credits and a minimum of 39 elective credits.

3. Among the 39 elective credits, students must take a minimum of 31 credit courses offered by the department.