中國醫藥大學 醫學院生醫科技產業博士學位學程 **必修** 畢業學分認定表 111 學年度入學適用

China Medical University The Ph.D. Program of Biotechnology and Biomedical Industry Requirement for Ph.D. Program (Applicable for 2022-2023 Enrollees)

科目名稱 Course Title	修別 Type	學分 Credits	碩一 1st year		博一 2nd year		博二 3rd year		博三 4th year		博四 5th year		6th year		7th year		課程分類 Category	備註 Remarks
			上 1	下 2	上 1	下 2	上 1	下 2	上 1	下 2	上 1	下 2	上 1	下 2	上 1	下 2		
分子醫學(Molecular medicine)	必(R)	4.0	4.0														院定必修(College Required Courses)	全英授課
專題討論(一)(Seminar(I))	必(R)	1.0	1.0														所定必修(Required Courses)	全英授課/碩博修課
生技產業與行銷管理(Biotechnology industry & marketing management)	必(R)	2.0		2.0													所定必修(Required Courses)	
專題討論(二)(Seminar(II))	必(R)	1.0		1.0													所定必修(Required Courses)	全英授課/碩博修課
專題討論(三)(Seminar(III))	必(R)	1.0			1.0												所定必修(Required Courses)	全英授課
專題討論(四)(Seminar(IV))	必(R)	1.0				1.0											所定必修(Required Courses)	全英授課
博士論文(Ph.D. Thesis)	必(R)	12.0				12.0											所定必修(Required Courses)	
企業實習(一)(Internship(I))	必(R)	1.0					1.0										所定必修(Required Courses)	
企業實習(二)(Internship(II))	必(R)	1.0						1.0									所定必修(Required Courses)	
企業實習(三)(Internship(III))	必(R)	1.0							1.0								所定必修(Required Courses)	
企業實習(四)(Internship(VI))	必(R)	1.0								1.0							所定必修(Required Courses)	
合計 必修總學分(Requirement subtotal)		26.0	5.0	3.0	1.0	13.0	1.0	1.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0		

校內注意事項

一、校級畢業規定

(一)須完成修讀「實驗室安全」0學分、「研究倫理」0學分及「現代生物醫學講座」4學分課程。

(二)須通過校定博士生英文能力鑑定標準，相關規定依本校「學生英文能力鑑定實施辦法」辦理。(外籍生免修)

(三)教學助理訓練：博士生須完成至少2學期之教學助理訓練。(外籍生免修)

二、本學分表做為畢業應修課程學分之認定依據。

Note of CMU

1.University requirement for graduation

(1)Students must take and pass the courses Research ethics (0 credit), Laboratory safety (0 credit), and Lecture on Modern Biomedicine (4 credits).

(2)According to the regulation of CMU Students' English Proficiency Assessment, students must pass the English Proficiency requirement before graduation.(Foreign students excluded)

(3)Teaching assistant training: All PhD students must complete at least two semester of teaching assistant training.(Foreign students excluded)

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

生醫科技產業博士學位學程注意事項

生醫科技產業博士學位學程注意事項

一、教育目標：

1. 培育具備生醫科技產業應用與法規以及行銷管理之專業人才。

2. 發展轉譯研究與產業實踐整合之生醫科技。

3. 增進生醫產業的國際視野及競爭力。

二、111學年度入學新生實施，最低畢業學分為48學分：中

1. 逕博前碩班學分最多認列10學分。

2. 必修學分：30學分(包含校級必修「現代生物醫學講座」4學分、院級必修「分子醫學」4學分、學程規定課程必修共2學分、專題討論4學分、博士論文（專案報告）12學分和企業實習4學分)。

3. 選修學分：8學分(本博士學程選修課程至少6學分)。其他博士班課程可認列為選修學分。中

Note of The Ph.D. Program of Biotechnology and Biomedical Industry

1. Educational goals:

(1) Cultivate professionals with the application and regulations of the biomedical industry, and marketing management.

(2) Develop biomedical technology that integrates translational research and industrial practice.

(3) Promote the biomedical industry with international vision and competitiveness.

2. For students enrolled in 2022: The minimum number of credits required for graduation is 48.

(1) 30 required credits:

Lecture on Modern Biomedicine: School-level required course, 4 credits

Molecular medicine: College-level required course, 4 credits

Program required courses for 2 credits. Seminar: 4 credits., Ph.D. Dissertation: 12 credits, Internship: 4 credits.

(2) 8 elective credits (at least 6 credits must be taken from courses offered by The Ph.D. Program for biotechnology and biomedical Industry). Credits taken from another Ph.D. program can be considered as elective credits.

中國醫藥大學　醫學院生醫科技產業博士學位學程 **選修** 畢業學分認定表 111 學年度入學適用

China Medical University The Ph.D. Program of Biotechnology and Biomedical Industry Elective for Ph.D. Program (Applicable for 2022-2023 Enrollees)

科目名稱 Course Title	修別 Type	學分 Credits	一年級 1st year 上 1	一年級 1st year 下 2	二年級 2nd year 上 1	二年級 2nd year 下 2	課程分類 Category	備註 Remarks
分子癌症生物學(Molecular cancer biology)	選(E)	2.0	2.0				所定選修(Elective Courses)	全英授課
生醫產業專題討論(Dission in biomedical industry)	選(E)	2.0	2.0				所定選修(Elective Courses)	碩一時上修此課程
企業見習(Enterprises practicum)	選(E)	1.0	1.0				所定選修(Elective Courses)	
新藥開發之智財權規範(Intellectual property rights & regulations of drug)	選(E)	1.0	1.0				所定選修(Elective Courses)	
臨床與基礎醫學整合課程(Integrated course in clinical & basic medicine)	選(E)	2.0	2.0				所定選修(Elective Courses)	
臨床癌症與轉譯醫學(Clinical oncology & translation medicine)	選(E)	2.0	2.0				所定選修(Elective Courses)	
生物資料庫與數據分析(Biological database & data analysis)	選(E)	2.0		2.0			所定選修(Elective Courses)	
基因不穩定性與癌症(Genomic instability & cancer)	選(E)	2.0		2.0			所定選修(Elective Courses)	全英授課
智慧財產權與生醫產業(Intellectual property rights & biomedical industries)	選(E)	2.0		2.0			所定選修(Elective Courses)	
新藥開發流程(New Drug Development Flow)	選(E)	1.0		1.0			所定選修(Elective Courses)	
電腦輔助藥物設計(Computer-aided drug design)	選(E)	2.0		2.0			所定選修(Elective Courses)	
臨床試驗(Clinical trials)	選(E)	2.0		2.0			所定選修(Elective Courses)	
醫療器材管理與法規(Management & regulation of medical devices)	選(E)	2.0		2.0			所定選修(Elective Courses)	
藥業法規(Advanced regulatory in drug development)	選(E)	2.0		2.0			所定選修(Elective Courses)	
大數據分析基本結構與原理(Basic structure & principle of big data analysis)	選(E)	2.0			2.0		所定選修(Elective Courses)	
合計　選修總學分(Elective subtotal)		27.0	10.0	15.0	2.0			

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