

中山醫學大學

Chung Shan Medical University

115 學年度入學新生應修科目及學分表

Courses and Credits for Freshmen Admitted in the 115th Academic Year

健康管理學院醫學資訊學系

Department of Medical Informatics

第一學年

1st Academic Year

科目名稱 Course Name in Chinese	英文科目名稱 Course Name in English	必修 Required Elective	合計 學分 Credits Subtotal	第一 學期 1 st Semester Credits	第二 學期 2 nd Semester Credits	備註 Remarks
醫學資訊概論	Introduction to Medical Information	必修 Required	3	3	0	
微積分	Calculus	必修 Required	4	2	2	
管理學	Management	必修 Required	2	2	0	
物件導向程式設計(一)	Object-Oriented Programming (I)	必修 Required	3	0	3	
計算機組織與結構	Computer Architecture and Organization	必修 Required	3	0	3	
醫務管理概論	Introduction to Health Care Management	必修 Required	2	0	2	
線性代數	Linear Algebra	必修 Required	2	0	2	
英文	English	必修 Required	2	(2)	(2)	遠距教學 Distance Learning
英文能力檢定	General English Proficiency Test	必修 Required	0	0	0	
C 語言	C Language	選修 Elective	3	3	0	
人工智慧概論	Introduction to Artificial Intelligence	選修 Elective	3	3	0	
管理數學	Management Mathematics	選修 Elective	2	2	0	
健康資訊輔具概論	Introduction to Intelligent Assistive Devices	選修 Elective	2	2	0	
醫療數位孿生概論	Introduction to Digital Twins in Medicine	選修 Elective	2	2	0	
MATLAB 程式設計	MATLAB Programming	選修 Elective	3	0	3	
.NET 程式設計	.NET Programming	選修 Elective	3	0	3	
智慧醫療概論	Introduction to Artificial Intelligence in Healthcare	選修 Elective	3	0	3	
影像醫學	Imaging Medicine	選修 Elective	2	0	2	
國際醫療與資訊實務	Medical Tourism Information and Practice	選修 Elective	2	0	2	

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第一學年

1st Academic Year

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疾病與診斷概論	Introduction to Diseases and Diagnoses	選修 Elective	2	0	2	
健康大數據概論	Introduction to Health Big Data	選修 Elective	2	0	2	
必修學分合計 Required Credits Subtotal			21	7	12	

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Department of Medical Informatics

第 二 學 年 2 st Academic Year						
科目名稱 Course Name in Chinese	英文科目名稱 Course Name in English	必修 Required Elective	合計 學分 Credits Subtotal	第一 學期 1 st Semester Credits	第二 學期 2 nd Semester Credits	備註 Remarks
機率與統計	Probability and Statistics	必修 Required	3	3	0	
資料結構	Data Structure	必修 Required	3	3	0	
臨床醫學網路暨資訊安全	Network and Information Security in Clinical Medicine	必修 Required	3	3	0	
健康雲與大數據	Health Cloud and Big Data	必修 Required	2	2	0	
作業系統	Operating Systems	必修 Required	3	0	3	
資料庫系統	Database System Analysis and Design	必修 Required	3	0	3	
研究方法與生醫資料分析	Research Methods and Biomedical Data Analysis	必修 Required	3	0	3	
醫用程式語言	Programming Language for Hospital	必修 Required	3	0	3	
物件導向程式設計(二)	Objected-Oriented Programming (II)	選修 Elective	3	3	0	
離散數學	Discrete Mathematics	選修 Elective	3	3	0	
影像處理概論	Introduction to Image Processing	選修 Elective	3	3	0	
生醫訊號處理概論	Introduction to Biomedical Signal Processing	選修 Elective	3	3	0	
Python 程式設計	Python Programming	選修 Elective	3	3	0	
Power BI 資料視覺化	Power BI Data Visualization	選修 Elective	2	2	0	
醫學影像處理	Medical Image Processing	選修 Elective	3	0	3	
演算法	Design and Analysis of Algorithms	選修 Elective	3	0	3	
物件導向程式習作	Practice in Object-Oriented Programming	選修 Elective	3	0	3	
醫療文本分析與人工智慧應用	Clinical Text Analytics and Artificial Intelligence	選修 Elective	3	0	3	
R 語言	R Language	選修 Elective	2	0	2	
專題研究(一)	Independent Study(I)	選修	1	0	1	

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Department of Medical Informatics

第 二 學 年

2st Academic Year

科目名稱 Course Name in Chinese	英文科目名稱 Course Name in English	必選 修 Required Elective	合計 學分 Credits Subtotal	第一 學期 1 st Semester Credits	第二 學期 2 nd Semester Credits	備註 Remarks
		Elective				
必修學分合計 Required Credits Subtotal			23	11	12	

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Department of Medical Informatics

第 三 學 年

3st Academic Year

科目名稱 Course Name in Chinese	英文科目名稱 Course Name in English	必修 Required Elective	合計 學分 Credits Subtotal	第一 學期 1 st Semester Credits	第二 學期 2 nd Semester Credits	備註 Remarks
資料庫管理系統	Database Management System	必修 Required	3	3	0	
醫用資訊系統分析與設計	Medical Information System Analysis and Design	必修 Required	3	3	0	
管理資訊系統	Management Information Systems	必修 Required	2	2	0	
實習	Internship	必修 Required	4	0	4	
醫用行動軟體設計	Mobile APP Design in Medical Application	必修 Required	3	0	3	
醫療資訊管理	Medical Information Management	必修 Required	2	0	2	
醫療系統安全	Medical Information System Security	必修 Required	2	0	2	
醫學資訊專題(一)	Independent Study in Medical Informatics(I)	必修 Required	1	0	1	
網路程式設計	Design of Network Programs	選修 Elective	3	3	0	
機器學習	Machine Learning	選修 Elective	3	3	0	
電子病歷實務	The Practice of Electronic Medical Records	選修 Elective	2	2	0	
健康大數據應用與實作	Application of Health Big Data	選修 Elective	2	2	0	
專題研究(二)	Independent Study (II)	選修 Elective	1	1	0	
資料庫應用系統開發	Development of Database Application System	選修 Elective	3	0	3	
論文與報告寫作	Writing Academic Papers	選修 Elective	2	0	2	
醫院資訊系統實務	Healthcare Information System	選修 Elective	2	0	2	
深度學習	Deep Learning	選修 Elective	2	0	2	
必修學分合計 Required Credits Subtotal			20	8	12	

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Courses and Credits for Freshmen Admitted in the 115th Academic Year

健康管理學院醫學資訊學系

Department of Medical Informatics

第 四 學 年 4th Academic Year						
科目名稱 Course Name in Chinese	英文科目名稱 Course Name in English	必/選修 Required Elective	合計 學分 Credits Subtotal	第一 學期 1 st Semester Credits	第二 學期 2 nd Semester Credits	備註 Remarks
書報討論(一)	Discussion in Literature (I)	必修 Required	1	1	0	
醫學資訊專題(二)	Independent Study in Medical Informatics(II)	必修 Required	1	1	0	
書報討論(二)	Discussion in Literature (II)	必修 Required	1	0	1	
優質網路健康照護	Excellent Internet Healthcare	選修 Elective	2	2	0	
資訊輔具開發	Design and Implementation of Assistive Devices	選修 Elective	3	0	3	
必修學分合計 Required Credits Subtotal			3	2	1	
最低畢業學分數 128 學分，必修 67 學分，通識 20 學分，體育 2 學分，選修 39 學分 Minimum graduation credits: 128 credits, compulsory 67 credits, general education 20 credits, physical education 2 credits, elective credits						
說明：						
一、 通識教育課程總學分數為 20 學分，學生需修滿學分數，始得申請畢業。課程內容分為「基礎通識」及「博雅通識」等兩大部分，修習原則如下：(一)「基礎通識」課程：必修，共 6 學分。含括：「多元文化與語文」、「人工智慧概論與應用」、「大學之道」及「服務學習」等課程。(二)「博雅通識」課程：必修，共 14 學分(醫資系除外，需 16 學分)。含括：文藝領域、社會領域、醫學人文領域和科普領域等四個領域，每個領域至少需修習 2 學分。通識教育課程畢業學分的認列，以 20 學分為上限。通識教育課程修習方式依照「中山醫學大學通識課程選課須知」辦理。「服務學習」依照「中山醫學大學服務學習課程實施辦法」辦理。 二、 學生須於畢業前修滿 2 學分「體育」，始得畢業，但超修不列入畢業學分數。 三、 大一「英文」分級及修課依照「雙語教學推動資源中心」所公告之規定辦理。 四、 學生須於畢業前擇一修習雙主修、輔系、跨域學程或跨域微學程，符合修習規範者，始得畢業。 五、 學生須於畢業前擇一參加經認定之校外官方英文能力檢定考試或校內「中山醫大英文能力檢測」(CEPT)英文檢定考試，相當全民英檢中級初試，並於每學期開學後繳交通過之成績證明文件至各系登錄，以作為畢業資格審定之依據。 六、 學生須依「中山醫學大學深化醫能力百分百實施辦法」參加各項符合增益基本能力之活動並累積至少 100 點，始得畢業。 七、 系選修至少須修滿 30 學分及通過本系程式設計能力畢業資格檢定，方可畢業。						
Instructions：						

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Department of Medical Informatics

第 四 學 年

4th Academic Year

科目名稱 Course Name in Chinese	英文科目名稱 Course Name in English	必/選修 Required Elective	合計 學分 Credits Subtotal	第一 學期 1 st Semester Credits	第二 學期 2 nd Semester Credits	備註 Remarks
1.The total number of credits required for the General Education Curriculum is 20. Students must complete these credits to apply for graduation. The curriculum is divided into two main parts: Fundamental General Education and Liberal Arts General Education. The guidelines for course completion are as follows: Fundamental General Education Courses: These are mandatory and total 6 credits. They include courses such as Multiculturalism and Languages, Introduction to Artificial Intelligence and Applications, Foundation of University Education, and Service Learning. Liberal Arts General Education Courses: These are also mandatory and total 14 credits (16 credits for the Department of Medical Informatics). They cover four domains: Literature and Arts, Social Sciences, Medical Humanities, and Science and Technology. At least 2 credits must be completed in each domain. The maximum number of credits recognized from the General Education Curriculum towards graduation is 20. Enrollment procedures for the General Education Curriculum are governed by the Guidelines for General Education Course Selection at Chung Shan Medical University. The Service Learning component must be conducted in accordance with the Implementation Guidelines for Service Learning Courses at Chung Shan Medical University. 2.Students must complete 2 credits of Physical Education before graduation. However, excess credits will not be counted toward the total graduation credits. 3.English course placement and enrollment are subject to the regulations of the English-Medium Instruction Center. 4.Students are required to choose a double major, a minor, an interdisciplinary program, or an interdisciplinary micro-program before graduation. Only those who complete the requirements of their chosen program are eligible to graduate. 5.Students must pass an officially recognized external English proficiency test or the CSMU's internal English Proficiency Test (CEPT) before graduation. The required proficiency level is equivalent to the preliminary test of the GEPT Intermediate Level. Within the designated period at the start of each semester, students must submit their official score reports to their respective departments to verify graduation eligibility. 6.Students must participate in various activities that enhance their basic competencies in accordance with the Implementation Guidelines for Enhancing Soft Skills at Chung Shan Medical University and accumulate at least 100 points in order to graduate. 7.Department electives must complete at least 30 credits and pass the departments program design ability graduation qualification test before graduation.						