中 山 醫 學 大 學

Chung Shan Medical University

114 學年度入學新生應修科目及學分表

Courses and Credits for Freshmen Admitted in the 114th Academic Year

醫學科技學院醫學檢驗暨生物技術學系

Department of Medical Laboratory and Biotechnology, College of Medical Science and Technology

第 一 學 年 1st Academic Year						
科目名稱 Course Name in Chinese	科目英文名稱 Course Name in English	必選修 Required Elective	合計學分 Credits Subtotal	第一學期 1st Semester Credits	第二學期 2nd Semester Credits	備註 Remarks
普通化學	General Chemistry	必修 Required	2	2	0	
有機化學	Organic Chemistry	必修 Required	2	2	0	
普通生物學(一)	General Biology (I)	必修 Required	2	2	0	
組織學	Histology	必修 Required	2	0	2	
生理學	Physiology	必修 Required	2	0	2	
生物統計學	Biostatistics	必修 Required	2	0	2	
生物化學(一)	Biochemistry(I)	必修 Required	2	0	2	
生物化學實驗	Biochemistry Laboratory	必修 Required	1	0	1	
病理切片技術學	Histopathologic Techniques	必修 Required	1	0	1	
病理切片技術實驗	Histopathologic Laboratory	必修 Required	1	0	1	
解剖學	Human Anatomy	選修 Elective	2	2	0	
醫技概論	Introduction to General Medical Technology	選修 Elective	2	2	0	
分生概論	Introduction to Molecular Biology	選修 Elective	2	2	0	
醫學檢驗專業英文聽力與寫作	Listening Comprehension and Writing in English for Medical Technologists	選修 Elective	2	2	0	全英語授課 Taught in English
輔助與另類醫學概論	Introduction to Complementary and Alternative Medicine (CAM)	選修 Elective	2	2	0	
細胞生物學	Cell Biology	選修 Elective	2	0	2	
毒物學	Toxicology	選修 Elective	2	0	2	
遺傳學概論	Introduction to genetics	選修 Elective	2	0	2	
普通生物學(二)	General Biology (II)	選修 Elective	2	0	2	

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基礎文獻探討與寫作	Basic Literature Review and Writing	選修 Elective	2	0	2	
組織學實驗	Histology Laboratory	選修 Elective	1	0	1	
多元文化與語文		必修 Required	2	(2)	(2)	共同教育課程通識中心開課 Common Education Courses Provided by General Studies Center
程式語言	Programming Language	必修 Required	2	2	0	共同教育課程通識中心開課 Common Education Courses Provided by General Studies Center
大學之道	Foundation of University Education	必修 Required	1	1	0	共同教育課程通識中心開課 Common Education Courses Provided by General Studies Center
服務學習	Service Learning	必修 Required	1	(1)	(1)	共同教育課程通識中心開課 Common Education Courses Provided by General Studies Center
體育	Physical Education	必修 Required	1	1	0	共同教育課程通識中心開課 Common Education Courses Provided by General Studies Center
體育	Physical Education	必修 Required	1	0	1	共同教育課程通識中心開課 Common Education Courses Provided by General Studies Center
必修學分合計 Required Credits Subtotal			25	10	12	

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Department of Medical Laboratory and Biotechnology, College of Medical Science and Technology

第 二 學 年 2nd Academic Year						
科目名稱 Course Name in Chinese	科目英文名稱 Course Name in English	必選修 Required Elective	合計學分 Credits Subtotal	第一學期 1st Semester Credits	第二學期 2nd Semester Credits	備註 Remarks
免疫學	Immunology	必修 Required	2	2	0	
臨床生理學	Clinical Physiology	必修 Required	2	2	0	
分子生物學(一)	Molecular Biology(I)	必修 Required	2	2	0	
生物化學(二)	Biochemistry(II)	必修 Required	2	2	0	
臨床生理學實驗	Clinical Physiology Laboratory	必修 Required	1	1	0	
醫學專題討論(一)	Seminar in Biomedicine (I)	必修 Required	1	1	0	
微生物學	Microbiology	必修 Required	3	0	3	
臨床血液學(一)	Clinical Hematology (I)	必修 Required	2	0	2	
寄生蟲學	Parasitology	必修 Required	2	0	2	
微生物學實驗	Microbiology Laboratory	必修 Required	1	0	1	
寄生蟲學實驗	Parasitology Laboratory	必修 Required	1	0	1	
醫學專題討論(二)	Seminar in Biomedicine (II)	必修 Required	1	0	1	
癌症醫學	Cancer Medicine	選修 Elective	2	2	0	
幹細胞與再生醫學概論	Introduction to Stem Cell and Regeneration Medicine	選修 Elective	2	2	0	全英語授課 Taught in English
基因工程技術	Genetic Engineering	選修 Elective	2	2	0	
濫用藥物分析	Abused Drug Analysis	選修 Elective	2	0	2	
食品藥物殘留分析	Analysis of Drugs Residue in Food	選修 Elective	2	0	2	
DNA 鑑定	DNA Analysis	選修 Elective	2	0	2	
生技藥品研發實例	Development of Biopharmaceuticals	選修 Elective	2	0	2	
臨床細胞遺傳學檢驗	Clinical Cytogenetics Technology	選修 Elective	2	0	2	

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第 二 學 年 2nd Academic Year						
科目名稱 Course Name in Chinese	科目英文名稱 Course Name in English	必選修 Required Elective	合計學分 Credits Subtotal	第一學期 1st Semester Credits	第二學期 2nd Semester Credits	備註 Remarks
臨床細胞遺傳學檢驗實驗	Clinical Cytogenetics Technology Laboratory	選修 Elective	1	0	1	
體育	Physical Education	必修 Required	1	1	0	共同教育課程體育中心開課 Common Education Courses Provided by Sports Center
體育	Physical Education	必修 Required	1	0	1	共同教育課程體育中心開課 Common Education Courses Provided by Sports Center
必修學分合計 Required Credits Subtotal			22	11	11	

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Department of Medical Laboratory and Biotechnology, College of Medical Science and Technology

第 三 學 年 3rd Academic Year						
科目名稱 Course Name in Chinese	科目英文名稱 Course Name in English	必選修 Required Elective	合計學分 Credits Subtotal	第一學期 1st Semester Credits	第二學期 2nd Semester Credits	備註 Remarks
臨床生化學	Clinical Biochemistry	必修 Required	3	3	0	
血庫學	Blood Banking	必修 Required	2	2	0	
臨床血液學(二)	Clinical Hematology (II)	必修 Required	2	2	0	
臨床鏡檢學	Clinical Microscopy	必修 Required	2	2	0	
臨床生化學實驗	Clinical Biochemistry Laboratory	必修 Required	1	1	0	
臨床血液學實驗	Clinical Hematology Laboratory	必修 Required	1	1	0	
臨床鏡檢學實驗	Clinical Microscopy Laboratory	必修 Required	1	1	0	
臨床微生物學	Clinical Microbiology	必修 Required	3	0	3	
臨床微生物學實驗	Clinical Microbiology Laboratory	必修 Required	1	0	1	
臨床血清免疫學	Clinical Serology & Immunology	必修 Required	2	0	2	
臨床病毒學	Clinical Virology	必修 Required	2	0	2	
醫學分子檢驗學	Molecular Diagnostics in Medicine	必修 Required	2	0	2	
病理學	Pathology	必修 Required	2	0	2	
臨床血清免疫學實驗	Clinical Serology & Immunology Laboratory	必修 Required	1	0	1	
臨床病毒與分子檢驗實驗	Clinical Virology and Molecular Diagnosis Laboratory	必修 Required	1	0	1	
分子遺傳學	Molecular Genetics	選修 Elective	2	2	0	
分子遺傳學實驗	Molecular Genetic Laboratory	選修 Elective	1	1	0	
多體學與精準醫學應用概論	Introduction to Applications in Omics and Precision Medicine	選修 Elective	2	0	2	
臨床檢驗數據判讀	Interpretation of Clinical Laboratory Test	選修 Elective	2	0	2	
生技產業實習(一)	Practice in Biotechnology Industry (I)	選修 Elective	2	0	2	
生技產業實習(二)	Practice in Biotechnology Industry (II)	選修 Elective	3	0	3	

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醫學科技學院醫學檢驗暨生物技術學系

Department of Medical Laboratory and Biotechnology, College of Medical Science and Technology

第 三 學 年 3rd Academic Year						
科目名稱 Course Name in Chinese	科目英文名稱 Course Name in English	必選修 Required Elective	合計學分 Credits Subtotal	第一學期 1st Semester Credits	第二學期 2nd Semester Credits	備註 Remarks
必修學分合計 Required Credits Subtotal			26	12	14	

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醫學科技學院醫學檢驗暨生物技術學系

Department of Medical Laboratory and Biotechnology, College of Medical Science and Technology

第 四 學 年 4th Academic Year						
科目名稱 Course Name in Chinese	科目英文名稱 Course Name in English	必選修 Required Elective	合計學分 Credits Subtotal	第一學期 1st Semester Credits	第二學期 2nd Semester Credits	備註 Remarks
生物技術學	Biotechnology	必修 Required	2	(2)	(2)	
臨床微生物實習	Practicum in Clinical Microbiology	必修 Required	3	(3)	(3)	
臨床血庫實習	Practicum in Clinical Blood Banking	必修 Required	1	(1)	(1)	
臨床生化實習	Practicum in Clinical Chemistry	必修 Required	2	(2)	(2)	
臨床血清免疫實習	Practicum in Clinical Seroimmunology	必修 Required	2	(2)	(2)	
臨床血液實習	Practicum in Clinical Hematology	必修 Required	2	(2)	(2)	
臨床鏡檢實習	Practicum in Clinical Microscopy	必修 Required	3	(3)	(3)	
臨床生理實習	Practicum in Clinical Physiology	必修 Required	2	(2)	(2)	
病理切片與細胞診斷實習	Practicum in Clinical Histopathologic and Cytologic Diagnosis	必修 Required	1	(1)	(1)	
醫學分子檢驗實習	Practicum in Molecular Diagnostics in Medicine	必修 Required	1	(1)	(1)	
醫學實驗室管理及品質管理	Management of Medical Laboratory and Quality Management	必修 Required	2	(2)	(2)	
臨床病毒學實習	Practicum in Clinical Virology	選修 Elective	2	(2)	(2)	
臨床檢驗實務操作	Clinical Medical Laboratory Practice	選修 Elective	1	(1)	(1)	
臨床生化學特論	Special Lectures in Clinical Chemistry	選修 Elective	2	(2)	(2)	
臨床微生物學特論	Special Topics in Clinical Microbiology	選修 Elective	2	(2)	(2)	
醫學實驗室認證	Medical Laboratory Accreditation	選修 Elective	2	(2)	(2)	
免疫學與血清學特論	Special Topics in Immunology and Serology	選修 Elective	2	(2)	(2)	
血液學及血庫學特論	Special Topics in Hematology and Immunohematology	選修 Elective	2	(2)	(2)	
分子生物技術學特論	Special topics in molecular biology and related techniques	選修 Elective	2	(2)	(2)	
實驗室開發檢測	Laboratory Developed Tests	選修 Elective	2	(2)	(2)	
必修學分合計 Required Credits Subtotal			21	0	0	

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最低畢業學分數學分 128 學分，必修 84 學分，通識 20 學分，體育 4 學分，選修 20 學分 Minimum graduation credits: 128 credits, compulsory 84 credits, general education 20 credits, physical education 4 credits, elective 20 credits	
說明 Instructions：	
1.	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」、「程式語言」、「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。含括：文藝領域、社會領域、人文醫學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。 The total number of credits required for the General Education Curriculum is 20. Students must complete these credits in order 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," "Programming Languages," " Foundation of University Education," and "Service Learning." Liberal Arts General Education Courses: These are also mandatory and total 14 credits. They cover four domains: Literature and Arts, Social Sciences, Humanistic Medicine, and Science and Technology. At least 2 credits must be completed in each domain. The maximum number of credits recognized for the General Education Curriculum towards graduation is 20. The enrollment procedures for the General Education Curriculum are to be followed according to the "Guidelines for General Education Course Selection at Chung Shan Medical University." The "Service Learning" component is to be conducted in accordance with the "Implementation Guidelines for Service Learning Courses at Chung Shan Medical University."
2.	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。 Students are required to participate in an officially recognized external English proficiency test or the university's internal "Chung Shan Medical University English Proficiency Test" (CEPT) before graduation. The required proficiency level is equivalent to the preliminary test of the GEPT Intermediate Level. After the start of each semester, students must submit their passing score documents to their respective departments for registration, which will serve as a basis for graduation qualification verification.
3.	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。 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.

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4.	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。 Students are required to choose a double major, a minor, an interdisciplinary program, or an interdisciplinary micro-program before graduation. Only those who meet the study standards can graduate.
5.	跨域微學程認列之科目於下列情況不可重複認列學分數：1、其他跨域微學程之科目。2、學生主系之科目(包含必修、選修、專業選修)及通識課程。 Courses recognized in the interdisciplinary micro-study program cannot be recognized as credits repeatedly under the following circumstances: 1. Courses in other interdisciplinary micro-study programs. 2. Courses of the student’s major (including compulsory, elective, and professional electives) and general courses.