

中臺科技大學大學部四年制日間部醫學檢驗生物技術系114學年度入學課程標準表
Central Taiwan University of Science and Technology Undergraduate 4-Year Daytime Department of Medical Laboratory Science and Biotechnology Program Curriculum Standards for the 114th Academic Year

1140211系課程委員會會議審議通過
 1140213系務會議審議通過
 1140311院課程委員會審議通過
 1140319校課程委員會會議審議通過
 1150226系課程委員會會議審議通過
 1150317院課程委員會會議審議通過
 1150401校課程委員會會議審議通過

學年 Academic Year	科目 Course	學分數 Credits	時數 Teaching hours	上學期 First Semester		下學期 Second Semester		備註 Remarks
				授課 Teaching	實習 Internship	授課 Teaching	實習 Internship	
核心素養(8學分) Core Competencies (8 Credits)								
第一學年 1 st Academic Year	中文閱讀與表達 Chinese Reading and Expressing	2	2	2				
	大一英文(一) Freshman English (I)	2	2	2				
	大一英文(二) Freshman English (II)	2	2			2		
	資訊科技與AI應用 Information Technology and AI Application	2	2	2				電腦課程、AI課程 Computer Course、AI Course
體育(2學分) Physical Education (2 Credits)								
第一學年 1 st Academic Year	體育(一) Physical Education (I)	1	2	2				
	體育(二) Physical Education(II)	1	2			2		
領域涵養(16學分) Domain-Specific Learning (16 Credits)								
第一學年 1 st Academic Year	領域涵養 Domain-Specific Learning	8	8			8		人文、自然、社會、博學至少各選修一門 Humanities, Natural Sciences, Social Sciences, and Cultivation of Broad Knowledge -with at Least One Elective Course from Each
第二學年 2 nd Academic Year	領域涵養 Domain-Specific Learning	8	8	4		4		
跨域學習(4學分) Interdisciplinary Learning (4 Credits)								
第二學年 2 nd Academic Year	跨域學習 Interdisciplinary Learning	4	4	2		2		
專業必修(84學分) Professional Required Courses (84 Credits)								
核心基礎(14學分) Core Foundations (14 Credits)								
第一學年 1 st Academic Year	有機化學含實驗 Organic Chemistry and Laboratory	2	3			2	1	
	普通化學 General Chemistry	2	2	2				
	普通生物學 General Biology	2	2	2				
	生理學含實驗 Physiology and Laboratory	2	3			2	1	
	解剖學含實驗 Anatomy and Laboratory	2	3	2	1			
第二學年 2 nd Academic Year	分析化學含實驗 Analytical Chemistry and Laboratory	2	3	2	1			
	分子生物學 Molecular Biology	2	2			2		
核心專業(70學分) Core Professional Courses (70 Credits)								
	病理學 Pathology	2	2			2		
	寄生蟲學 Parasitology	2	2	2				跨域學習 Interdisciplinard Learning
	寄生蟲學實驗 Parasitology Laboratory	1	2		2			含「服務學習」 includes Service Learning

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				First Semester		Second Semester		
				授課 Teaching	實習 Internship	授課 Teaching	實習 Internship	
第二學年 2 nd Academic Year	生物化學(一) Biochemistry (I)	2	2	2				含「服務學習」includes Service Learning
	生物化學實驗 Biochemistry Laboratory	1	2		2			
	生物化學(二) Biochemistry (II)	2	2			2		含「服務學習」includes Service Learning
	微生物學(一) Microbiology (I)	2	2	2				
	微生物學(二) Microbiology (II)	2	2			2		
	微生物學實驗 Microbiology Laboratory	1	2				2	
	病理切片技術含實驗 Histopathology Techniques and	1	2			1	1	
	臨床鏡檢學 Clinical Microscopy	2	2			2		
臨床鏡檢學實驗 Clinical Microscopy Laboratory	1	2				2	含「服務學習」includes Service Learning	
第三學年 3 rd Academic Year	免疫學 Immunology	3	3	3				
	臨床血液學(一) Clinical Hematology (I)	2	2	2				
	臨床血液學實驗(一) Clinical Hematology Laboratory (I)	1	2		2			含「服務學習」includes Service Learning
	臨床血液學(二) Clinical Hematology (II)	2	2			2		
	臨床血液學實驗(二) Clinical Hematology Laboratory (II)	1	2				2	含「服務學習」includes Service Learning
	臨床生物化學(一) Clinical Biochemistry (I)	2	2	2				
	臨床生物化學實驗(一) Clinical Biochemistry Laboratory	1	2		2			含「服務學習」includes Service Learning
	臨床生物化學(二) Clinical Biochemistry (II)	2	2			2		
	臨床生物化學實驗(二) Clinical Biochemistry Laboratory	1	2				2	含「服務學習」includes Service Learning
	臨床生理學 Clinical physiology	2	2	2				
	臨床生理學實驗 Clinical Physiology Laboratory	1	2		2			含「服務學習」includes Service Learning
	臨床病毒學 Clinical Virology	2	2			2		
	血庫學 Immunohematology	2	2			2		
	臨床血清免疫學 Clinical Seroimmunology	2	2			2		
	臨床血清免疫學實驗 Clinical Seroimmunology Laboratory	1	2				2	含「服務學習」includes Service Learning
	臨床微生物學 Clinical Microbiology	3	3			3		
	臨床微生物學實驗 Clinical Microbiology Laboratory	2	4				4	含「服務學習」includes Service Learning
醫學分子檢驗學 Molecular Diagnosis in Medicine	3	3			3			
第四學年 4 th Academic Year	臨床血液學與血庫學證照實務 License Practice of Clinical Hematology and Immunohematology	1	2			2		
	醫學分子檢驗學與臨床鏡檢學證照實務 License Practice of Molecular Medicine and Clinical Microscopy	1	2			2		
	臨床生理學與病理學證照實務 License Practice of Clinical Physiology and Clinical Pathology	1	2			2		
	生物化學與臨床生化學證照實務 License Practice of Biochemistry and Clinical Biochemistry	1	2			2		
	微生物學與臨床微生物學證照實務 License Practice of Microbiology and Clinical microbiology	1	2			2		
	臨床血清免疫學與臨床病毒學證照實務 License Practice of Clinical Seroimmunology and Clinical Virology	1	2			2		
	臨床生化實習 Clinical Biochemistry Practice	2	4		4			校外實習，實習3週Off-Campus Internship Internship Duration: 3weeks
	臨床微生物實習 Clinical Microbiology Practice	2	4		4			校外實習，實習5週Off-Campus Internship Internship Duration: 5weeks

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				First Semester		Second Semester		
				授課 Teaching	實習 Internship	授課 Teaching	實習 Internship	
	臨床血液實習 Clinical Hematology Practice	1	2		2			校外實習, 實習 2 週Off-Campus Internship Internship Duration: 2weeks
	臨床血庫實習 Immunoematology Practice	1	2		2			校外實習, 實習 1 週Off-Campus Internship Internship Duration: 1 weeks
	臨床鏡檢實習 Clinical Microscopy Practice	2	4		4			校外實習, 實習 3 週Off-Campus Internship Internship Duration: 3weeks
	臨床血清免疫實習 Clinical Serology and Immunology	1	2		2			校外實習, 實習 2 週Off-Campus Internship Internship Duration: 2weeks
	臨床生理實習 Clinical Physiology Practice	1	2		2			校外實習, 實習 2 週Off-Campus Internship Internship Duration: 2weeks
	病理切片與細胞診斷實習 Clinical Pathology Practice	1	2		2			校外實習, 實習 1 週Off-Campus Internship Internship Duration: 1 weeks
	醫學分子檢驗實習 Molecular Medicine Practice	1	2		2			校外實習, 實習 1 週Off-Campus Internship Internship Duration: 1 weeks
專業選修(40學分) Professional Electives Courses (40 Credits)								
醫學檢驗類 Medical Laboratory Science								
第一學年 1 st Academic Year	◎醫技英文(一) English in Medical Technology I	1	1			1		
第二學年 2 nd Academic Year	臨床神經生理學 Clinical Neurophysiology	2	2			2		含「服務學習」includes Service Learning
第三學年 3 rd Academic Year	◎醫技英文(二) English in Medical Technology II	1	1	1				
	◎細胞診斷學 Diagnostic Cytology	2	2	2				
	◎黴菌學含實驗 Clinical Mycology and Laboratory	1	2	2				
	睡眠醫學技術 Sleep Medicine and Technology	2	2			2		
生物技術類 Biotechnology								
第一學年 1 st Academic Year	普通生物學實驗 General Biological Laboratory	1	2		2			
	普通化學實驗 General Chemistry Laboratory	1	2		2			
	◎專題討論 Seminar	2	2			2		學術倫理課程 Academic Ethics Course
第二學年 2 nd Academic Year	腫瘤生物學 Cancer Biology	2	2			2		
	細胞培養技術 Cell Culture Technique	2	2			2		
	細胞遺傳學 Cytogenetics	2	2	2				
第三學年 3 rd Academic Year	◎生物技術學實驗 Biotechnology Laboratory	2	4	2	2			
	實驗室開發檢測 Laboratory Developed Tests	2	2	2				
智慧健康類 Intelligent Health								
第一學年 1 st Academic Year	◎健康產業與職業倫理 Ethics and Health Industry	1	1	1				定錨課程 Anchoring Course 職業倫理 Ethics Course
	◎生物統計 Biostatistics	2	2	2				
	流行病學 Epidemiology	2	2			2		跨域學習 Interdisciplinary Learning
	論文導讀 Reading Skills for Science Literature	2	2	2				
	醫師病人與社會 Physician Patient and Society	2	2			2		
第三學年 3 rd Academic Year	精準健康與檢驗醫學 Precision Health and Diagnostic Medicine	2	2			2		
第四學年 4 th Academic Year	生物資訊學概論 Introduction to Bioinformatics	2	2			2		電腦課程 Computer Course
	臨床檢驗諮詢評估 Assessment of Clinical Data	2	2			2		
	◎實驗室管理與認證 Laboratory Management and	2	2			2		
第一學年小計(1) 1st Academic Year Credits Subtotal (1)		42	48	19	5	23	2	
第二學年小計(2) 2nd Academic Year Credits Subtotal (2)		43	49	16	5	23	5	
第三學年小計(3) 3rd Academic Year Credits Subtotal (3)		45	51	18	8	20	10	

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第四學年小計(4) 4 th Academic Year Credits Subtotal (4)		24	42	0	24	18	0	
合計 Total = (1)+(2)+(3)+(4)		154	190	53	42	84	17	
畢業規定及其他相關說明：								
一	<p>最低畢業學分為128學分，必修114學分【含核心素養8學分、體育2學分、領域涵養16學分(人文、自然、社會、博學至少各選修一門)、跨域學習4學分、專業必修84學分】，選修至少14學分(其中含具◎之專業選修至少6學分)。</p> <p>The minimum graduation requirement is 128 credits, including mandatory 114 credits [comprising 8 credits for core competencies, 2 credits for physical education, 16 credits for domain enrichment (including humanities, natural sciences, social sciences, and cultivation of broad knowledge -with at least one elective course from each category), 4 credits for interdisciplinary learning, and mandatory professional 84 credits]. Elective credits must be at least 14 credits [with a minimum number of 6 credits</p>							
二	<p>◎為系定專業選修,學生畢業前須選修具◎之專業選修課程始得畢業。◎ These are professional elective courses required by the Department of Medical Laboratory Science. Students must complete these ◎ courses before graduation.</p>							
三	<p>畢業前需取得本校「資訊能力」畢業資格審定暨實施要點所列之資訊相關證照，始得畢業。</p> <p>Before graduation, students must obtain the qualifications as stipulated in the "Regulations for the Assessment and Implementation of Information Literacy Graduation Qualifications" of our university, which includes obtaining the information-related certifications listed therein, in order to graduate.</p>							
四	<p>在本校就學期間必須取得心肺復甦術(CPR)畢業門檻之相關規定，依照「中臺科技大學健康科學院心肺復甦術(CPR)證照畢業門檻實施要點」之規定辦理</p> <p>During the period of study, it is required to fulfill the graduation threshold for CPR in accordance with the 'Implementation Guidelines for Graduation Threshold of CPR Certification at the College of Health Science, Central Taiwan University of Science and Technology.</p>							
五	<p>有關英文能力畢業門檻之相關規定，依照「中臺科技大學大學部英(日)文畢業門檻實施要點」之規定辦理。</p> <p>The regulations regarding the graduation requirements for English proficiency are implemented in accordance with the "Implementation Guidelines for the English (Japanese) Graduation Thresholds for Undergraduate Programs at CTUST."</p>							
六	<p>畢業前需修習健康科學院定共同課程:生物統計「Biostatistics」2學分，需有修讀紀錄，始得畢業。</p> <p>Prior to graduation, students must complete the core course "Biostatistics" designated by the College of Health Science, which is worth 2 credits. A transcript of this course is required for graduation.</p>							
七	<p>修習「專題討論(一)」課程之學生，需依「中臺科技大學學術倫理教育課程實施要點」完成「學術倫理教育」相關課程修習後，提交任課老師列入成績考核。</p> <p>Undergraduate students are required to complete relevant courses on academic ethics education in accordance with the 'Implementation Guidelines for Academic Ethics Education Courses at the Central Taiwan University of Science and Technology. After completing the courses, students must submit their performance to the respective instructors for grading.</p>							
八	<p>大一新生於入學第一學期需修習「銜接課程」(1學分18學時)。</p> <p>Freshmen in their first semester are required to take the "Transition Course". (1 credit for 18 instructional hours)</p>							
九	<p>境外生於畢業前需修習「進階華語(一)」及「進階華語(二)」兩門課程</p> <p>International students need to take two courses, "Advanced Chinese (I)" and "Advanced Chinese (II)" before graduation.</p>							
十	<p>學生於前2年需修習「班級永續經營課程(一)、(二)、(三)、(四)」，「班級永續經營課程(一)、(二)」成績及格，可認列為「跨域學習」學分；「班級永續經營課程(三)、(四)」成績及格，可認列為「一般選修」學分。依規定學生需取得「班級永續經營課程(一)、(二)」之學分或取得「愛校服務認證」始得畢業。</p> <p>Students need to take "Class Sustainable Management Course (I), (II), (III), and (IV)" in the first 2 years. Passing the "Class Sustainable Management Course (I), and (II)" will be recognized as "Interdisciplinary Learning" credits; passing the "Class Sustainable Management Course (III), and (IV)" can be recognized as "General Elective" credits. According to regulations, students must obtain credits for Class Sustainable Management Course (I), and (II)" or obtain the "Love School Service Certification"</p>							