

長庚大學 中醫學系天然藥物碩士班 必選修科目表 (一一三學年度入學學生適用)
Curriculum of the Master Program in Graduate Institute of Natural Products, Chang Gung University
(For students admitted in Fall, 2024)

Divisions	Required(R) or Elective(E)	Course Title	Credit	Year	Fall	Spring	Note
General Required Courses	R	中醫藥專題討論 Seminar in Traditional Chinese Medicine and Herbal Medicine	2	—	1	1	
	R	中醫藥研究概論 Research in Chinese Medicine and Herbal Drugs	2	—	2		One class will be offered in Chinese and another one will be offered in English.
Graduate Institute of Natural Products Required Courses	R	生物藥學特論 Special Topics in Biopharmaceutics	2	—		2	1.Required course: students should fulfill minimum of 4 credits, and maximum of 6 credits.
	R	天然藥物學特論 Special Topics in Natural Products	2	—	2		2. International students are required to take the English course " Seminar in Natural Products" for four semesters to substitute for the four-credit courses " Seminar in Traditional Chinese Medicine and Herbal Medicine" and " Seminar in Natural Products."
	R	天然藥物專題討論 Seminar in Natural Products	2	二	1	1	
Core Elective Courses	E	中草藥藥效篩選 Pharmacodynamic Evaluation of Chinese Herbal Drugs	2	—	2		Elective courses in the science program
	E	中草藥藥效篩選實驗 Pharmacodynamic Evaluation of Chinese Herbal Drugs Laboratory	1	—	1		1.Elective courses in the science program 2. Taking 「Pharmacodynamic Evaluation of Chinese Herbal Drugs」 is required.
	E	儀器分析 Instrumental Analysis	2	—	2		Elective courses in the pharmaceutical program and in the science program(taught in English)
	E	儀器分析實驗 Instrumental Analysis Laboratory	1	—	1		1.Elective courses in the pharmaceutical program and in the science program.(taught in English) 2. Taking 「Instrumental Analysis」 is required.
	E	科學研究方法 Scientific Methods	2	—		2	
	E	中藥資訊研究 Information Studies in Traditional Chinese Medicine	2	二	2		Elective courses in the pharmaceutical program(taught in English)
	E	中草藥產業技術開發 Industrial Development in Chinese Medicine and Herbal Drugs	2	二		2	Elective courses in the pharmaceutical program and in the science program(taught in English)
	E	藥用植物學 Pharmaceutical Botany	2	—	2		Elective courses in the pharmaceutical program
	E	分離技術 Isolation Techniques	2	—	2		Elective courses in the science program
	E	分離技術實驗 Isolation Techniques Laboratory	1	—	1		1.Elective courses in the science program 2. Taking 「Isolation Techniques」 is required.
	E	藥效學特論 Special Topics in Pharmacodynamics	2	—		2	1.Offered jointly with Division of Natural Products 2.Elective courses in the pharmaceutical program
	E	基礎藥學研究方法 Methodolgy in Drug Research	2	—		2	Elective courses in the pharmaceutical program and in the science program
	E	製藥生技學特論 Special Topics in Industrial Pharmaceutical Biotechnology	2	—		2	Elective courses in the pharmaceutical program and in the science program(taught in English)
	E	藥物設計及合成 Drug Design and Synthesis	2	—		2	Elective courses in the pharmaceutical program and in the science program(taught in English)
	E	血栓與血液恆定生物技術 Thrombosis and Haemostasis Biotechnology	2	—		2	Elective courses in the pharmaceutical program and in the science program(taught in English)
	E	血栓與血液恆定生物技術實驗 Thrombosis and Haemostasis Biotechnology Laboratory	1	—		1	1.Elective courses in the pharmaceutical program and in the science program(taught in English) 2. Taking 「Thrombosis and Haemostasis Biotechnology」 is required.
	E	有機光譜學 Organic Spectroscopy	2	—		2	Elective courses in the science program
	E	有機光譜學實驗 Organic Spectroscopy Laboratory	1	—		1	1.Elective courses in the science program 2. Taking 「Organic Spectroscopy」 is required.

Elective Courses	E	微生物天然物 Introduction of Microbial Natural Products	3	二	3		Elective courses in the pharmaceutical program and in the science program.(taught in English)
	E	微生物天然物實驗 Introduction of Microbial Natural Products Laboratory	1	二	1		Elective courses in the pharmaceutical program and in the science program.(taught in English)
	E	高等藥物化學特論 Special Topics in Advanced Medicinal Chemistry	2	二	2		Elective courses in the pharmaceutical program and in the science program.(taught in English)
	E	藥廠與專利申請實務特論 Special Topics in The Pharmaceutical Factory and Patent Application	2	二	2		Elective courses in the pharmaceutical program and in the science program
	E	藥物動物實驗特論 Special Topics in Animal Models in Research of Traditional Chinese Medicine	2	二		2	1.Elective courses in the pharmaceutical program and in the science program(taught in English) 2.Offered bi-annually(offered in 2026)
	E	中藥藥物動力學 Pharmacokinetics of Traditional Chinese Medicine	2	二		2	1.Elective courses in the pharmaceutical program and in the science program(taught in English) 2.Offered bi-annually(offered in 2025)
	E	藥理學特論 Special Topics in Pharmacology	2	二		2	1.Offered bi-annually, offered in 2026(taught in English) 2.Elective courses in the pharmaceutical program.
	E	藥物開發生物技術 Biotechnology of Drug Development	2	一		2	
	E	體學時代的生物技術與生物標誌 Biotechnology and Biomarkers in the 'Omic Era'	1	一		1	
	E	體學時代的藥物研發 Drug Development in an omic era	1	一		1	
	E	藥物研發實習 Practice for Drug Development	0.5	一		0.5	Offered bi-annually, offered in 2025
Remarks	<p>1.Candidates for the M.S.degree must fulfill a minimum 24 credits in course work and 6 credits for the M.S. Thesis. (1)Required courses : 10 credits,at least 4 credits of general required courses and 6 credits of Graduate Institute of Natural Products Required Courses. International students are required to take the English course " Seminar in Natural Products" for four semesters to substitute for the four-credit courses " Seminar in Traditional Chinese Medicine and Herbal Medicine" and " Seminar in Natural Products. (2)Elective course : 14 credits. (3)The 6 credits for the "M.S. Thesis" are given only after completion and passing of the thesis defense. 2. Individuals with a bachelor's degree in pharmacy may choose the pharmaceutical program, and must earn at least 8 credits from elective courses within the pharmaceutical program (related to pharmacy) in order to be awarded a Master of Pharmacy degree. 3.Those choosing the science program must earn at least 6 credits from elective courses within the science program in order to be awarded a Master of Science degree. 4.Students must choose 2 core elective courses. 5.Choose elective course offered by the other divisions up to 8 credits. 6.Graduate Institute of Traditional Chinese Medicine elective courses can be taken to fulfill the requirements for elective courses. 7.The courses in the list can offered to junior student. 8."Thesis Writing" is a required elective course starting in the second year. 9.For international students in the master program, the 24-credits requirement can be fulfilled by any courses in the above list or any courses in Graduate Institute of Biomedical Sciences and Graduate Institute of Medical Biotechnology and Laboratory Science, plus the seminar in Natural Products courses (4 credits total) and 6 credits of the "Master Thesis" . Course selection should be consulted with and approved by the research adviser.</p>						