

長庚大學醫學影像暨放射科學系 博士班必選修科目表 (114 學年度入學學生適用)
Curriculum of the PHD Program at the Department of Medical Imaging and Radiological Sciences,
Chang Gung University (For students admitted in Fall, 2025)

2025.04.10 revised

必選修 Required/ Elective	科目名稱 Course Title	學分 Credit	開課年級 Year	上學期 Fall	下學期 Spring	備註 Note
必修 Required Courses	書報討論(1) Seminar(1)	1	1	1		
	放射與核物理 Radiation and Nuclear Physics	3	1	3		
	書報討論(2) Seminar(2)	1	1		1	
	影像解剖及生理學 Radiological Anatomy and Physiology	3	1		3	
	生物統計學 Biostatistics	3	1		3	
	書報討論(3) Seminar(3)	1	2	1		
	書報討論(4) Seminar(4)	1	2		1	
	科學倫理與論文寫作 Scientific Ethics and Writing	2	2		2	曾以第一作者身分發表 SCI 論文者，視為通過該課程。 It is deemed "pass" should the student publish an SCI article with first authorship.
選修 Elective Courses	磁共振造影 Magnetic Resonance Imaging: Basic Principles and Applications	3	1	3		
	醫學保健物理 Medical Health Physics	3	1	3		
	放射治療物理 Physics of Radiotherapy	3	1	3		
	醫學影像處理 Medical Imaging Processing	3	1	3		偶數學年度開課 Offered bi-annually
	功能性磁共振造影 Functional MRI	3	1	3		
	醫學影像處理特論 Special Topics in Medical Image Processing	3	1	3		奇數學年度開課 Offered bi-annually
	研究專題 Special Project	3	1	3		
	癌症生物學 Cancer Biology	3	1	3		
	診斷影像物理實驗 Physics Measurements in Diagnostic Imaging Lab	2	1		2	偶數學年度開課 Offered bi-annually
	醫學輻射劑量學 Medical Radiation Dosimetry	3	1		3	
	輻射生物學 Radiobiology	3	1		3	
	放射診斷物理 Diagnostic Imaging Physics	3	1		3	偶數學年度開課 Offered bi-annually
	核子醫學物理暨藥物學 Physics and Pharmaceuticals in Nuclear Medicine	3	1		3	偶數學年度開課 Offered bi-annually
	放射治療物理實驗 Lab-Radiotherapy Physics	1	1		1	奇數學年度開課 Offered bi-annually
	超音波影像特論 Special Topics in Ultrasound Imaging	3	1		3	
	正子製藥方法與相關法規 PET drug preparation and its related regulation	3	1		3	奇數學年度開課 Offered bi-annually
	放射醫學產業概論 Introduction to the Radiological Medicine Industry	3	1		3	
	分子影像學 Molecular Imaging	3	2	3		奇數學年度開課 Offered bi-annually
	放射藥物開發及藥理神經學應用 Radiotracer Development for Pharmacology and Neurology Studies	3	2	3		奇數學年度開課 Offered bi-annually
	輻射度量 Radiation Detection and Measurement	3	2	3		偶數學年度開課 Offered bi-annually
	臨床醫學物理實習(影像物理) Physics-Diagnostic Imaging	4	2	4		暑假上課 Summer school

臨床醫學物理實習(治療物理) Clinical Practicum of Medical Physics-Radiation Therapy	4	2	4		暑假上課 Summer school
醫學影像系統 Biomedical Imaging System	3	2	3		電機系博士班開課
進階放射治療物理 Advanced Radiotherapy Physics	3	2		3	偶數學年度開課 Offered bi-annually
粒子放射治療 Particle Radiotherapy	3	2		3	奇數學年度開課 Offered bi-annually

屆別：第十一屆
 1. 畢業學分：33 學分。
 Core total : 33 Credits
 (1) 必修 15 學分。
 Required Courses : 15Credits
 (2) 選修 12 學分。
 Elective Courses:12 Credits。
 (3) 論文 6 學分(通過學位考試並繳交通過審核論文後給予)。
 Master Thesis with 6 credits will be awarded after degree examination.
 2. 須達英文畢業門檻方可畢業。
 Students must meet the basic English Proficiency requirement to be eligible to graduate.
 3. 每學期限修一門書報討論。
 No more than one seminar course can be taken in a semester.
 4. 其他(Others):
 (1) 醫學院各所開設之「生物統計學」及「高等生物統計學」可擇一選修，至多承認 3 學分。
 Biostatistics or Advanced Biostatistics offered by all departments in medical school will be acknowledged at most 3 credits.
 (2) 博士生選修外所課程，經指導教授同意後均可承認學分。
 Courses in other departments with supervisor's agreement will be acknowledged.
 (3) 逕升博士班之學生，畢業時需修滿最少 30 學分(不含論文 6 學分)。
 PhD students admitted following direct admission track should complete course work of minimum 30 credit hours.
 Additional 6 credit hours are necessary for the dissertation.