

生命科學系碩士班課程地圖

112學年度入學新生適用

Life Science Master's Course Map -For the Students Enrolled in 2023

共同必修課程 Required Courses(4 Credits)
專題討論(碩) (2+2 Credits) Seminar

領域核心必修課程 Core Required Courses

生態學與演化領域 Ecology and Evolution	細胞生物暨分子醫學領域 Cellular and Molecular	生理學領域 Physiology
演化生物學3(碩博) Evolutionary Biology 進階生態學3-英(碩博) Advanced Ecology -E	細胞及分子生物學3(碩博) Cellular and Molecular Biology 實驗生物學研究方法2(碩博) Research Methods of Experimental Biology 進階專題討論0(一)(二)(碩博) Advanced Seminar (I)(II)	現代生理學3(碩) Modern Physiology 實驗生理學2(碩博) Experimental Physiology

領域進階課程(至少選2科) Core Elective Courses (Select at Least Two)

生態學與演化領域 Ecology and Evolution	細胞生物暨分子醫學領域 Cellular and Molecular	生理學領域 Physiology
生物地理學3(大碩) Biological Geography 島嶼生物地理學3(大碩) Island Biogeography 海洋生物學2(大碩) Marine Biology 海洋生態學2(大碩) Marine Ecology 生態演化研究方法1(碩博) Research Methods in Ecology and Evolution 實驗設計與資料分析3(碩博) Experimental Design and Data Analysis 行為生態學3-英(碩博) Behavioral Ecology-E 迴歸分析3(碩博) Regression Analysis 適應與天擇3(碩博) Adaptation and Natural Selection 族群遺傳與演化3(大碩博) Population Genetics and Evolution	森林生態學3-英(大碩) Forest Ecology-E 入侵生物學3(大碩) Biological Invasions 地景生態學3-英(大碩) Landscape Ecology-E 系統生物學3(大碩) Principles of Systematic Biology 保育生物學3(大碩) Conservation Biology 疾病生態學3(大碩) Disease Ecology 線性與邏輯迴歸3-英(碩博) Linear and Logistic Regression Models-E 野生動物學3-英(大碩) Wildlife Biology-E 統計分析概論3-英(碩博) Introduction to statistical analysis-E	發育生物學3(大碩) Developmental Biology 幹細胞生物學3(大碩) Stem Cell Biology 蛋白質與酵素化學2(碩博) Protein and Enzyme Chemistry 神經生物學3(大碩) Neurobiology 生物技術3(大碩) Biotechnology 訊息傳遞3(大碩) Signal Transduction 分子生物學特論2(碩博) Topics in Molecular Biology
神經生物學3(大碩) Neurobiology 內分泌學3(大碩) Endocrinology 比較動物生理學3(大碩博) Comparative Animal Physiology 學習與記憶3(碩博) Learning and memory 氧化壓力生理學3(碩博) Oxidative Stress Physiology 動物生理學特論(一)2(碩博) Topics on Animal Physiology (I) 魚類生理學特論3(碩博) Topics in Fish Physiology 光電科技在生醫上的應用2(碩博) Application of Optoelectronic Technology in Biomedical		

選修課程 Elective Courses

鳥類學3(大碩) Ornithology 兩棲爬蟲動物學2(大碩) Herpetology 哺乳動物學2(大碩) Mammalogy 適應與天擇研討2(碩博) Studies in Adaptation and Natural Selection 兩棲爬蟲動物生態與演化2(碩博) Ecology and Evolution of Amphibians and Reptiles 昆蟲演化學3(大碩) Evolution of Insects 生態演化專題討論2-英(碩博) Seminar on Ecology & Evolution-E 植物工廠的概念與體驗學習2(大碩) Concept and Experimental Learning of Plant Factory 蕨類植物學3(大碩) Pteridology 生態學概論與應用2-英(碩) Ecoacoustics : Principle and Application-E	癌症生物學研究方法3(大碩) Biomethology of Cancer Research 基因轉殖2(大碩) Transgenic 植物病理學3(大碩) Plant Pathology 免疫化學3(大碩博) Immunochemistry 神經行為學3(大碩博) Neuroethology 分子遺傳學特論3(碩博) Topics in Molecular Genetics 藥物開發與轉譯醫學2(大碩博)-英 Drug Development and Translational Medicine-E 癌症生物學期刊論述2-英(大碩) Oncology Journal reading and discussion-E 病毒學2(大碩) Virology 病毒學概論2-英(大碩) Introduction in Virology-E 病毒學特論2-英(碩博) Topics in Virology-E 癌生物學2(大碩) Cancer Biology	植物分子生物學特論2-英(碩博) Topics in Plant Molecular Biology-E 細胞分生實驗見習3-英(碩博) Laboratory Rotations in Cell and Molecular Biology 神經藥理學3(碩博) Neuropharmacology 動物生理學特論(二)2(碩博) Topics on Animal Physiology (II) 腦結構學3(碩博) Architecture of Brain 骨生物學：基礎及應用2(大碩) Basic and Applied Bone Biology 組織學2-英(大碩) Histology-E 生物顯微技術含實驗3(大碩) Biological Microtechnique (including Lab.) 生物資訊相關演算法3(大碩) Algorithms in Bioinformatics 生物資訊應用程式語言3(大碩) Programming Language in Bioinformatics	蛋白質工程3(碩博) Protein Engineering 科學論文英文寫作2(碩博) Writing Scientific Papers in English 生物醫學研究新知與技術2(大碩) The Latest Issues in Biomedical Research and Technology 應用科學引領生物技術產業2-英(碩博) Apply Sciences Lead to Biotechnology Industry-E 產業實習3(大碩博) Industrial Practice 新藥與中草藥轉譯醫學2(大碩博) Translational Medicine — Novel Compounds and Chinese Herbal Medicines 生命科學知識轉化與分享2-英(碩) Knowledge Transformation and Dissemination for Life Science-E 植物細胞組織培養3(大碩) Plant Cell and Tissue Culture 生醫晶片製程技術3(碩博) Bio-Chips Manufacturing Technology
---	---	---	--

具備畢業基本資格(至少24學分)
Graduation (24Credits)

生命科學系博士班課程地圖
112學年度入學新生適用

Life Science Science Ph.D.'s Course Map -For the Students Enrolled in 2023

共同必修課程 Required Courses (8 credits)
專題討論 (博) (2x4 credits) Seminar



領域核心必修課程 Core Required Courses

生態學與演化領域 Ecology and Evolution	細胞生物暨分子醫學領域 Cellular and Molecular	生理學領域 Physiology
演化生物學 3 (碩博) Evolutionary Biology 進階生態學 3-英 (碩博) Advanced Ecology -E	細胞及分子生物學 3 (碩博) Cellular and Molecular Biology 實驗生物學研究方法 2(碩博) Research Methods of Experimental Biology	動物生理學特論(一)2 (碩博) Topics on Animal Physiology (I) 實驗生理學 2(碩博) Experimental Physiology

領域進階課程(至少選2科) Core Elective Courses (Select at Least Two)

生態學與演化領域 Ecology and Evolution	細胞生物暨分子醫學領域 Cellular and Molecular	生理學領域 Physiology
生態演化研究方法 1 (碩博) Research Methods in Ecology and Evolution 實驗設計與資料分析 3(碩博) Experimental Design and Data Analysis 行為生態學 3-英 (碩博) Behavioral Ecology-E 迴歸分析 3 (碩博) Regression Analysis 適應與天擇 3 (碩博) Adaptation and Natural Selection 族群遺傳與演化 3 (大碩博) Population Genetics and Evolution	統計分析概論 3-英 (碩博) Introduction to statistical analysis-E 線性與邏輯迴歸 3-英 (碩博) Linear and Logistic Regression Models-E 蛋白質與酵素化學 2 (碩博) Protein and Enzyme Chemistry Signal Transduction 分子生物學特論 2 (碩博) Topics in Molecular Biology 科學論文英文寫作 2(碩博) Writing Scientific Papers in English 免疫化學 3(大碩博) Experimental Physiology 蛋白質工程 3(碩博) Protein Engineering	比較動物生理學 3 (大碩博) Comparative Animal Physiology 學習與記憶 3 (碩博) Learning and memory 氧化壓力生理學 3 (碩博) Oxidative Stress Physiology 魚類生理學特論 3 (碩博) Topics in Fish Physiology 動物生理學特論(二) 2 (碩博) Topics on Animal Physiology (II) 神經藥理學 3(碩博) Neuropharmacology 感覺生理學特論 3 (博) Topics in Sensory Physiology 腦生理學特論 3 (博) Topics in Brain Physiology

選修課程 Elective Courses

適應與天擇研討 2 (碩博) Studies in Adaptation and Natural Selection 兩棲爬蟲動物生態與演化 2 (碩博) Ecology and Evolution of Amphibians and Reptiles 生態演化專題討論 2-英 (碩博) Seminar on Ecology & Evolution-E 神經行為學 3 (大碩博) Signal Transduction 分子遺傳學特論 3 (碩博) Topics in Molecular Genetics 藥物開發與轉譯醫學 2-英 (大碩博) Drug Development and Translational Medicine-E 植物分子生物學特論 2-英 (碩博) Topics in Plant Molecular Biology-E 病毒學特論 2-英 (碩博) Topics in Virology-E	細胞分生實驗見習 3-英 (碩博) Laboratory Rotations in Cell and Molecular Biology-E 腦結構學 3(碩博) Architecture of Brain 光電科技在生醫上的應用 2(碩博) Application of Optoelectronic Technology in Biomedical 產業實習 3(大碩博) Industrial Practice 應用科學引領生物技術產業 2-英 (碩博) Apply Sciences Lead to Biotechnology Industry -E 新藥與中草藥轉譯醫學 2 (大碩博) Translational Medicine — Novel Compounds and Chinese Herbal Medicines
---	---



具備畢業基本資格 (至少24學分)
Graduation (24Credits)