跨域創新生技國際博士學位學程TILST

學生核心能力 Student Core Competencies

A. 具備合人工智能、生命科學及生物技術之專業能力 Expertise in artificial intelligence, life sciences and biotechnology
B. 具備分析與邏輯推理能力 Analytical and logical reasoning skills
C. 具備宏觀國際視野及跨領域整合之能力 Macro international vision and cross-border integration capabilities
D. 熟稔人工智能分析實作技術 Artificial Intelligence Analysis Implementation Technology
E. 精熟生命科學研究實作技術 Life Science Research Implementation Technology
F. 精熟生物技術分析實作技術 Biotechnology Analysis Implementation Technology

共同必修課程 Required Courses

1(1+1)(ABCDEF)
跨域創新生技(一) Interdisciplinary Innovative Technology(I)

2(1+1)(ABCDEF)
跨域創新生技(二) Interdisciplinary Innovative Technology(II)

1(2)(ADEF)
跨域創新生技(三) Interdisciplinary Innovative Technology(III)

2(2)(ADEF)
跨域創新生技(四) Interdisciplinary Innovative Technology(IV)

1(2)(AD)
生物資訊程式設計 Bioinformatics Programming

畢業前須通過博士候選人資格考 (12)(ABCDEF)
博士論文 Dissertation

藍字部分課程3選2
Two of three of the blue font courses must be selected

選修課程 Elective Courses

生物領域課程Biology related courses

生化儀器分析 Instrumental Analysis in Biochemistry (3)(AF)
蛋白質化學 Protein Chemistry (3)(AEF)
表顯遺傳學 Epigenetics (2)(ABEF)
微生物遺傳學 Advanced Microbial Genetics (2)(AEF)
動物細胞培養 Culture of Animal Cells (1)(AEF)
細胞生長與凋亡 Cell Growth and Apoptosis (3)(AEF)
組織工程學I、IIS pecial Topics in Tissue Engineering(I) (II) (2+2)(AEF)
鳥類生殖生理Avian Reproductive Physiology (2)(AEF)
禽鳥胚胎實驗動物 Avian Embryos as Model Animal (2)(AEF)
發育生物學研究法 Methods in Developmental Biology (3)(AEF)
植物比較形態學 Plant Comparative Morphology (3)(AEF)
植物基因轉殖之新知探討(一) Current Topics in Plant Gene Transformation (I) (1)(ACEF)
植物分子遺傳新知探討(一) Current Topics in Plant Molecular Genetics (I) (1)(ACEF)

跨領域課程Interdisciplinary Courses

病毒蛋白結構與功能研究特論(一)(二) Special Topics in Structure and Function Studies of Virus Protein (I)(II) (2+2)(ADEF)
膜蛋白功能與結構 Functional and Structural Studies of Membrance Proteins (3)(ADEF)
基因轉錄機制 Mechanism of Transcription (3)(ADF)
基因體生物技術新知與實作(一)(二) Practice and Frontiers in Genomics Study (I)(II) (2+2)(ABDF)
科學英文寫作 Scientific Writing in English (3)(ABC)
分子細胞生物學之科學論文寫作 Research Article Writing in Molecular and Cell Biology (1)(ABC)
分子細胞生物學之計畫書申請寫作 Grant Proposal Planning and Writing in Molecular and Cell Biology (1)(ABC)
論文寫作與演說 Academic Writing and Speaking (1)(ABC)
閱讀與講演生物醫學期刊論文概論 Introduction of Reading and Presenting Biomedical Journal Paper (1)(ABC)
醫用生物技術(一) Medical Biotechnology (I)(2)(AEF)
發育生物學專題研究(一)(二) Independent Study and Research Developmental Biology(I) (II)(2+2)(ABCEF)
散彈槍定序原理與實習 Shutgun Sequencing :Principle and Experiment (2)(ADF)

人工智慧領域課程 Artificial Intelligence related courses

使用R語言介紹生物統計
Introductory Biostatistics with R (2)(ABDF)

具備畢業資格(至少30學分) Minimum 30 credits required to graduate