

課程流水號 Serial Number	24035
課號 Course Number	LS6062
班次 Class	*
科目名稱(中文) Course Title(in Chinese)	專題研究：基因調控
科目名稱(外文) Course Title(In English or other languages)	Special Topics in Regulation of Gene Expression
授課老師(中文) Instructor(in Chinese)	王健家
授課老師(外文) Instructor(In English or other languages)	Chien-Chia Wang
辦公時間(中文) Office Hour(in Chinese)	10:00-11:50 am on Monday(王)
辦公時間(外文) Office Hour(In English or other languages)	10:00-11:50 am on Monday(王)
課程目標(中文) Course Objective(in Chinese)	專精生物化學及分子生物學之基礎能力 閱讀及討論期刊論文
課程目標(外文) Course Objective(In English or other languages)	專精生物化學及分子生物學之基礎能力 閱讀及討論期刊論文
授課內容(中文) Course Description(in Chinese)	<ol style="list-style-type: none"> 1. Introduction 2. Bacteria: The Molecular Biologist's Guinea Pig 3. Basic Genetics: Foundation for Understanding the Genes 4. Replication: Duplicating the DNA 5. Transcription: Getting the Message Out 6. Translation: A Decoding Process 7. Regulation of Gene Expression (I): Transcriptional Control 8. Regulation of Gene Expression (II): Translational Control 9. Genetic Organization in Bacteria 10. Genetic Organization in Higher Organisms 11. Mutations: Changes in the Genetic Codes of A Gene 12. PCR: Polymerase Chain Reaction and Its Applications 13. Virus and Viroids 14. Plasmids 15. Construction of A Genomic or cDNA Library 16. Screening of A Genomic or cDNA Library
授課內容(外文) Course Description(In English or other languages)	<ol style="list-style-type: none"> 1. Introduction 2. Bacteria: The Molecular Biologist's Guinea Pig 3. Basic Genetics: Foundation for Understanding the

	<p>Genes</p> <p>4. Replication: Duplicating the DNA</p> <p>5. Transcription: Getting the Message Out</p> <p>6. Translation: A Decoding Process</p> <p>7. Regulation of Gene Expression (I): Transcriptional Control</p> <p>8. Regulation of Gene Expression (II): Translational Control</p> <p>9. Genetic Organization in Bacteria</p> <p>10. Genetic Organization in Higher Organisms</p> <p>11. Mutations: Changes in the Genetic Codes of A Gene</p> <p>12. PCR: Polymerase Chain Reaction and Its Applications</p> <p>13. Virus and Viroids</p> <p>14. Plasmids</p> <p>15. Construction of A Genomic or cDNA Library</p> <p>16. Screening of A Genomic or cDNA Library</p>
教科書/參考書(中文) Textbook/References(in Chinese)	<p>1. Analysis of genes and genomes (2004), by Richard Reece, Published by John Wiley & Sons, Ltd.</p> <p>2. Journals : EMBO J, JBC, PNAS, NAR</p>
教科書/參考書(外文) Textbook/References(In English or other languages)	<p>1. Analysis of genes and genomes (2004), by Richard Reece, Published by John Wiley & Sons, Ltd.</p> <p>2. Journals : EMBO J, JBC, PNAS, NAR</p>
自編教材比例 Self-compiled Textbook/References Proportion	
授課方式 Requirements	講授Lecture 研討Seminar 個別指導Individual Discussion
評量配分比重(中文) Grading(in Chinese)	報告及討論 (100%)
評量配分比重(外文) Grading(In English or other languages)	Presentation and Discussion (100%)
課程所屬學制 Educational System	博士班(Doctoral Programme)
課程領域 Course Domain	<p>進階學科</p> <p>農業應用</p> <p>生物科技</p> <p>醫藥</p> <p>實驗操作</p>
跨系課程領域 Cross Department Course Domain	

系所核心能力 Core Competencies of Department	強度指數 Overall Rating						評量方式 Corresponding Assessments
	0 不具 備 Zero	1 非常 低 Very Low	2 低 Low	3 普通 Medium	4 高 High	5 非常 高 Very High	
高等生物專業知識 Advanced Biological Sciences	●	●	●	●	●	●	<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習(Assignments) <input checked="" type="checkbox"/> 口頭報告/口試 (Presentation/Oral Exam) <input type="checkbox"/> 專題研究報告(書面) (Research Report(printed on paper)) <input type="checkbox"/> 實作/實驗 (Practices/Experiments) <input type="checkbox"/> 出席/課堂表現 (Attendance/Performance) <input type="checkbox"/> 學習檔案評量(Portfolios Assessment) <input type="checkbox"/> 自我評量/同儕互評(Self Assessment/ Peer Assessment) <input type="checkbox"/> 作品/創作展演 (Products/Creative Performance) <input type="checkbox"/> 其他(Others) <input type="checkbox"/> 無(No assessment)
創新及整合研究 Innovative and integrative research	●	●	●	●	●	●	<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習(Assignments) <input checked="" type="checkbox"/> 口頭報告/口試 (Presentation/Oral Exam) <input type="checkbox"/> 專題研究報告(書面) (Research Report(printed on paper)) <input type="checkbox"/> 實作/實驗 (Practices/Experiments) <input type="checkbox"/> 出席/課堂表現 (Attendance/Performance) <input type="checkbox"/> 學習檔案評量(Portfolios Assessment) <input type="checkbox"/> 自我評量/同儕互評(Self Assessment/ Peer Assessment) <input type="checkbox"/> 作品/創作展演 (Products/Creative Performance) <input type="checkbox"/> 其他(Others) <input type="checkbox"/> 無(No assessment)

專業寫作與表達 Professional writing and presentation	●	●	●	●	●	●	<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習(Assignments) <input checked="" type="checkbox"/> 口頭報告/口試 (Presentation/Oral Exam) <input type="checkbox"/> 專題研究報告(書面) (Research Report(printed on paper)) <input type="checkbox"/> 實作/實驗 (Practices/Experiments) <input type="checkbox"/> 出席/課堂表現 (Attendance/Performance) <input type="checkbox"/> 學習檔案評量(Portfolios Assessment) <input type="checkbox"/> 自我評量/同儕互評(Self Assessment/ Peer Assessment) <input type="checkbox"/> 作品/創作展演 (Products/Creative Performance) <input type="checkbox"/> 其他(Others) <input type="checkbox"/> 無(No assessment)
國際觀 International vision	●	●	●	●	●	●	<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習(Assignments) <input checked="" type="checkbox"/> 口頭報告/口試 (Presentation/Oral Exam) <input type="checkbox"/> 專題研究報告(書面) (Research Report(printed on paper)) <input type="checkbox"/> 實作/實驗 (Practices/Experiments) <input type="checkbox"/> 出席/課堂表現 (Attendance/Performance) <input type="checkbox"/> 學習檔案評量(Portfolios Assessment) <input type="checkbox"/> 自我評量/同儕互評(Self Assessment/ Peer Assessment) <input type="checkbox"/> 作品/創作展演 (Products/Creative Performance) <input type="checkbox"/> 其他(Others) <input type="checkbox"/> 無(No assessment)