

課程流水號 Serial Number	24013
課號 Course Number	LS3036
班次 Class	*
科目名稱(中文) Course Title(in Chinese)	分子生物學
科目名稱(外文) Course Title(In English or other languages)	Molecular Biology
授課老師(中文) Instructor(in Chinese)	陸重安
授課老師(外文) Instructor(In English or other languages)	Chung-An Lu
辦公時間(中文) Office Hour(in Chinese)	Wed 11:00~12:00
辦公時間(外文) Office Hour(In English or other languages)	Wed 11:00~12:00
課程目標(中文) Course Objective(in Chinese)	以生物大分子結構與功能探來討生命現象之本質。2. 培養 學生從不同角度及合理邏輯探討生命現象。
課程目標(外文) Course Objective(In English or other languages)	1. The study gene structure and function at the macromolecular level. 2. Molecular biology course leads students to investigate the life sciences from different angles
授課內容(中文) Course Description(in Chinese)	Major Shift in Bacterial Transcription (II) (Ch8) Eukaryotic RNA Polymerases and Their Promoters (I) (Ch10) Eukaryotic RNA Polymerases and Their Promoters (II) (Ch10) General Transcription Factors in Eukaryotes (I) (Ch11) General Transcription Factors in Eukaryotes (II) (Ch11)

	<p>Transcription Activators in Eukaryotes (I) (Ch12)</p> <p>Transcription Activators in Eukaryotes (II) (Ch12)</p> <p>Chromatin Structure and Its Effects on Transcription (Ch13)</p> <p>Posttranscriptional Events I: Splicing (I) (Ch14)</p> <p>Posttranscriptional Events I: Splicing (II) (Ch14)</p> <p>Posttranscriptional Events II: Capping and Polyadenylation (Ch15)</p> <p>Posttranscriptional Events III: Other Events (Ch16)</p> <p>The Mechanism of Translation I: Initiation (Ch17)</p> <p>The Mechanism of Translation II: Elongation and Termination (Ch18)</p> <p>Ribosomes and Transfer RNA (Ch19)</p> <p>Genomics (Ch24)</p> <p>Final Examination</p>
<p>授課內容(外文)</p> <p>Course Description(In English or other languages)</p>	<p>Major Shift in Bacterial Transcription (II) (Ch8)</p> <p>Eukaryotic RNA Polymerases and Their Promoters (I) (Ch10)</p> <p>Eukaryotic RNA Polymerases and Their Promoters (II) (Ch10)</p> <p>General Transcription Factors in Eukaryotes (I) (Ch11)</p> <p>General Transcription Factors in Eukaryotes (II) (Ch11)</p> <p>Transcription Activators in Eukaryotes (I) (Ch12)</p> <p>Transcription Activators in Eukaryotes (II) (Ch12)</p> <p>Chromatin Structure and Its Effects on Transcription (Ch13)</p> <p>Posttranscriptional Events I: Splicing (I) (Ch14)</p> <p>Posttranscriptional Events I: Splicing (II) (Ch14)</p> <p>Posttranscriptional Events II: Capping and Polyadenylation (Ch15)</p> <p>Posttranscriptional Events III: Other Events (Ch16)</p> <p>The Mechanism of Translation I: Initiation (Ch17)</p> <p>The Mechanism of Translation II: Elongation</p>

	and Termination (Ch18) Ribosomes and Transfer RNA (Ch19) Genomics (Ch24) Final Examination
教科書/參考書(中文) Textbook/References(in Chinese)	Molecular Biology, Fifth Edition; Robert F. Weaver; University of Kansas; McGraw-Hill
教科書/參考書(外文) Textbook/References(In English or other languages)	Molecular Biology, Fifth Edition; Robert F. Weaver; University of Kansas; McGraw-Hill
自編教材比例 Self-compiled Textbook/References Proportion	
授課方式 Requirements	講授Lecture
評量配分比重(中文) Grading(in Chinese)	Midterm 30% ; final exam 40% ; Usually score :30%
評量配分比重(外文) Grading(In English or other languages)	Midterm 30% ; final exam 40% ; Usually score :30%
課程所屬學制 Educational System	學士班(Undergraduate Programme)
課程領域 Course Domain	基礎學科
跨系課程領域 Cross Department Course Domain	

系所核心能力 Core Competencies of Department	0	1	2	3	4	5	評量方式 Corresponding Assessments
	不具備 Zero	非常低 Very Low	低 Low	普通 Medium	高 High	非常高 Very High	
強度指數 Overall Rating							

強度指數 Overall Rating 系所核心能力 Core Competencies of Department	0	1	2	3	4	5	評量方式 Corresponding Assessments
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基礎生物專業知識 Basic Biological Sciences	●	●	●	●	●	●	<input checked="" type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input checked="" type="checkbox"/> 作業練習 (Assignments) <input 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)

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	
發掘問題及實驗能力 Question approaching and experimental skills	●	●	●	●	●	●	<input checked="" type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input checked="" type="checkbox"/> 作業練習 (Assignments) <input 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)

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邏輯分析 Logical thinking and analysis	●	●	●	●	●	●	<input checked="" type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input checked="" type="checkbox"/> 作業練習 (Assignments) <input 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)

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	不 具 備 Zero	非 常 低 Very Low	低 Low	普通 Medium	高 High	非常 高 Very High	
強度指數 Overall Rating 電腦應用 Computer application	●	●	●	●	●	●	<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習 (Assignments) <input 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 checked="" type="checkbox"/> 無(No assessment)

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	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	
溝通技巧 Communication skills	●	●	●	●	●	●	<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習 (Assignments) <input 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 checked="" type="checkbox"/> 無(No assessment)

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獨立思考與自我學習 Independent thinking and self-learning	●	●	●	●	●	●	<input checked="" type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input checked="" type="checkbox"/> 作業練習 (Assignments) <input 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)

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	不具備 Zero	非常低 Very Low	低 Low	普通 Medium	高 High	非常高 Very High	
團隊合作 Team work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input type="checkbox"/> 作業練習 (Assignments) <input 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 checked="" type="checkbox"/> 無(No assessment)

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	不具備 Zero	非常低 Very Low	低 Low	普通 Medium	高 High	非常高 Very High	
強度指數 Overall Rating 博雅通識 General knowledge	●	●	●	●	●	●	<input checked="" type="checkbox"/> 紙筆測驗/會考 (Test/Exam) <input checked="" type="checkbox"/> 作業練習 (Assignments) <input 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)