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| 課程流水號 Serial Number | 24018 |
| 課號 Course Number | LS5015 |
| 班次 Class | * |
| 科目名稱(中文) Course Title(in Chinese) | 植物訊息傳遞特論 |
| 科目名稱(外文) Course Title(In English or other languages) | Advanced in Plant Signal Transduction |
| 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) | 星期四; 9 and A |
| 辦公時間(外文) Office Hour(In English or other languages) | 星期四; 9 and A |
| 課程目標(中文) Course Objective(in Chinese) | The concepts and methods in signal transduction |
| 課程目標(外文) Course Objective(In English or other languages) | The concepts and methods in signal transduction |
| 授課內容(中文) Course Description(in Chinese) | <p>The concepts and methods in signal transduction</p> <ol style="list-style-type: none"> 1. Characteristics of a signal transduction pathway 2. Three general pathways of information flow to the nucleus 3. Study and dissection of signaling mechanisms <ol style="list-style-type: none"> a. Pharmacological approaches b. Approaches based on physical interactions between signaling components. c. Genetic approaches d. Microarray data create enormous datasets. Simple two-dimensional models for linear pathways work well, but networks are more complex. 4. Specific topic of plant signal transduction <ol style="list-style-type: none"> A. Salt stress B. Drought stress |
| 授課內容(外文) Course Description(In English or other languages) | <p>The concepts and methods in signal transduction</p> <ol style="list-style-type: none"> 1. Characteristics of a signal transduction pathway 2. Three general pathways of information flow to the nucleus 3. Study and dissection of signaling mechanisms <ol style="list-style-type: none"> a. Pharmacological approaches b. Approaches based on physical interactions |

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| | between signaling components. c. Genetic approaches d. Microarray data create enormous datasets. Simple two-dimensional models for linear pathways work well, but networks are more complex. 4. Specific topic of plant signal transduction A. Salt stress B. Drought stress |
| 教科書/參考書(中文) Textbook/References(in Chinese) | 植物生物期刊 |
| 教科書/參考書(外文) Textbook/References(In English or other languages) | Plant Biology Journal |
| 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) | 口頭報告50%與課堂表現50% |
| 評量配分比重(外文) Grading(In English or other languages) | 口頭報告50%與課堂表現50% |
| 課程所屬學制 Educational System | 博士班(Doctoral Programme) |
| 課程領域 Course Domain | 進階學科 生物科技 |
| 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 | |
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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 | |
| 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 checked="" 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 checked="" 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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| | 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 | |
| 專業寫作與表達 Professional writing and presentation | <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 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 checked="" 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="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 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 checked="" 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) |

