

課程流水號 Serial Number	24010
課號 Course Number	LS3001
班次 Class	*
科目名稱(中文) Course Title(in Chinese)	植物生理學
科目名稱(外文) Course Title(In English or other languages)	Plant Physiology
授課老師(中文) Instructor(in Chinese)	吳少傑,葉靖輝
授課老師(外文) Instructor(In English or other languages)	Shaw-Jye Wu, Ching-Hui Yeh
辦公時間(中文) Office Hour(in Chinese)	Thur 17:00~20:00
辦公時間(外文) Office Hour(In English or other languages)	Thur 17:00~20:00
課程目標(中文) Course Objective(in Chinese)	The word "physiology" is derived from the Greek words physis (nature) and logos (discourse). Therefore, plant physiology is a discourse about the nature of plants. The topic it contains include how plants use energy of the sun, how they grow and develop, how they respond to their environment, how they react to stress and how they reproduce. In short, plant physiology is to understand how plants function.
課程目標(外文) Course Objective(In English or other languages)	The word "physiology" is derived from the Greek words physis (nature) and logos (discourse). Therefore, plant physiology is a discourse about the nature of plants. The topic it contains include how plants use energy of the sun, how they grow and develop, how they respond to their environment, how they react to stress and how they reproduce. In short, plant physiology is to understand how plants function.
授課內容(中文) Course Description(in Chinese)	週次 日期 授課主題 授課老師 1 2/21 Ch 1-4, Plant Cells, tissues, organs; Water and Plants 吳少傑 2 2/28 228 Holiday 吳少傑 3 3/7 Ch 13, Inorganic nutrients 吳少傑 4 3/14 Meeting abroad, to be postponed to 4/18 吳少傑 5 3/21 Ch 7, Photosynthesis: Pigments and light reaction 吳少傑 6 3/28 Ch 8, Photosynthesis: Dark reaction 吳少傑 7 4/4 Spring break 吳少傑

	<p>8 4/11 Ch 16, Signals form sunlight (phytochrom) 吳少傑</p> <p>9 4/18 Mid-term exam & (補 3/14) 吳少傑</p> <p>Ch 20, The control of flowering</p> <p>10 4/25 Ch 15, Signals and signal transduction 葉靖輝</p> <p>11 5/2 Ch 17, Embryogenesis 葉靖輝</p> <p>12 5/9 Ch 19, Vegetative growth (Auxin) 葉靖輝</p> <p>13 5/16 Ch 19, Organanogenesis (Cytokinin) 葉靖輝</p> <p>14 5/23 Ch 21, Seed dormancy (ABA) 葉靖輝</p> <p>15 5/30 Ch 22, Plant Senescence (Ethylene) 葉靖輝</p> <p>16 6/6 Ch 23, Biotic interactions 葉靖輝 (Brassinosteroids, Salicylic acid)</p> <p>17 6/13 Ch 24, Responses and adaptations to abiotic stress 葉靖輝</p> <p>18 6/20 Final exam 葉靖輝</p>
授課內容(外文) Course Description(In English or other languages)	<p>Week Date Contents Instructor</p> <p>週次 日期 授課主題 授課老師</p> <p>1 2/21 Ch 1-4, Plant Cells, tissues, organs; Water and Plants 吳少傑</p> <p>2 2/28 228 Holiday 吳少傑</p> <p>3 3/7 Ch 13, Inorganic nutrients 吳少傑</p> <p>4 3/14 Meeting abroad, to be postponed to 4/18 吳少傑</p> <p>5 3/21 Ch 7, Photosynthesis: Pigments and light reaction 吳少傑</p> <p>6 3/28 Ch 8, Photosynthesis: Dark reaction 吳少傑</p> <p>7 4/4 Spring break 吳少傑</p> <p>8 4/11 Ch 16, Signals form sunlight (phytochrom) 吳少傑</p> <p>9 4/18 Mid-term exam & (補 3/14) 吳少傑</p> <p>Ch 20, The control of flowering</p> <p>10 4/25 Ch 15, Signals and signal transduction 葉靖輝</p> <p>11 5/2 Ch 17, Embryogenesis 葉靖輝</p> <p>12 5/9 Ch 19, Vegetative growth (Auxin) 葉靖輝</p> <p>13 5/16 Ch 19, Organanogenesis (Cytokinin) 葉靖輝</p> <p>14 5/23 Ch 21, Seed dormancy (ABA) 葉靖輝</p> <p>15 5/30 Ch 22, Plant Senescence (Ethylene) 葉靖輝</p> <p>16 6/6 Ch 23, Biotic interactions 葉靖輝 (Brassinosteroids, Salicylic acid)</p> <p>17 6/13 Ch 24, Responses and adaptations to abiotic stress 葉靖輝</p> <p>18 6/20 Final exam 葉靖輝</p>
教科書/參考書(中文) Textbook/References(in Chinese)	Text Book : Plant Physiology and Development, 6th Edition (2015). Taiz L and Zeiger E. Eds., Sinauer Associates.
教科書/參考書(外文) Textbook/References(In English or other languages)	Text Book : Plant Physiology and Development, 6th Edition (2015). Taiz L and Zeiger E. Eds., Sinauer Associates.
自編教材比例 Self-compiled Textbook/References Proportion	80%
授課方式	講授Lecture 其他Other

Requirements	
評量配分比重(中文) Grading(in Chinese)	筆試: 期中考(佔45%), 期末考(45%), 課堂問答與討論(10%)
評量配分比重(外文) Grading(In English or other languages)	One mid-term exam (45%), one final exam (45%), in class discussion (10%)
課程所屬學制 Educational System	學士班(Undergraduate Programme)
課程領域 Course Domain	基礎學科 生理 農業應用 環境生物
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	
基礎生物專業知識 Basic Biological Sciences	●	●	●	●	●	●	<input checked="" 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 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	
發掘問題及實驗能力 Question approaching and experimental 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 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)
邏輯分析 Logical thinking and analysis	●	●	●	●	●	●	<input checked="" 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 type="checkbox"/> 無(No assessment)

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電腦應用 Computer application	●	●	●	●	●	●	<input 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 checked="" type="checkbox"/> 其他(Others) <input type="checkbox"/> 無(No assessment)
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 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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獨立思考與自我學習 Independent thinking and self-learning	●	●	●	●	●	●	<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 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)
團隊合作 Team work	●	●	●	●	●	●	<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 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 checked="" type="checkbox"/> 無(No assessment)

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博雅通識 General knowledge	●	●	●	●	●	●	<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 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)