

課程流水號 Serial Number	24039
課號 Course Number	LS6092
班次 Class	*
科目名稱(中文) Course Title(in Chinese)	專題研究：台灣與東亞之生物地理親緣關係
科目名稱(外文) Course Title(In English or other languages)	Special Topics in Biogeography in Taiwan and East Asia
授課老師(中文) Instructor(in Chinese)	劉阜果
授課老師(外文) Instructor(In English or other languages)	Fu-Guo Robert Liu
辦公時間(中文) Office Hour(in Chinese)	Make an appointment by e-mail.
辦公時間(外文) Office Hour(In English or other languages)	Make an appointment by e-mail.
課程目標(中文) Course Objective(in Chinese)	學習研究及瞭解台灣生物多樣性的演化及源起
課程目標(外文) Course Objective(In English or other languages)	Study and learn evolution and origin of biodiversities in Taiwan
授課內容(中文) Course Description(in Chinese)	Biogeographic and phylogenetic analyses are the knowledge and tools to study evolution in nature. This course would apply these on different taxa to synthesize how evolutionary events have driven the evolution of organisms' distribution patterns, population structures, and speciation on global or local scales. The East and Southeast Asia encompasses one of the most actively geographical histories on earth with extremely high biodiversities. Conservation issues are highly emphasized and valued there. However, we are still limited in

organism information from these areas. I hope this course may draw more attentions to this field and areas, as well as inspiring students' interests and having more participants.

1. Introduction of the Princial of Biogeography
2. Distributions of Species
3. Dispersal and Immigeation
4. Speciation and Extinction
5. Geographic events
6. Island Ecology and Biogeography
7. Evolution and Molecular Evolution
8. Molecular Clock
9. Phylogeny
10. Geology and Biogeography in South and East Asia
11. Formation and Geography of Taiwan
12. Plant Biodiversity in Taiwan and Neighboring Area
13. Terrial Animal Biodiversity in Taiwan and Neighboring Area
14. Fresh-water Animal Biodiversity in Taiwan and Neighboring Area
15. Marine Organism Biodiversity around Taiwan and Neighboring Area
16. Presentation I
17. Presentation II
18. Presentation III

授課內容(外文)

Course Description(In English or other languages)

Biogeographic and phylogenetic analyses are the knowledge and tools to study evolution in nature. This course would apply these on different taxa to synthesize how evolutionary events have driven the evolution of organisms' distribution patterns, population structures, and speciation on global or local scales. The East and Southeast Asia encompasses one of the most actively geographical histories on earth with extremely high biodiversities. Conservation issues are highly emphasized and valued there. However, we are still limited in organism information from these areas. I hope this course may draw more attentions to this field and areas, as well as inspiring students' interests and having more participants.

	<ol style="list-style-type: none"> 1. Introduction of the Princial of Biogeography 2. Distributions of Species 3. Dispersal and Immigeation 4. Speciation and Extinction 5. Geographic events 6. Island Ecology and Biogeography 7. Evolution and Molecular Evolution 8. Molecular Clock 9. Phylogeny 10. Geology and Biogeography in South and East Asia 11. Formation and Geography of Taiwan 12. Plant Biodiversity in Taiwan and Neighboring Area 13. Terrial Animal Biodiversity in Taiwan and Neighboring Area 14. Fresh-water Animal Biodiversity in Taiwan and Neighboring Area 15. Marine Organism Biodiversity around Taiwan and Neighboring Area 16. Presentation I 17. Presentation II 18. Presentation III
教科書/參考書(中文) Textbook/References(in Chinese)	<p>Biogeography: an ecological and evolutionary approach. 7th ed. Barry Cox and Peter Moore. 2007. Blackwell publishing, Singapore.</p> <p>Molecular approaches to ecology and evolution. Rob DeSalle and Bernd Schiervater (eds). 1998. Birkhauser, Boston, USA.</p>
教科書/參考書(外文) Textbook/References(In English or other languages)	<p>Biogeography: an ecological and evolutionary approach. 7th ed. Barry Cox and Peter Moore. 2007. Blackwell publishing, Singapore.</p> <p>Molecular approaches to ecology and evolution. Rob DeSalle and Bernd Schiervater (eds). 1998. Birkhauser, Boston, USA.</p>
自編教材比例 Self-compiled Textbook/References Proportion	
授課方式 Requirements	<p>講授Lecture 研討Seminar 實習/實驗 Internship/Experiment 個別指導Individual Discussion</p>

評量配分比重(中文) Grading(in Chinese)	Presentation 60% Discussion 20% Attendance 20%
評量配分比重(外文) Grading(In English or other languages)	Presentation 60% Discussion 20% Attendance 20%
課程所屬學制 Educational System	博士班(Doctoral Programme)
課程領域 Course Domain	生態演化
跨系課程領域 Cross Department Course Domain	

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
	不具備 Zero	非常低 Very Low	低 Low	普通 Medium	高 High	非常高 Very High	

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 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)

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
	不具備 Zero	非常低 Very Low	低 Low	普通 Medium	高 High	非常高 Very High	
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)

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
	不具備 Zero	非常低 Very Low	低 Low	普通 Medium	高 High	非常高 Very High	
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 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)

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	
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 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)