



教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	科學寫作		學年/學期 Academic Year/Semester	112/1	
課程名稱(英文) Course Name in English	Scientific Writing				
科目代碼 Course Code	NRESM0200	系級 Department & Year	碩士	開課單位 Course-Offering Department	自然資源與環境學系
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)	3.0/3.0		
授課教師 Instructor	/蔡金河				
先修課程 Prerequisite					

課程描述 Course Description

This course is designed as a research and professional development course for ESL graduate students in science majors. Students will practice writing/preparing academic CVs, research proposals, conference abstracts or posters, seminar talks, and journal articles.

課程目標 Course Objectives

To help students write a scientific paper for publication in an international journal.

系專業能力 Basic Learning Outcomes		課程目標與系專業能力相關性 Correlation between Course Objectives and Dept.'s Education Objectives
A	能覺知多元的自然科學與社會科學理論並具備研究能力 To have knowledge of natural and social science theories.	●
B	具備自然資源與人類社會議題之調查分析、規劃與經營之能力 To be able to investigate, analyze, plan, and manage both natural resource and human social issues.	●
C	具備將環境倫理與生態思想落實於永續性生活型態的能力 To implement sustainable lifestyles based on environmental ethics and ecological principles.	
D	能以整全式的觀點來解析環境問題，並具備發展系統性解決方案的能力 To resolve environmental issues and develop systematic solutions with a global perspective	●
E	具備系統分析、未來思考、溝通協調與團隊合作的能力 The ability to analyze, plan, communicate, and coordinate with others (teamwork).	○
F	具備終身學習、國際視野與外語溝通的能力 To instill the values of lifelong learning, an international perspective, and the ability to communicate in a foreign language	●

圖示說明 Illustration : ● 高度相關 Highly correlated ○ 中度相關 Moderately correlated

授課進度表 Teaching Schedule & Content

週次 Week	內容 Subject/Topics	備註 Remarks
1	Introduction	
2	Academic CV	
3	Before You Write	
4	Searching and Reviewing Scientific Literature	
5	Proposals	

6	Theses	
7	Publishing in Scientific Journals	
8	How to Write a Good Introduction	
9	Discussion; First Assignment Due	mid-term week
10	Abstract and Conclusion	
11	Reviewing and Revising	
12	Professionalism, Ethics, and Legal Issues	
13	Peer Review	
14	How to Do a Good Oral Presentation	
15	How to Do a Good Poster Presentation	
16	Student Presentations (I)	
17	Student Presentations (II)	
18	Second Assignment Due; Final Discussion	Final week

教學策略 Teaching Strategies

- 課堂講授 Lecture
 分組討論 Group Discussion
 參觀實習 Field Trip
 其他 Miscellaneous:

教學創新自評 Teaching Self-Evaluation

創新教學(Innovative Teaching)

- 問題導向學習(PBL)
 團體合作學習(TBL)
 解決導向學習(SBL)
 翻轉教室 Flipped Classroom
 磨課師 Moocs

社會責任(Social Responsibility)

- 在地實踐 Community Practice
 產學合作 Industry-Academia Cooperation

跨域合作(Transdisciplinary Projects)

- 跨界教學 Transdisciplinary Teaching
 跨院系教學 Inter-collegiate Teaching

- 業師合授 Courses Co-taught with Industry Practitioners

其它 other:

學期成績計算及多元評量方式 Grading & Assessments									
配分項目 Items	配分比例 Percentage	多元評量方式 Assessments							
		測驗 會考	實作 觀察	口頭 發表	專題 研究	創作 展演	卷宗 評量	證照 檢定	其他
平時成績 General Performance	20%			✓			✓		
期中考成績 Midterm Exam									
期末考成績 Final Exam	40%			✓			✓		
作業成績 Homework and/or Assignments	40%			✓			✓		
其他 Miscellaneous (_____)									
評量方式補充說明 Grading & Assessments Supplemental instructions									
教科書與參考書目 (書名、作者、書局、代理商、說明) Textbook & Other References (Title, Author, Publisher, Agents, Remarks, etc.)									
Alley, M. (2018) The Craft of Scientific Writing, Springer. Bates, R.L., Adkins-Heljeson, M.D., and Buchanan, R.C. (1995) Geowriting (5th Ed.), American Geological Institute. Carter, M. (2020) Designing Science Presentations, Elsevier. Copeland, P. (2011) Communicating Rocks, Pearson. Davis, M. Davis, K.J., and Dunagan, M.M. (2012) Scientific Papers and Presentations (5th Ed.), Elsevier. Donovan, S.K. (2017) Writing for Earth Scientists, Wiley-Blackwell. Hofmann, A.H. (2020) Scientific Writing and Communication (4th Ed.), Oxford University Press. Katz, M.J. (2009) From Research to Manuscript, Springer. Shoja, M. et al. (2019) A Guide to the Scientific Career: Virtues, Communication, Research and Academic Writing, Wiley. Oruc, A.Y. (2011) Handbook of Scientific Proposal Writing, CRC Press. Ross, C and Ross, G. (2019) Real Science in Clear English: A Guide to Scientific Writing for the Global Market, Springer. Stüwe, K. and Drescher, A. (2012) How to Write a Manuscript for a Journal, Mitteilungen des naturwissenschaftlichen Vereines für Steiermark.									
課程教材網址(含線上教學資訊, 教師個人網址請列位於本校內之網址) Teaching Aids & Teacher's Website(Including online teaching information. Personal website can be listed here.)									
其他補充說明 (Supplemental instructions)									