



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	114/1
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 or non-science majors. Students will practice writing academic CVs, research proposals, conference abstracts, dissertations, and journal manuscripts. This course will also teach students about how to do academic presentations and scientific communications.					
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; Communication; Organization				
2	Academic/Professional Career Development: Preparing Your CVs				
3	Choosing Academic Advisors and Research Projects				
4	Searching and Reviewing Scientific Literature				

5	Writing Proposals	
6	Writing Theses	
7	Publishing in Academic Journals	
8	Titles and Introductions	
9	First Assignment Due	mid-term week
10	Abstracts and Conclusions	
11	Revising Manuscripts	
12	Professionalism, Ethics, and Legal Issues	
13	About Peer Review	
14	Oral Presentations: Seminar, Conference, Defense	
15	Poster Presentations	
16	Student Final (Oral) Presentations	
17	Second Assignment Due (written one)	Final week
18	Optional One-on-one Mentoring	Flexible timing

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(含出席) General Performance (Attendance Record)	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. Hofmannn, 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)									