

 國立東華大學
教學計劃表 Syllabus

課程名稱(中文) Course Name in Chinese	科學課程設計			學年/學期 Academic Year/Semester	114/1
課程名稱(英文) Course Name in English	Science Curriculum Design				
科目代碼 Course Code	SCE_52830	系級 Department & Year	碩士	開課單位 Course-Offering Department	教育與潛能開發學系
修別 Type	選修 Elective	學分數/時間 Credit(s)/Hour(s)		3.0/3.0	
授課教師 Instructor	/陳世文				
先修課程 Prerequisite					
課程描述 Course Description					
This course is essential for researchers and practitioners in the field of science education. It aims to introduce fundamental concepts of curriculum, the psychological and philosophical foundations of curriculum theory, as well as the design and development of science curricula. Through practical outdoor education course design activities, students are provided with opportunities and experiences in hands-on curriculum design. This helps them gain a clear understanding of the concepts related to science curriculum design and development, and cultivates their ability to practically design science curricula for their future teaching or research endeavors.					
課程目標 Course Objectives					
1. 瞭解課程的定義、基本理念、理論基礎。 2. 熟悉各種課程設計發展的模式與種類。 3. 瞭解現行自然科學課程內涵及與課程相關之時勢議題。 4. 科學課程發展與設計之實作，培養課程設計之能力。 5. 培養小組合作、分組報告、表達溝通與分享之能力。					
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	瞭解科學教育專業理論及內涵。To comprehend the theories and implementations of science education				●
B	具備科學教學專業素養。To possess the professional competencies of science teaching				●
C	具有科學教育研究基礎素養。To have the basic abilities of science education research				●
D	具備科學素養與人文關懷。To integrate scientific literacy with humanistic concer				○
E	具備科學教育推廣與傳播素養。To possess the abilities of science popularization and communicate				○
F	具備主動探究之態度與熱愛自然的情操。To express the positive attitude toward inquiry and the sentiment adoring the nature				○
G	具備多面相的科學觀。To understand the science with multidimensional viewpoints				○
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	Curriculum introduction	discussion and illustration
2	課程基本概念、課程哲學觀 The basic ideas about the curriculum / Philosophical foundation of curriculum	Presentation and discussion Chapter 1 & 2 of the textbook
3	課程的歷史與心理學基礎 Historical and Psychological foundations of curriculum	Presentation and discussion Chapter 3 & 4 of the textbook
4	課程設計與發展 Curriculum design and development	Presentation and discussion Chapter 6 & 7 of the textbook
5	國慶日National Day (Holiday)	–
6	課程實施與評量 Curriculum implementation and evaluation	Presentation and discussion Chapter 8 & 9 of the textbook
7	台灣光復節 Taiwan Restoration Day (Holiday)	–
8	科學課程分析：美國、英國The analysis of scientific curriculum: US, UK	Investigation and presentation
9	期中考試週 Midterm Exam	–
10	科學課程分析：美國、英國The analysis of scientific curriculum: US, UK	Investigation and presentation
11	科學課程分析：越南、臺灣The analysis of scientific curriculum: VN, TW	Investigation and presentation
12	科學課程分析：日本、南韓The analysis of scientific curriculum: JP, KR	Investigation and presentation
13	科學課程設計與實踐 1 Scientific curriculum design and practice 1	present your own curriculum design and demonstration, group discussion
14	臺灣科學教育年會（彰師大）ASET conference (NCUE)	–
15	科學課程設計與實踐 2 Scientific curriculum design and practice 2	present your own curriculum design and demonstration, group discussion
16	課程省思與回饋 Course reflection and feedback	group discussion and interaction
17	自主學習週Self-directed learning	–
18	期末考試週 Final Exam	–

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(含出缺席) General Performance (Attendance Record)	20%			✓	✓				
期中考成績 Midterm Exam	30%		✓	✓					
期末考成績 Final Exam	30%	✓		✓					
作業成績 Homework and/or Assignments	20%						✓		
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.)									
Ornstein, A. C., & Hunkins, F. P. (2017). Curriculum: Foundations, principles, and issues. Pearson Higher Ed.									
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)									