

國立中正大學課程大綱

National Chung Cheng University Syllabus

課號 course code	3408125	全英文授課 EMI	☐ yes ☒ no
課程名稱 (中文) course name (Chinese)	科學哲學與理論建構專題研究		
課程名稱 (英文) course name (English)	Seminar on Philosophy of Science and Theory Building		
學年 academic year /semester	2026 Fall	學分 credits	2 credits
學系 (所) department	Department of Adult and Continuing Education	必選修 required/selected	☐ required ☒ elective
上課時間 class hours	Tuesday, 9:10-11:00 a.m.	上課地點 classroom	College of Education Hall Building II 557 R
教師 instructor	Yu-Shu Chen	教師 email Instructor's email	tasmj3000@gmail.com
助教 teaching assistant	Pei-Yan Lin	助教 email TA's email	patty950715@gmail.com
先修科目或 先備能力 prerequisites	none		
課程概述 course descriptions	The science of philosophy is an interdisciplinary field that explores the philosophical foundations of science and the scientific method. Theory building is the systematic process of developing a set of concepts, relationships, and explanations that help us understand, interpret, and predict phenomena. Its purpose is to organize knowledge into a coherent structure that explains <i>why</i> things happen and <i>how</i> they are connected. This course aims to provide students with a comprehensive understanding of the relationship between science of philosophy and theory building, and how philosophical concepts shape scientific inquiry and theory building. The syllabus will cover various topics including the nature of scientific knowledge, the scientific methods, and theory building of social science.		
學習目標 learning objectives	On completion of this course the student should be able to: ● Understand the nature and scope of the science of philosophy and its relationship to scientific inquiry. ● Identify and describe the major historical developments and influential figures in the philosophy of science. ● Critically analyze and compare different philosophical perspectives on the nature of scientific knowledge, such as empiricism, rationalism, and falsifiability.		

	● Understand the role and importance of theories in academic disciplines and their contribution to knowledge advancement. ● Familiarize oneself with different perspectives of different schools of the science of philosophy and their implications for theory building.
教科書及參考書 textbooks and references	Textbook ● 陳瑞麟 (2010) 科學哲學：理論與歷史。群學。 ● 陳瑞麟 (2014) 科學哲學：假設的推理。五南。 ● Smith, K. G., & Hitt, M. A. (Eds.). (2005). Great minds in management: The process of theory development. OUP Oxford. References ● Brown, J. R. (2021). Philosophy of science: The key thinkers (2nd Ed.). Bloomsbury Academic. ● Dubin, R. (1969). Theory building (revised ed.). The Free Press ● Humphreys, P. (Ed.). (2019). The Oxford handbook of philosophy of science. Oxford University Press. ● Jaccard, J., & Jacoby, J. (2020). Theory construction and model-building skills: A Practical guide for social scientists. The Guilford Press. ● Reynolds, P. D. (1971). A primer in theory construction. The Bobbs-Merrill. ● Swanson, R. A., & Chermack, T. J. (2013). Theory building in applied disciplines. Berrett-Koehler Publishers. Journals ● Organizational Research Methods ● Psychological Bulletin ● Psychological Methods ● Sociological Methodology ● Sociological Methods and Research ● Structural Equation Modeling ● The Academy of Management Review Note: Please respect copyrights and intellectual property rights.

教學要點概述	
教材編選 teaching materials	☒ self-editing materials ☐ provided by the publisher ☐ others
教學方法 teaching method	☒ lecture ☒ small discussion ☐ practice and demo ☐ PBL ☐ case study ☐ online learning ☐ experiment ☐ others
評量方法 evaluation	☒ participation 40% ☐ quizzes 0% ☒ assignment 60% ☐ practice 0% ☐ midterm report 0% ☐ final report 30% ☐ midterm exam 0% ☐ final exam 0% ☐ project 0% ☒ Student can get extra credits by collecting stickers.

	Assignments ● Assignment 1 (10%): Please refer to the sample provided by the professor to create your own resume. ● Assignment 2 (20%): Collect qualifying exam questions from domestic and international universities (3 questions each) related to "philosophy of science and theory building" from the past 5 years (2021-2025). ● Assignment 3 (30): The core of Kuhn's scientific revolution lies in depicting the developmental process of scientific theories. Please select a creativity-related theoretical system and illustrate its scientific image using Kuhn's three-stage model of normal science, scientific crisis, and scientific revolution. Please include an appendix specifying the AI tools you used and the prompts you employed in your interactions with the AI. Classroom Rules ● Be punctual ● Be prepared ● Be engaged ● Make contributions to the happy learning climate.																		
教學資源 teaching resources	☒ eCourse 2 ☐ digital files ☐ the website of intern																		
與 SDGs 目標的關聯 related to objectives of SDGs	<table border="0"> <tr> <td>☐SDG 1 no poverty</td><td>☐SDG 2 zero hunger</td></tr> <tr> <td>☐SDG 3 good health and well-being</td><td>☒SDG 4 quality education</td></tr> <tr> <td>☐SDG 5 gender equality</td><td>☐SDG 6 clean water and sanitation</td></tr> <tr> <td>☐SDG 7 affordable and clean energy</td><td>☐SDG 8 decent work and economic growth</td></tr> <tr> <td>☐SDG 9 industry, innovation, and infrastructure</td><td>☐SDG 10 reduce inequalities</td></tr> <tr> <td>☐SDG 11 sustainable cities and communities</td><td>☐SDG 12 responsible consumption and production</td></tr> <tr> <td>☐SDG 13 climate action</td><td>☐SDG 14 life below water</td></tr> <tr> <td>☐SDG 15 life on land</td><td>☐SDG 16 peace, justice, and strong institution</td></tr> <tr> <td>☐SDG 17 partnerships for the goals</td><td>☐ not relevant</td></tr> </table>	☐ SDG 1 no poverty	☐ SDG 2 zero hunger	☐ SDG 3 good health and well-being	☒ SDG 4 quality education	☐ SDG 5 gender equality	☐ SDG 6 clean water and sanitation	☐ SDG 7 affordable and clean energy	☐ SDG 8 decent work and economic growth	☐ SDG 9 industry, innovation, and infrastructure	☐ SDG 10 reduce inequalities	☐ SDG 11 sustainable cities and communities	☐ SDG 12 responsible consumption and production	☐ SDG 13 climate action	☐ SDG 14 life below water	☐ SDG 15 life on land	☐ SDG 16 peace, justice, and strong institution	☐ SDG 17 partnerships for the goals	☐ not relevant
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教師 相關訊息 instructor's information	● Prof. Yu-Shu Chen ● University of Minnesota, Ph.D. (human resource development) ● Research interests: organizational creativity, creativity development, creative problem solving, human resource development, statistical methodology ● Office location: the 2nd College of Education Hall 557R ● Office hours: Tuesday, 12:10 to 13:00 p.m. ● Telephone: (05) 2720411 ext. 36114																		
每週課程內容 weekly scheduled contents																			
Week 1 (9/8) ● Topic: Introduction ● Readings: syllabus & handouts																			

Week 2 (9/15) ● Topic：科學哲學導論 ● Readings: 陳瑞麟（2010）chap 1 & handouts
Week 3 (9/22) ● Topic：邏輯實證論及邏輯經驗證論 ● Readings: 陳瑞麟（2010）chap 2 & handouts
Week 4 (9/29) ● Topic：Popper's 否證論 ● Readings: 陳瑞麟（2010）chap 3 & handouts
Week 5 (10/6) ● Topic：Kuhn's 科學革命 ● Readings: 陳瑞麟（2010）chap 4 & handouts
Week 6 (10/13) ● Topic：Lakatos' 研究方案方法論及 Feyerabend's 科學無政府主義 ● Readings: 陳瑞麟（2010）chap 5 & handouts
Week 7 (10/20) Topic：Laudan's 研究傳統及 Longino's 女性主義科哲論價值 Readings: 陳瑞麟（2010）chap 6 & handouts
Week 8 (10/27) ● Topic：科學實在論及批判實在論 ● Readings: 陳瑞麟（2010）chap 7、黃光國(2013)chap 20 & handouts
Week 9 (11/3) Topic: The Midterm Exam Readings: handouts
Week 10 (11/10) ● Topic：社會中的科學 ● Readings: 陳瑞麟（2010）chap 8 & handouts
Week 11 (11/17) ● Topic：科學模型的認知與演化 ● Readings: 陳瑞麟（2010）chap 9 & handouts
Week 12 (11/24) ● Topic：理論建構 ● Readings: Dubin (1969) theory building
Week 13 (12/1) ● Topic:建構理論發展的理論 ● Readings: Mintzberg in Smith & Hitt (Eds.) (2005) chap 17 & handouts
Week 14 (12/8) ● Topic:社會科學的理論建構 ● Readings: 陳曉萍等人(2019) chap 3 & handouts
Week 15 (12/15) ● Topic：理論典範轉移：參觀美術展。 ● Readings: & handouts
Week 16 (12/22) ● Topic: The Final Exam

● Readings: & handouts

Week 17 (12/29)

- Topic: Self-directed learning
- Readings: handouts

Week 18 (1/5)

- Topic: Self-directed learning
- Readings: handouts

成教所核心能力
core competencies of ACE

Core competency		Degrees of related to core competency				
		1	2	3	4	5
Specific competency	Project planning	V				
	Teaching development		V			
	Talent development		V			
	Organizational management		V			
Competence	Communication				V	
	Problem solving				V	
	Inter-discipline cooperation	V				
	Creative thinking	V				
	Critical thinking			V		
	International vision				V	
	Wisdom technology			V		