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國立高雄科技大學
NATIONAL KAOHSIUNG
UNIVERSITY OF SCIENCE
AND TECHNOLOGY

授課大綱 Syllabus

部別：日間部四技

112學年度第2學期

列印日期：2024/03/08

中文課程名稱：校訂(六)創意與創新	英文課程名稱：Creativity and Innovation	授課教師：陳怡君
開課班級：博雅四技一甲(第	學分：2.0	授課時數：2.0
合班班級：		實習時數：0.0

1. 中文教學目標(Chinese Teaching objectives)

教育部於2003年公布的創造力教育白皮書中，即提及創造力與創新能力之培育，是提升國民素養的關鍵，伴隨著二十一世紀邁向創新知識經濟時代的來臨，創造力教育應成為通識教育工作之推動重點。基於此理念而規劃之『創意與創新』通識核心課程，即以啟發學生創造力為核心教育理念，「創造力」包含了創意的發想及實踐的歷程，因此本課程內容涵蓋了創造力理論的認識、創意思考法的介紹與演練、以及各學識領域(包括科學、視覺藝術、音樂、表演藝術與設計…等)創造活動的探究與分析。冀望透過創意思考法的引用，幫助學生建立創意發掘與問題解決之思維與能力，透過課程活動的執行或動手實作的安排，培養學生具備探索、獨立思考態度與創新精神，鼓勵以團隊合作方式展現創造力，啟發學生創新創業的動機及潛能。

2. 英文教學目標(English Teaching objectives)

In the Innovation Education White Paper announced by the Ministry of Education in 2003, creativity and creative capability is the key to improve national literacy. With the advent of the 21st century towards the era of innovative knowledge economy, creativity education should become the focus of general education. Based on this concept, the "Creativity and Innovation" general education core curriculum is planned, that is, to inspire students' creativity as the core educational philosophy. "Creativity" includes the process of creative thinking and practice, so the content of this course covers the understanding of creativity theory, the introduction and practice of creative thinking, and the exploration and analysis of creative activities in various academic fields (including science, visual arts, music, performing arts and design... etc.). Through the implementation of creative thinking, students may discover their creativity and build up capabilities to solve problems. Through the implementation of course activities or hands-on arrangements, students will be able to cultivate their exploration, independent thinking attitude and innovative spirit, and encourage teamwork to demonstrate creativity and to foster in students motivation and potential for innovation and entrepreneurship. Focus of this course is creativity as well as cross-disciplinary integration and innovation, students with creative and innovative minds nowadays shall be well prepared with skills to manage creativity, innovation and technologies to meet challenges in career. This course is about the development and management of creativity and innovation. It will be taught in English and students will be prepared for future career with knowledge of creativity and innovation. At the same time, students will develop their innovative ideas step by step and deliver a proposal for creative product/service. This proposal may be submitted to the on-campus contest of "Innovative Idea Competition." "It is not enough for a firm to be innovative - to be successful it must innovate better than its competitors." Creativity and innovation come from both aesthetic and pragmatic appeals, and it requires realization of ideas and profiting from those great ideas.

3. 中文教學綱要(Chinese CourseDescription)

本課程包含:創意與創新理論與創意思維、創意思考法的介紹與演練以及創意思考在各領域的應用與案例分析。其綱要如下:(1)創意熱身階段:透過創意理論的介紹與創意思考法的引用，幫助學生建立創意發掘與問題解決之思維與技術。(2)創見探索階段:透過科技領域創造活動的介紹，幫助學生理解與分析科技創造產生之歷程。(3)創新發展階段:透過課程活動的執行，幫助學生發展創造力，過程強調構想與成果的可行性、創意性與完整度。

4. 英文教學綱要(English CourseDescription)

This course includes: creativity and innovation theory and creative thinking, introduction and exercise of creative thinking, and application and case analysis of creative thinking in various fields. The outline is as follows: (1) Creative warm-up stage: students will establish thinking and techniques for creative discovery and problem solving through the introduction of creative theories and the citation of creative thinking. (2) Creative exploration stage: students will understand and analyze the process

of technological creation through the introduction of creative activities in the field of science and technology. (3) Innovative development stage: students will develop creativity, the process emphasizes the feasibility, creativity and completeness of ideas and results through the implementation of curriculum activities.

無中文核心能力資料。

無英文核心能力資料。

7. 教科書

中文書名：Strategic Management of Technological Innovation 英文書名：Strategic Management of Technological Innovation 英文書名：Strategic Management of Technological Innovation 英文書名：Strategic Management of Technological Innovation

- 1 中文作者：Schilling, M. A. 英文作者：Schilling, M. A.
 中文出版社：McGraw Hill, Singapore. 英文出版社：McGraw Hill, Singapore.
 出版日期：年 月 備註：

8. 參考書

- 中文書名：創新與創業精神 英文書名：
 中文作者：蕭富峰、李田樹譯 英文作者：
 1 中文出版社：天下 英文出版社：
 出版日期：年 月 備註：

9. 教學進度表

週次或項目 Week or Items	中文授課內容 Chinese Course Content	英文授課內容 English Course Content	分配節次 Assigned Classes	備註 Note
Week 1	導論 發現問題	Introduction What's a problem?		If necessary to use Google Meet, here's the link: meet.google.com/wny-yizc-mgb .
Week 2	創意發想競賽及分類介紹 創意案例	Introduction to "Innovative Ideas Competition" and categories; Innovation examples		If necessary to use Google Meet, here's the link: meet.google.com/wny-yizc-mgb .
Week 3	破冰：自我介紹與組成小組/ 尋找創意案例	Ice breaking: Self introduction and group building Looking for examples of innovative ideas		The importance of technological innovation 1-5 LifeStraw®, Java Jackets®, Freshmax NZ Ltd. avocado sticker
Week 4	創新活動 實作：AEIOU使用者調查 (Empathy map)	Innovative activities Practice: AEIOU user analysis with mind mapping (Empathy map)		Overview pp. 19-23 Innovative idea generation; Problems in daily life
Week 5	開放觀課 產生創新想法 心智圖法試作	Generating creative ideas Method of mind mapping		Translating creativity into innovation pp. 24-32 Solutions for daily life

Week 6	市場調查與分析 創新提案 - 20種/5種方案	Market analysis Proposal of 20/5 innovative ideas	Types of innovation, pp. 46-50
Week 7	價值主張 篩選最佳提案	Value proposition Screening best innovative solutions	
Week 8	創意產品概念發展	Prototype concept development	
Week 9	期中簡報及提案	Mid-term presentation and proposal delivery for on-campus “Innovative Ideas Competition”	
Week 10	產品技術探討	Technologies and new products	
Week 11	小組報告：什麼是電腦？	Group presentation: What is a computer?	In-class test
Week 12	創新案例 一	Innovation case study 1	“Clean Meat” pp. 15-18; The Chotukul Project pp. 43-45
Week 13	標準、模組及平台	Standards Battles, Modularity, and Platform Competition	A battle for dominance in mobile payment pp. 67-70
Week 14	創新案例 二	Innovation Case study 2	UberAIR pp. 95-97
Week 15	Google的組織與創新	Organizing for innovation at Google	Google pp. 225-226
Week 16	創新案例 三	Innovation Case study 3	Tesla pp. 115-121
Week 17	創新與創業管理	Innovation management Entrepreneurship management	Managing the new product development pp. 249-251
Week 18	期末簡報	Final presentation	

10. 中文成績評定(Chinese Evaluation method)

出席：20%，期中報告：30%，課堂練習及作業：20%，期末簡報：30%。

11. 英文成績評定(English Evaluation method)

Class attendance: 20%, Mid-term presentation: 30%, In-class discussion and work: 20%, Final presentation: 30%

12. 中文課堂要求(Chinese Classroom requirements_)

1. 參與課堂討論及個案研究
2. 期中、期末簡報

13. 英文課堂要求(English Classroom requirements_)

1. Join in-class discussion and case studies.
2. Do the mid-term and final presentations.

14. 本課程與SDGs相關項目(This course is relevant to these of SDGs as following_)

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