

淡江大學 99 學年度第 1 學期課程教學計畫表

課程名稱	科學研究	授課 教師	林秋助 Lin Chhiu-tsu
	SCIENTIFIC RESEARCH		
開課系級	理共同科－碩 A	開課 資料	選修 單學期 2學分
	TGSXM0A		
學系(門)教育目標			
<p>一、傳授專業知識。</p> <p>二、增進表達能力。</p> <p>三、培養團隊精神。</p> <p>四、落實自我實現。</p> <p>五、培養國際視野。</p>			
學生基本能力			
<p>A. 熟悉科學領域基本核心知識。</p> <p>B. 培養發掘問題，分析問題及解決問題的基本能力。</p> <p>C. 具有團隊合作的精神與能力。</p> <p>D. 透過國際交流，培養國際觀。</p>			
課程簡介	see English version		
	<p>Scientific Research: Ethics, Safety, and Productivity. This “Scientific Research” course will discuss ethics &amp; code of conduct, laboratory safety, scientific productivity. The course objective is designed to assist graduate (and/or undergraduate research) students and faculty in the College of Sciences at TKU to enhance their scientific research productivity. The one-on-one arrangement will be made to review, correct, and revise the scientific papers from faculty and students.</p>		

本課程教學目標與目標層級、學生基本能力相關性

一、目標層級(選填)：

- (一)「認知」(Cognitive 簡稱C)領域：C1 記憶、C2 瞭解、C3 應用、C4 分析、C5 評鑑、C6 創造
- (二)「技能」(Psychomotor 簡稱P)領域：P1 模仿、P2 機械反應、P3 獨立操作、P4 聯結操作、P5 自動化、P6 創作
- (三)「情意」(Affective 簡稱A)領域：A1 接受、A2 反應、A3 重視、A4 組織、A5 內化、A6 實踐

二、教學目標與「目標層級」、「學生基本能力」之相關性：

- (一)請先將課程教學目標分別對應前述之「認知」、「技能」與「情意」的各目標層級，惟單項教學目標僅能對應C、P、A其中一項。
- (二)若對應「目標層級」有1~6之多項時，僅填列最高層級即可(例如：認知「目標層級」對應為C3、C5、C6項時，只需填列C6即可，技能與情意目標層級亦同)。
- (三)再依據所訂各項教學目標分別對應該系「學生基本能力」。單項教學目標若對應「學生基本能力」有多項時，則可填列多項「學生基本能力」(例如：「學生基本能力」可對應A、AD、BEF時，則均填列)。

序號	教學目標(中文)	教學目標(英文)	相關性	
			目標層級	學生基本能力
1	See English version	Becoming a successful scientist, do good research works, and be productive scientifically	P6	ABCD

教學目標之教學策略與評量方法

序號	教學目標	教學策略	評量方法
1	See English version	課堂講授、分組討論	報告、討論

授課進度表

週次	日期	內容 (Subject/Topics)	備註
1	09/13	How to read and write a scientific research paper	Lecture and discussion
2	09/20	How to write a publishable paper	Lecture and discussion
3	09/27	How to write a publishable paper	Lecture and discussion
4	10/04	How to revise a submitted paper	Lecture and discussion
5	10/11	The important of research (scientific research and design is a multifaceted course designed to stimulate interest in various fields and offers the student the opportunity to pursue a topic of personal interest).	Student presentation and discussion
6	10/18	What are some importance of science and technology in the field of industry (Science discovers the technology that moves industry into the future).	Student presentation and discussion
7	10/25	Becoming a successful scientist (Albert Einstein: Never forget that the fruits of our work are not final in themselves).	Student presentation and discussion

8	11/01	Research and technology development (R&D refers to creative work undertaken on a systematic basis in order to increase the stock of knowledge to devise new applications).	Student presentation and discussion
9	11/08	Research methods and techniques (Scientific method refers to a body of techniques for investigating phenomena, acquiring new knowledge, or correcting and integrating previous knowledge).	student presentation and discussion
10	11/15	Midterm Exam: start to edit a publishable volume for our lecture note	meeting with students, participants and a selected publisher
11	11/22	Research laboratory safety (Report to the Chancellor on UCLA laboratory safety)	Student presentation and discussion
12	11/29	Research notebook guidelines (Invention rights can easily be lost without a good research notebook).	Student presentation and discussion
13	12/06	Science – ethics & code of conduct (Chemists should seek to advance chemical science, respect the truth, and maintain integrity in all conduct; the scientific misconduct, such as fabrication, falsification and plagiarism will be discussed).	Student presentation and discussion
14	12/13	Ten secrets to giving a good scientific talk (Persuasive, instructional, and informative)	Student presentation and discussion
15	12/20	Writing a good grant proposal (Make sure that the first page acts as a stand-alone summary of the entire proposal – one of the two Golden Rules)	Student presentation and discussion
16	12/27	Patents and patentable research (The world before and after Bayh-Dole).	Student presentation and discussion
17	01/03	Creation of university spin-off company (University spin-offs: opportunity or challenge?).	Student presentation and discussion
18	01/10	Final Exam: Production of a final version of our lecture note for publication	all students and attendants
修課應 注意事項			
教學設備	電腦、投影機		
教材課本	Lecture note and internet references		
參考書籍	Internet search		
批改作業 篇數	篇 (本欄位僅適用於所授課程需批改作業之課程教師填寫)		
學期成績 計算方式	◆平時考成績：           %   ◆期中考成績：           %   ◆期末考成績：           % ◆作業成績：           % ◆其他 〈presentation, partic〉 : 100.0 %		

備 考

「教學計畫表管理系統」網址：<http://info.ais.tku.edu.tw/csp> 或由教務處  
首頁〈網址：<http://www.acad.tku.edu.tw/index.asp/>〉教務資訊「教學計畫  
表管理系統」進入。

**※非法影印是違法的行為。請使用正版教科書，勿非法影印他人著作，以免觸法。**