



國立中興大學教學大綱(Syllabus)-研究所

系務會議通過修訂日期：2010/1/13
updated: 2012/02/15

課程名稱 (course name)	(中) 科技論文寫作 (N94047)				
	(Eng.) Technical Writing				
開課系所班級 (dept. & year)	材料科學與工程學系碩士 在職專班一年級 (Dept. of Mat. Sci. & Eng., Master-Professional Program)	學分 (credits)	3	授課教師 (teacher)	顏秀崗教授 (Prof. S.K.Yen)
課程類別 (course type)	<input type="checkbox"/> 必修(Mandatory) <input checked="" type="checkbox"/> 選修(Elective)	授課語言 (language)	中文 (Chinese)	開課學期 (semester)	下學期 (Spring)
課程目標 (course objectives)	(中) 本課程提供學生撰寫科技論文的指導方針。課程設計以初次撰寫碩士論文的工學學生為對象。課堂當中教師將指導學生練習寫作、指出其中錯誤並帶領討論。				
	(Eng.) The course is to provide some guidelines on scientific writing for those who are concerned. The design of this course is particularly oriented for the students in engineering who are just about to write their theses. The teacher instructs students in writing practice, points out common mistakes made by students and leads discussions in the class.				
課程簡述 (course description)	(中) 本課程先教導撰寫科技論文前必須完成的準備事項。介紹論文的基本架構與必備單元。閱讀樣本文章並製作研究記錄。練習文章各單元的書寫，掌握其關鍵架構。訓練文法、語法與書寫技巧，如段落分配、文體選擇、冠詞用法、語態時態以及標題擬定、等等。學習引用文獻的技巧與撰寫致謝。最後知道修改校正論文的方法，以期學生能概念清晰又不失學術深度地完成論文報告。				
	(Eng.) The items of preparation for writing technical thesis are taught at first in this course. The basic framework and essential units of a thesis are introduced. Article samples are to read and research books are to minute. Students practice composing each unit and learn grasping the key framework. Student are trained in grammar, syntax and writing skills, e.g. parceling paragraph, selecting style, applying article, voice and tense, and drafting title, etc. Students also learn citing references and writing acknowledgements. Finally, the methods of emendating thesis are to know. It is expected that students can accomplish their theses not only with conceptual clarity but also with academic profundity.				
先修課程(prerequisites)					
課程名稱 (course name)		與課程銜接的重要概念、原理與技能 (relation to the current course)			
教學模式 (teaching methodology) 【請勾選】	講授 (teaching)	討論/報告 (discussion & report)	實驗/參訪 (exp./fab visit)	遠距/網路教學 (remote/web teaching)	
	V	V			

授課進度與內容 (週次、單元名稱與內容、習作/考試進度、備註) (course content and homework/tests schedule)			
週次 (week)	單元名稱與內容 (subject and content)	習作/考試進度 (homework and tests)	備註 (remark)
01	科技論文寫作之程序 Process in technical writing	依隨堂進度習作	
02	有效組織知識與訊息 Organizing information	依隨堂進度習作	
03	研究論文之基本要素 Fundamental elements of research papers	依隨堂進度習作	
04	簡介單元樣本文章之閱讀與寫作練習 Samples of introduction and relevant	依隨堂進度習作	
05	writing practices	依隨堂進度習作	
06	材料與方法單元樣本文章之閱讀與寫作 練習	依隨堂進度習作	
07	Samples of material & method and relevant writing practices	依隨堂進度習作	
08	提案及可行性之研究 Proposals and feasibility studies	期中報告	
09		期中報告	
10	結果單元樣本文章之閱讀與寫作練習 Samples of results and relevant writing	依隨堂進度習作	
11	practices	依隨堂進度習作	
12	討論單元樣本文章之閱讀與寫作練習 Samples of discussion and relevant	依隨堂進度習作	
13	writing practices	依隨堂進度習作	
14	摘要單元樣本文章之閱讀與寫作練習 Samples of abstract and relevant writing	依隨堂進度習作	
15	practice	依隨堂進度習作	
16		依隨堂進度習作	
17	結論單元樣本文章之閱讀與寫作練習 Samples of conclusion and relevant	期末報告	
18	writing practices	期末報告	
學習評量方式 (evaluation)			
寫作作業 (包含課後寫作練習與樣本文章分析) 30%			
期中報告 30%			
期末報告 30%			
出席 (討論) 10%			
教科書&參考書目 (書名、作者、書局、代理商、說明) (textbook & other references)			
教科書 Textbook			
William S. Pfeiffer, " <i>Technical writing :a practical approach, 5th ed</i> " , Prentice Hall , 2003			
參考論文與書籍 References			
1. Han-Chang Liu and Shiow-Kang Yen *, 2007, "Characterization of Electrolytic Co ₃ O ₄ Thin Films as Anodes for Lithium Ion Batteries, J. Power Sources, Vol. 166, P.478-484.			
2 Han-Chang Liu, Wen-Hsien Ho, Ching-Fei Li, and Shiow-Kang Yen , (2008). "Electrochemical Synthesis of FePO ₄ for Anodes in Rechargeable Lithium Batteries" <i>Journal of The Electrochemical Society</i> , 155 (12)E178-E182			

3. W. H. Ho, C. F. Li, H. C. Liu, **S. K. Yen**, “Electrochemical performance of In₂O₃ thin film electrode in lithium cell”, 2008, Journal of Power Sources, Vol. 175, P.897-902.
4. C. T. Hsu, C. F. Li, **S. K. Yen**, “Effects of Electrolytic Y₂O₃ and YAG Coatings on Oxidation and Corrosion of IN617 Superalloy”, 2009, J. Electrochem. Soc. Vol. 156 (1)
5. C. F. Li, W. H. Ho, **S. K. Yen**, “Effects of Applied Voltage on Morphology and Crystal Orientation of Mg(OH)₂ Coating on Pt by Electrochemical Synthesis”, Journal of The Electrochemical Society, 156 (2) E29-E34, 2009
6. Ching-Fei Li, Wen-Hsien Ho, Chi-Sheng Jiang, Chien-Chang Lai, Ming-Jia Wang, **Shiow-Kang Yen** “Electrolytic Sn/Li₂O coatings for thin-film lithium ion battery anodes”, Journal of Power Sources 196 (2011) 768 - 775
7. Chi-Chuan Yang, Chiang-Yu Huang, Chien-Chung Lin, and **Shiow-Kang Yen** “Electrolytic Deposition of Collagen/HA Composite on Post HA/TiO₂ Coated Ti6Al4V Implant Alloy”, J. Electrochem. Soc., Volume 158, Issue 2, pp. E13-E20 (2011)
8. Ching-Fei Li, Ming-Jia Wang, Wen-Hsien Ho, Hui-Nien Li, and **Shiow-Kang Yen** “Effects of Electrolytic MgO Coating Parameters on Corrosion Resistance of AZ91D Magnesium Alloy”, *Journal of The Electrochemical Society*, 158 _2_ C11-C16 _2011_
9. Chi-Chuan Yang, Chien-Chung Lin, and **Shiow-Kang Yen** “Electrochemical Deposition of Vancomycin/Chitosan Composite on Ti Alloy”, *Journal of The Electrochemical Society*, 158 (12) E152-E158 (2011)
10. “科學論文寫作與發表”，潘振澤著，藝軒圖書出版,2001
11. “科學論文寫作：包括學期報告及學位論文”，傅祖慧著，藝軒圖書出版,2003
12. “如何撰寫及發表科技論文”，Robert A. Day, 藝軒圖書出版,2002
13. “撰寫博碩士論文實戰手冊”，朱浚源主編，正中書局 1999
14. “中英論文寫作綱要與體例：研究報告與英文書信規範”，葉乃嘉著，五南圖書出版社, 2005
15. “寫作與表達-e世代求學與職場的祕笈”，羅欽煌著，金華書局, 2002
16. “學術論文寫作”，王貳瑞，東華書局, 2002
17. “研究方法”，張紹勳，滄海書局
18. “研究方法與論文寫作”，葉至誠、葉立誠,商鼎出版 ,1999
19. “精通科技論文(報告)寫作之捷徑 (An English style approach for Chinese technical writers), 柯泰德(Knoy Ted), 華香園, 1998
20. 芝加哥大學寫作手冊 (A Manual for Writers of Term Papers, Theses, and Dissertation)
21. “Technical Writing – A Practical Approach”, 5th edition, by Pfeiffer, Prentice Hall.
- Weissberg, R. & Buker, S. *Writing up Research: Experimental Research Report Writing for Students of English*. Prentice-Hall Inc, 1990.
22. Julie M. Zeleznik, *Technical writing: what it is and how to do it*, New York: LearningExpress, 1999.
23. Marilyn Schauer Samuels, *The technical writing process*, New York: Oxford University Press, 1989.
- Brian R. Holloway 作，陳蘋琪、許瑜芳譯，技術英文寫作導論，臺北市，臺灣培生教育，2004.

課程教材 (教師個人網址請列在本校內之網址。)(teaching aids & teacher's website)

E-Mail : skyen@dragon.nchu.edu.tw
個人網址 : audi.nchu.edu.tw/~skyen/

課程輔導時間
(office hours)

每星期五晚上 2100~2300 或網路 e-mail 課程討論與輔導



與學系教育目標之關聯性(材料系)
(relation to educational objective of materials engineering department)

1. 提供材料性質、製程與應用及跨領域知識與訓練
To provide interdisciplinary know-how and training on materials properties, processing, and applications
2. 培育具獨立思考、創新與實作能力之材料科技人才
To train materials technology students for independent thinking, innovation, and practical skills
3. 培養團隊合作精神與溝通協調整合能力
To cultivate the spirit of teamwork and the capacity of integrated cooperation
4. 建立多元價值與國際觀
To inculcate multifarious values and cosmopolitan worldview
5. 強化綠色材料科技教育
To implement educational programs in eco-materials technology

與學系教育核心能力之關聯性(材料系)
(relation to educational core abilities for materials engineering department)

- (A) 特定材料之專業知識
Specialized knowledge in Materials science and Engineering
- (B) 策劃及執行專題研究之能力
Ability to plan and execute a research project
- (C) 撰寫專業論文之能力
Ability to write journal articles
- (D) 創新思考及獨立解決問題之能力
Ability to do innovative thinking and independent problem solving
- (E) 跨領域協調整合之能力
Ability to work in an interdisciplinary setting
- (F) 國際觀及綠色材料意識
A fine international scope and general concept of eco-material
- (G) 領導、管理及規劃之能力
Ability in leadership, management, and organization
- (H) 終身自我學習成長之能力
Ability for life-long learning
- (I) 學術專業倫理
Professional ethics in Science and Engineering

課程內涵達成學系【核心能力】比對資料(研究所)

授課進度與內容	核心能力								
	A 特定材料之專業知識	B 策劃及執行專題研究之能力	C 撰寫專業文能	D 創新思考及獨立解決問題之能力	E 跨領域調整之能力	F 國際觀及綠色材料意識	G 領導、管及劃能	H 終身自我學習成長之能力	I 學術專業倫理
請勾選關聯性 <input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
課程簡介與方向	1	0	1	0				1	1
科技論文寫作之基礎	0	0	1	1				1	0
研究論文之組織	0	1	1	1				1	0
簡介單元樣本文章之閱讀與寫作練習(4週)	0	0	1	1				1	0
材料與方法單元樣本文章之閱讀與寫作練習(2週)	1	1	1	1				1	0
結果單元樣本文章之閱讀與寫作練習(3週)	1	0	1	1				1	0
討論單元樣本文章之閱讀與寫作練習及期末報告(4週)	1	0	1	1				1	1
摘要單元樣本文章之閱讀與寫作練習及期末報告(2週)	0	0	1	1				1	1
總計(%)	50%	11%	100%	88%				100%	38%

- 註：
1. 所有必修課均須填寫此表。
 2. 矩陣中請填入關聯性； 1 表示相關，0 表示無相關。