

No. 編號	Department 開課系所	Course Code 課號	Course Title 科目名稱	Required/ Elective 必修/ 選修	Credit Points 學分 數	Instructor 授課老師	Weekly 每週上課節次					Classroom 上課教室	Course Plan 課程 計畫
							Mon	Tue	Wed	Thu	Fri		
1	Master's Program, Department of Mechanical and Comuter-aided Engineering (機械與電腦輔助 工程系碩士班)	0010	Special Topics on Metal Forming 金屬成形特論	Elective 選修	3	Li-Wei Chen 陳立緯				5-7		(AME0209) Seminar Room I, Mechanical engineering Building 2F 機械工程館 2F AME0209 第一專題研討 室	<u>Course Plan</u>
2	Department of Mechanical Design Engineering (機械設計工程系 碩士班)	0248	Mechanical Vibrations 機械振動學	Elective 選修	3	Hwang , Yunn-Lin 黃運琳		2-4				(BGA0810) Multi-Purpose Engineering Bldg., Computer Aided Design Lab.8F 綜合工程一館 8F BGA0810 電腦輔助設計 室	<u>Course Plan</u>
3	Department of Precision Mechanical Engineering	2654	P-TECH Course (5) P-TECH 課程 (五)	Elective 選修	1	Mao , Yen-Chieh 毛彥傑			7			(BGA0901) Multi-Purpose Engineering Bldg.,	<u>Course Plan</u>

	(精密機械工程科 五專)											Conference Hall 9F 綜合工程一館 9F BGA0901 國際會議廳	
4	Doctoral Program in Mechanical and Electro-Mechanical Engineering, Department of Power Mechanical Engineering (動力機械工程系 博士班)	2689	Dynamics of Multibody Systems 多體動力學	Elective 選修	3	Hwang, Yunn-Lin 黃運琳			2-4			(AIA0201) Information Building 2F ordinary classroom 資訊大樓 2F AIA0201 普通 教室(10301 起 工程學院電腦 教室)	<u>Course Plan</u>
5	Master's Program, Department of Automation Engineering (自動化工程系碩 士班)	0055	Autonomous Unmanned Vehicle System 自動化無人載 具系統	Elective 選修	3	LI ,MENG TSE 李孟澤	5-7					(BGA0340) Seminar Room 3F, Building One, Campus Two 綜合工程一館 3F 研討室	<u>Course Plan</u>
6	Master's Program, Department of Automation Engineering (自動化工程系碩 士班)	0054	Application for Digital Image Processing 數位影像處理 實務	Elective 選修	3	Lee ,Kuang-Chyi 李廣齊			7-9			(BGA0330) Computer-aided Engineering Lab 3F, Building One, Campus	<u>Course Plan</u>

												Two 綜合工程一館 3F 電腦輔助工 程實驗室	
7	Master's Program in Aeronautical and Electronic Engineering, Department of Aeronautical Engineering (飛機工程系碩士 班)	0306	Flight Safety 飛航安全	Elective 選修	3	Wang, Shih-Chia 王士嘉		5-7				(ATB0502) Phase II Teaching Building 5F ATB0502 ordinary classroom 第二期教學大 樓 5F ATB0502 普通 教室	<u>Course Plan</u>
8	Department of Electrical Engineering (電機工程系)	7266	Science and Technology English 科技英文	Elective 選修	3	Sen-Tung Wu 吳森統	10-12					EE building, Lighting laboratory 電機館 1F BEE0105 照明 實驗室	<u>Course Plan</u>
9	Master's Program, Department of Electrical Engineering (電機工程系碩士 班)	0133	FPGA Circuits Design FPGA 電路設計	Elective 選修	3	SUN, CHI-CHIA 宋啟嘉			2-4			BEE0502; Network Application and Chip Design Lab. 5F, Electrical 電機館 5F	<u>Course Plan</u>

												BEE0502 網路 應用與晶片設 計實驗室	
10	Master's Program, Department of Electrical Engineering (電機工程系碩士 班)	0138	Embedded Systems 嵌入式系統	Elective 選修	3	SU, HUI-KAI 蘇暉凱	5-7					BEE0402; Intelligent Electronic and Application Lab. 4F, Electrical Engineering Building 電機館 4F BEE0402 智慧 電子應用實驗 室	<u>Course Plan</u>
11	Department of Electro-Optical Engineering (光電工程系)	1138	Photonic detection 光電檢測	Optional 選修	3	Huang, Hung Ji 黃鴻基	3		7-8			(ATD0704) Phase 4 Teaching Building 7F 第四期教學大 樓 7F ATD0704 普通 教室	<u>Course Plan</u>
12	Master's Program, Department of Computer Science and Information Engineering (資訊 工程系碩士班)	0118	Internet of Things 物聯網	Elective 選修	3	JIAN,MING-SHEN 簡銘伸	7-9					(BGC0614) The 3rd Assembly Building 6F e-Learning Lab. 綜合工程三館 6F BGC0614	<u>Course Plan</u>



												Bioinformatics Lab. 綜合工程三館 5F BGC0513 生物資訊實驗室	
15	Department of Computer Science and Information Engineering (資訊工程系)	2079	Microprocessor 微處理機	Required 必修	3	CHEN,KUO-YI 陳國益				7-9		(BGC0601) The 3rd Assembly Building 6F IC Desing Lab. 綜合工程三館 6F BGC0601 IC 設計實驗室	<u>Course Plan</u>
16	Department of Computer Science and Information Engineering (資訊工程系)	2078	Operation System 作業系統 (三甲)	Required 必修	3	HUANG,SHIH-CHANG 黃世昌		5-7				(BGC0601) The 3rd Assembly Building 6F IC Desing Lab. 綜合工程三館 6F BGC0601 IC 設計實驗室	<u>Course Plan</u>
17	Master's Program, Department of Computer Science and Information Engineering (資訊工程系碩士)	0126	Big Data Analysis 巨量資料分析	Elective 選修	3	JIANG,JI-HAN 江季翰			5-7			(BGC0501) The 3rd Assembly Building 5F Basic electricity and	<u>Course Plan</u>

	班)											professional certification Lab. 綜合工程三館 5F BGC0501 基本電學與證 照實驗室	
18	Master's Program, Department of Computer Science and Information Engineering (資訊工程系碩士 班)	0124	Machine Learning 機器學習	Elective 選修	3	LIN, WU-CHIEH 林武杰				2-4		(BGC0305) Embedded System Software Design Lab. 綜合工程三館 3F BGC0305 嵌入式系統軟 體實驗室	<u>Course Plan</u>
19	Department of Electronic Engineering (電子工程系)	1822	Introduction to Electronic Engineering 電子工程導論	Elective 選修	3	Yu-Sung Liu 劉育松		5,6		2		(AME0406) Lab 3, Building of Mechanical Engineering 4F 機械工程館 4F AME0406 物理實驗室 (三)	<u>Course Plan</u>
20	Master's Program in Industrial Engineering and Management,	0328	Quantitative Research Methodology 數 量研究方法	Required 必修	3	Chao, Wei-Cheng 趙偉成	5-7					Business Intelligence Room (CMA0305)	<u>Course Plan</u>

	Department of Engineering and Management (工業管理系工業工程與管理碩士班)											Applied Arts, Sciences and Management Building 3F 文理暨管理大樓 3F CMA0305 企業智慧教室	
21	Master's Program in Industrial Engineering and Management, Department of Engineering and Management (工業管理系工業工程與管理碩士班)	0330	Data Mining 資料探勘	Elective 選修	3	Ying -Lien Lee 李英聯					5-7	Business Intelligence Room (CMA0305) Applied Arts, Sciences and Management Building 3F 文理暨管理大樓 3F CMA0305 企業智慧教室	<u>Course Plan</u>
22	Master's Program in Industrial Engineering and Management, Department of Engineering and Management (工業管理系工業工程與管理碩士班)	0329	Simulation 模擬學	Elective 選修	3	Hu ,Chih -Hsiung 胡智熊			2-4			Business Intelligence Room (CMA0305) Applied Arts, Sciences and Management Building 3F 文理暨管理大樓 3F CMA0305 企業智慧教室	<u>Course Plan</u>



	工程與管理碩士 班)											理 暨管理大 樓 3F CMA0305 企 業智慧教室	
23	Master's Program in Industrial Engineering and Management, Department of Engineering and Management (工業管理系工業 工程與管理碩士 班)	2710	Sustainable Engineering and Management 永續工程與管 理	Elective 選修	3	Li, Meng-Hua 李孟樺				7-9		Seminar RoomI (CMA0211) Applied Arts, Sciences and Management Building 3F 文 理 暨管理大 樓 2F CMA0211 專業教室I	<u>Course Plan</u>
24	Institute of Information Management (資訊管理系碩士 班)	0100	Introduction to Business Intelligence 商業智慧	Electives 選修	3	Yung-Tsung Hou 侯雍聰	5-7					(CMA0407) , Applied Arts, Sciences and Management Building 4F 文理暨管理大 樓 4F CMA0407 智慧應用電腦 教室	<u>Course Plan</u>
25	Institute of Information Management (資訊管理系碩士 班)	0103	ETL and Modeling of Big data  大數據彙整與 建模	Electives 選修	3	Nian-Ze Hu 胡念祖					2-4	(CMA0405) , Applied Arts, Sciences and Management Building 4F 文理暨管理大 樓 4F CMA0405 多媒體電腦教 室	<u>Course Plan</u>

26	Institute of Information Management (資訊管理系碩士班)	0096	Seminar on Information Management(1) 資訊管理專題研討(一)	Electives 選修	3	Yen-Kun Lin 林彥昆		3,4				(CMA0614) ., Applied Arts, Sciences and Management Building 6F 文理暨管理大樓 6F CMA0614 企業電子化實驗室	<u>Course Plan</u>
27	Information Management (資訊管理系大學部)	2504	Social Network Analysis 社群網路分析	Electives 選修	3	Yi-Shih Lo 羅亦斯	2-4					(CMA0407) , Applied Arts, Sciences and Management Building 4F 文理暨管理大樓 4F CMA0407 智慧應用電腦教室	<u>Course Plan</u>
28	Information Management (資訊管理系大學部)	1866	Programming (1) 程式設計(一)	Required 大學部必修		You-feng Lan 藍友烽				2-4		(CMA0406) , Applied Arts, Sciences and Management Building 4F 文理暨管理大樓 4F CMA0406 企業電子化電腦教室	<u>Course Plan</u>
29	Master's Program in Business Management, Department of Business Administration (經營管理碩士班)	0357	Marketing Management 行銷管理	Elective 選修	3	Yi Hsu 徐怡		5-7				(CMA0206) Applied Arts, Sciences and Management Building 2F 文理及管理大樓 2F CMA0206 經	<u>Course Plan</u>

												營模擬與數據 分析實驗室	
30	Master's Program in Business Management, Department of Business Administration (經營管理碩士 班)	0358	Corporate Financial Management 公司財務管理	Elective 選修	3	Chi-Lin Lu 呂麒麟			5-7			(CMA0209) Management of Entrepreneurial &Technology Lab., Applied Arts, Sciences and Management Building 2F 文理暨管理大 樓 2F CMA0209 創 業管理實驗室	<u>Course Plan</u>
31	Master's Program in Business Management, Department of Business Administration (經營管理碩士 班)	0360	Business Data Analysis 企業資料分析	Elective 選修	3	Liang, Chih-Chin 梁直青			2,3			(CMA0206) Applied Arts, Sciences and Management Building 2F 文 理及管理大樓 2F CMA0206 經營模擬與數 據分析實驗室	<u>Course Plan</u>
								2				(CMA0207) Applied Arts, Sciences and Management Building 2F 文 理及管理大樓 2F CMA0207 電腦教室	

32	Master's Program in Business Management, Department of Business Administration (經營管理碩士 班)	0373	Motivation and Leadership 激勵與領導	Elective 選修	3	Ching-Hsiang Liu 劉慶湘				2-4		(CMA0209) Management of Entrepreneurial &Technology Lab., Applied Arts, Sciences and Management Building 2F 文 理暨管理大樓 2F CMA0209 創業管理實驗 室	<u>Course Plan</u>
33	Master's Program in Business Management, Department of Business Administration (經營管理碩士 班)	0374	Entrepreneurial Management 創業管理	Elective 選修	3	Yu-Chun Chen 陳鈺淳			5-7			(CMAB108) Applied Arts, Sciences and Management Building B1 文 理及管理大樓 B1 三創學程 專業教室(1)	<u>Course Plan</u>
34	Department of Finance (Graduate Program) (財務金融系碩士 班)	0039	Corporate Finance 公司理財	Required 必修	3	Wang, Jo-Yu 王若愚					5-7	(CMA0201) Seminar Room II, Applied Arts, Sciencesand Management Building 2F 文理暨管理大 樓 2F CMA0201 財 金研討室 II	<u>Course Plan</u>

35	Department of Finance ( Graduate Program ) (財務金融系碩士班)	0040	Econometrics 計量經濟學	Required 必修	3	Tsai, Feng-Tse 蔡豐澤	5-7					(CHB0107) Certificate Center, Art and Humanity Building 1F 人文大樓 1F CHB0107 專業 電腦教室二	<a href="#">Course Plan</a>
36	Applied Foreign Languages (應用外語系)	1914	Introduction to Business 企業管理概論	Elective 選修	2	Chiu, Hui -Yun 邱慧昀					3-4	(AGR0312) Multi -function Professional Room, Red Building 3F 紅樓 3F AGR0312 多 功能專業教室	<a href="#">Course Plan</a>
37	Applied Foreign Languages (應用外語系)	1967	Cross-cultural management 跨文化管理	Elective 選修	2	Chiu, Hui -Yun 邱慧昀				7-8		(AGR0301) Multi -function Auditorium, Red Building 3F 紅樓 3F AGR0301 多 功能演講廳	<a href="#">Course Plan</a>
38	Graduate Institute of Digital Contents	0182	HCI Design Research 人機介面互動	Elective 選修	3	Shen Siu-Tsen 沈思岑			2-4			(CHB0305) Multimedia Design Studio,	<a href="#">Course Plan</a>

	and Creative Industries (多媒體設計系數位內容創意產業研究所碩士班)		設計研究									Art and Humanity Building 3F 人文大樓 3F CHB0305 多媒體設計實驗室	
39	Graduate Institute of Digital Contents and Creative Industries (多媒體設計系數位內容創意產業研究所碩士班)	0190	Digital media communication 數位媒體傳播	Elective 選修	3	Shen Siu-Tsen 沈思岑		2-4				(CHB0305) Multimedia Design Studio, Art and Humanity Building 3F 人文大樓 3F CHB0305 多媒體設計實驗室	<u>Course Plan</u>
40	Graduate Institute of Digital Contents and Creative Industries (多媒體設計系數位內容創意產業研究所碩士班)	0185	Creativity and Innovation Research 創意創新研究	Elective 選修	3	Jue Wu-Haw 朱文浩				2-4		(CHB0305) Multimedia Design Studio, Art and Humanity Building 3F 人文大樓 3F CHB0305 多媒體設計實驗室	<u>Course Plan</u>
41	Department of	0250	Introduction to	Elective	3	Disksha Chauhan					2-4	(BGA0611)	<u>Course</u>

	Mechanical Design Engineering (機械設計工程系碩士班)		Semiconductor Device and Manufacturing Process 半導體元件製程	選修		(迪克莎喬娜)博士						Comprehensive Engineering Building 1 6F, Seminar Room III BGA0611 綜合工程一館研討室(三)	<u>Plan</u>  外籍教師
42	Department of Vehicle Engineering (車輛工程系碩士班)	0072	The reading and writing of scientific paper 科技論文閱讀與寫作	Elective 選修	3	Disksha Chauhan (迪克莎喬娜)博士			7-9			(ATB0303) Phase II Teaching Building 3F Ordinary Classroom ATB0303 第二期教學大樓 3F 普通教室	<u>Course Plan</u>  外籍教師
43	Department of Electronic Engineering (電子工程系碩士班)	0087	Wireless communications 無線通訊	Elective 選修	3	Disksha Chauhan (迪克莎喬娜)博士				5-7		(BGA0611) Comprehensive Engineering Building 1 6F, Seminar Room III BGA0611 綜合工程一館研討室(三)	<u>Course Plan</u>  外籍教師
44	Institute of Material Science and	0232	Electro-optics Ceramic	Elective 選修	3	Ranjit Anandaro Patil (藍吉特)博士				2-4		AME0324 機械工程館 3F 預備	<u>Course Plan</u>

	Green Energy Engineering (材料科學與綠色能源工程研究所碩士班)		materials 光電陶瓷材料									教室(三)	外籍教師
45	Department of Mechanical and Computer-Aided Engineering (機械與電腦輔助工程系碩士班)	0020	Semiconductor Process Technology 半導體製程技術	Elective 選修	3	Ranjit Anandaro Patil(藍吉特)博士					2-4	AME0209 機械工程館 2F 第一專題研討室	<u>Course Plan</u>  外籍教師
46	Department of Electronic Engineering (電子工程系碩士班)	0088	Optoelectronic Energy Devices 光電能源元件	Elective 選修	3	Ranjit Anandaro Patil(藍吉特)博士					5-7	(BGA0611) Comprehensive Engineering Building 1 6F, Seminar Room III BGA0611 綜合工程一館研討室(三)	<u>Course Plan</u>  外籍教師
47	Master's Program in Aeronautical and Electronic Engineering, Department of Aeronautical Engineering (飛機工程系航空與電子科技碩士)	0305	Advanced Thermodynamic 高等熱力學	Elective 選修	3	Abhishek Kumar (庫秉弦)博士	2-4					(BGA0611) Comprehensive Engineering Building 1 6F, Seminar Room III BGA0611 綜合工程一館研討室(三)	<u>Course Plan</u>  外籍教師



	班)												
48	Master's Program, Department of Automation Engineering (自動化工程系碩士班)	0056	Collaborative product design 協同產品設計	Elective 選修	3	Abhishek Kumar (庫秉弦)博士				2-4		BGA0450S 綜 一館 4F 專業講 堂	<u>Course Plan</u>  外籍 教師
49	Doctoral Degree Program in Smart IndustryTechnology Research and Development (智慧產業博士學位學程)	2705	Writing of Scientific English paper 科技英文論文 寫作	Elective 選修	3	Abhishek Kumar (庫秉弦)博士			5-7			(BGA0611) Comprehensive Engineering Building 1 6F, Seminar Room III BGA0611 綜合 工程一館研討 室(三)	<u>Course Plan</u>  外籍 教師

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	金屬成形特論 Special Topics on Metal Forming	授課教師 Instructor	陳立緯 Li-Wei ,Chen
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材 Material	<p>1.指定課本書名 Book：_ Special Topics on Metal Forming _ (_100_% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：Special Topics on Metal Forming 採用英文之比例 (Percentage in English)_100_%</p> <p>3.其他補充說明 Others：</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing <input type="checkbox"/>小組討論 Group Discussion <input type="checkbox"/>口頭問答 Q&amp;A</p> <p><input type="checkbox"/>問題導向 Problem Based Learning <input checked="" type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/>分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others：</p>		
成績評量方式 Grading	<p><input checked="" type="checkbox"/>期中/期末考：_100_%以上英文試題，學生以英文答題_100_%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input checked="" type="checkbox"/>英文期中/期末報告：_100_%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/>全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input checked="" type="checkbox"/>其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：</p>		

**課程進度 Course Outline**

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction of Special Topics on Metal Forming	Introduction of Special Topics on Metal Forming
W2	literature review skills on metal forming related reference	literature review skills on metal forming related reference
W3	Principle of metal forming	Principle of metal forming
W4		
W5		
W6	Fundamental concept of plasticity	Fundamental concept of plasticity
W7		
W8		
W9	Midterm Examination	Midterm Examination
W10	Analysis of the material properties of metal forming	Analysis of the material properties of metal forming
W11		
W12	Analysis and simulation of metal forming	Analysis and simulation of metal forming
W13		
W14	Case study of advanced metal forming	Case study of advanced metal forming
W15		

W16	Project study	Project study
W17		
W18	Final Examination	Final Examination

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	機械振動學 Mechanical Vibrations	授課教師 Instructor	黃運琳 / 教授 Yunn-Lin Hwang / Professor
<p style="text-align: center;">教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book：Shabana A. A., Theory of Vibration - Volume I: An Introduction, Springer-Verlag, New York. (100% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_____%</p> <p>3.其他補充說明 Others：</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p> <input checked="" type="checkbox"/>教材講述 Lecturing   <input type="checkbox"/>小組討論 Group Discussion   <input checked="" type="checkbox"/>口頭問答 Q&amp;A </p> <p> <input checked="" type="checkbox"/>問題導向 Problem Based Learning   <input type="checkbox"/>協同教學 Collaborative Teaching </p> <p> <input checked="" type="checkbox"/>分組報告 Group Report </p> <p> <input checked="" type="checkbox"/>其他方式說明 Others： Final Project. </p>		

成績評量方式 Grading	<p>■ 期中/期末考：<u>100%</u>以上英文試題，學生以英文答題<u>80%</u>。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p>■ 英文期中/期末報告<u>80%</u>以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p>■ 全英語口頭簡報 (含 QA 問答)20分鐘以上(<b>一般科系專業課、碩博專業課程必須包含此評量方式</b>) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading )：</p>
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#### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduce Working Model 2D	Software demonstration, Q&A
W2	Introduce RecurDyn	Software demonstration, Q&A
W3	Solutions of Vibration Ordinary Differential Equations	Lectures, Homework, Q&A
W4	1-DOF Undamped Free Vibrations	Lectures, Q&A
W5	1-DOF Undamped Forced Vibrations	Lectures, Homework, Q&A
W6	1-DOF Damped Free Vibrations	Lectures, Homework, Q&A
W7	1-DOF Damped Forced Vibrations	Lectures, Homework, Q&A
W8	Stability of Motion	Lectures, Homework, Q&A
W9	Midterm Examination	Open-Book Midterm Exam.
W10	Coulomb Damping Vibrations	Lectures, Homework, Q&A
W11	Rotating Unbalance	Lectures, Homework, Q&A
W12	Base Motion	Lectures, Q&A
W13	Experimental Methods for Damping	Lectures, Homework, Q&A

	Evaluation	
W14	Response to Nonharmonic Forces	Lectures, Homework, Q&A
W15	Vibrations Under Periodic Forcing Functions	Lectures, Q&A
W16	More Than 1-DOF Vibration Systems	Lectures, Homework, Q&A
W17	Final project presentation	Oral presentations for final reports
W18	Final Examination	Open-Book Final Exam.

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	P-TECH 課程(五) P-TECH Course(5)	授課教師 Instructor	毛彥傑 Mao , Yen-Chieh
教學簡要說明 1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level. 2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.			
課程教材 Material	1.指定課本書名 Book：IBM Workplace Learning Curriculum ( 100 % 英文內容 Percentage in English) 2.自製教材 Self-made Materials：採用英文之比例(Percentage in English) 50 % 3.其他補充說明 Others：		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input type="checkbox"/> 口頭問答 Q&A <input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input checked="" type="checkbox"/> 協同教學 Collaborative Teaching <input checked="" type="checkbox"/> 分組報告 Group Report <input checked="" type="checkbox"/> 其他方式說明 Others：專題實作 Case study and implementation		

成績評量方式 Grading	<input type="checkbox"/> 期中/期末考：_____ % 以上英文試題，學生以英文答題_____ %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告： 50 % 以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading )：
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### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	時間管理概論 Time Management in Brief	Introductions to time management.
W2	時間管理在大型任務中之重要性 TM in Large-Scale Projects	Time management in a large project.
W3	待辦清單 To-do Lists	To-do lists.
W4	待辦事項之分類 Classifications in TDLs	Classifications in to-do lists.
W5	待辦事項之處理 Processing TDLs	Processing to-do lists.
W6	實際處理待辦清單之邏輯 Strategy of Managing TDLs	Strategies to process to-do lists.
W7	實際處理待辦清單之案例 Case Study of TDLs	Case study of processing a to-do list.
W8	時程清單 Schedule Arranging	Schedules.
W9	期中演練 Midterm Practice	Midterm practice.
W10	可定義時程之任務處理 Scheduling	Scheduled tasks.
W11	未能定義時程之任務處理 Tasks	Tasks that cannot be scheduled.
W12	選擇與定義任務負責人 Identifying Correspondences	Selecting task correspondence.
W13	組織管理概論	Intro. to Organization management.

	Organization Management	
W14	組織架構與分層項目 Organization Hierarchy and Pathways	Organization hierarchy.
W15	判定個人之所擅長 Personal Skill Identifications	Personal skills.
W16	目標與時程定義 Goal Definition	Goal scheduling.
W17	目標時程追蹤與溝通 Goal Tracking	Goal tracking and communication.
W18	期末演練 Final Practice	Final practice.

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	多體動力學 Dynamics of Multibody Systems	授課教師 Instructor	黃運琳 / 教授 Yunn-Lin Hwang / Professor
<p style="text-align: center;">教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book : <u>Shabana, Ahmed A., Dynamics of Multibody Systems, Cambridge University Press. (100% 英文內容 Percentage in English)</u></p> <p>2.自製教材 Self-made Materials : 採用英文之比例(Percentage in English)_____%</p> <p>3.其他補充說明 Others :</p>		



雙語教學方式 (可多選, 或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A  <input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching  <input checked="" type="checkbox"/> 分組報告 Group Report  <input checked="" type="checkbox"/> 其他方式說明 Others :
成績評量方式 Grading	<input checked="" type="checkbox"/> 期中/期末考: <u>100</u> %以上英文試題, 學生以英文答題 <u>80</u> %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告: <u>80</u> %以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading ) :

#### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduce Working Model 2D	Software demonstration, Q&A
W2	Introduce RecurDyn	Software demonstration, Q&A
W3	Appendix: LINEAR ALGEBRA	Lectures, Homework, Q&A
W4	Introduction of Multibody Systems	Lectures, Q&A
W5	Reference Kinematics	Lectures, Homework, Q&A
W6	Properties of Rotation Matrices	Lectures, Homework, Q&A
W7	Velocity Equations	Lectures, Homework, Q&A
W8	Acceleration Equations	Lectures, Homework, Q&A
W9	Midterm Examination	Open-Book Midterm Exam.

W10	Generalized Coordinates and Kinematic Constraints	Lectures, Homework, Q&A
W11	Degree of Freedom and Generalized Coordinate Partition	Lectures, Homework, Q&A
W12	Virtual Work and Generalized Forces	Lectures, Q&A
W13	Mechanics of Deformable Bodies	Lectures, Homework, Q&A
W14	Floating Frame of Reference Formulation	Lectures, Homework, Q&A
W15	Equations of Motion	Lectures, Q&A
W16	Finite Element Formulation	Lectures, Homework, Q&A
W17	Large Deformation Problems	Oral presentations for final reports
W18	Final Examination	Open-Book Midterm Exam.

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	自動化無人載具系統 Autonomous Unmanned Vehicle System	授課教師 Instructor	李孟澤 LI ,MENG TSE
<p style="text-align: center;">教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book：_____ (_____% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English) <u>80</u> %</p> <p>3.其他補充說明 Others：</p>		

雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	■教材講述 Lecturing   □小組討論 Group Discussion   ■口頭問答 Q&A □問題導向 Problem Based Learning   □協同教學 Collaborative Teaching ■分組報告 Group Report □其他方式說明 Others：
成績評量方式 Grading	<input type="checkbox"/> 期中/期末考：_____ % 以上英文試題，學生以英文答題_____ %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input type="checkbox"/> 英文期中/期末報告：_____ % 以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading )：

#### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Part-1: System Engineering	Introduction to “System Engineering”
W2		
W3	Part-2: The Unmanned Vehicles	History & Applications of AUVS
W4	Part-3: UAV	Unmanned Aerial Vehicle
W5		
W6	Part-4: UGV	Unmanned Ground Vehicle
W7		
W8	Part-5: UMV	Unmanned Maritime Vehicle
W9	Mid-term Exam	
W10	Part-6: The Subsystems of an	Subsystems of an Autonomous Unmanned Vehicle

	Autonomous Unmanned Vehicle	
W11	Part-7: Case Study	Design an Autopilot System for UAV
W12		
W13	Part-8: HIL & SIL	Hardware/Software in the Loop Simulation
W14	Part-9: Navigation(I)	Inertial Navigation System
W15	Part-10: Navigation(II)	Global Positioning System (GPS)
W16		
W17	Part-11: Sensors	Sensors in UV system
W18	Final Exam	

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	數位影像處理實務 Application for Digital Image Processing	授課教師 Instructor	李廣齊 LEE ,KUANG-CHYI
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			

課程教材  Material	1.指定課本書名 Book： <u>RC Gonzalez, RE Woods &amp; SL Eddins, Digital Image processing using MATLAB, McGraw Hill (100% 英文內容 Percentage in English)</u> 2.自製教材 Self-made Materials：採用英文之比例(Percentage in English) $\geq 70\%$ 3.其他補充說明 Others：	
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input type="checkbox"/> 小組討論 Group Discussion <input type="checkbox"/> 口頭問答 Q&A <input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching <input checked="" type="checkbox"/> 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others：	
成績評量方式 Grading	<input checked="" type="checkbox"/> 期中/期末考： <u>70</u> %以上英文試題，學生以英文答題 <u>50</u> %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input type="checkbox"/> 英文期中/期末報告： <u>      </u> %以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：	
<b>課程進度 Course Outline</b>		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction to image processing	Oral
W2	Introduction to OpenCV(I)	Oral & Practice
W3	Introduction to OpenCV(II)	Oral & Practice
W4	Image processing toolbox in Matlab	Oral & Practice
W5	Image Convolution	Oral & Practice
W6	Noise Removing	Oral & Practice

W7	Edge Detection	Oral & Practice
W8	Contour Following method	Oral & Practice
W9	Midterm Exam	
W10	Introduction to AOI	Oral
W11	Hough Transform method	Oral & Practice
W12	Least square method	Oral & Practice
W13	Straightness	Oral & Practice
W14	Roundness	Oral & Practice
W15	Ellipticity(I)	Oral & Practice
W16	Ellipticity(II)	Oral & Practice
W17	Final Project Presentation	Oral
W18	Final Exam	

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	飛航安全 Flight Safety	授課教師 Instructor	王士嘉 Wang, Shih-Chia
<p>教學簡要說明</p> <p>1. 請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2. 如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			

課程教材 Material	1. 指定課本書名 Book: _Aircraft Accidents Investigation (_100____% 英文內容 Percentage in English) 2. 自製教材 Self-made Materials: 採用英文之比例 (Percentage in English) _100____% 3. 其他補充說明 Others:
雙語教學方式 (可多選, 或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input type="checkbox"/> 口頭問答 Q&A <input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching <input type="checkbox"/> 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others:
成績評量方式 Grading	<input checked="" type="checkbox"/> 期中/期末考: _100____% 以上英文試題, 學生以英文答題 _100____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告: _100____% 以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答) 20 分鐘以上 <b>(一般科系專業課、碩博專業課程必須包含此評量方式)</b> English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例) Others (please state the proportion of Mandarin and English in grading):

#### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Course Preparation	Let's roll
W2	Maintenance Perspective	Aircraft maintenance perspective
W3	Accidents Illustrations _1	Look for aircraft accident investigations
W4	Accidents Illustrations _2	Look for aircraft accident investigations
W5	Fuel Pump Operation	Schematics knowledge shown
W6	Safety technique demonstration	Aircraft festered skill demonstration

W7	1st Term Evaluation	Skill Team test
W8	Technology Perspective-1	Aircraft Material Point of View
W9	Technology Perspective-2	Mid-Air Collision Investigation
W10	Technology Perspective-3	Site Survey
W11	Technology Perspective-4	Investigation Management
W12	Site Safety	Share with students and ask for feedback
W13	Field Trip	Field trip to Taiwan Transport. Safety Board,
W14	Human Factor-1	Team Presentation Contest
W15	Human Factor-2	Share with students and ask for feedback
W16	Human Factor-3	From Human Factor point of view lecture
W17	Big5 presentation	Oral Presentation
W18	Final Evaluation	Grade and wrap up

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	科技英文 Science and Technology English	授課教師 Instructor	吳森統 Sen-Tung Wu
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			



課程教材 Material	1.指定課本書名 Book : _____ (_____%英文內容 Percentage in English) 2.自製教材 Self-made Materials : 採用英文之比例 (Percentage in English) __50__% 3.其他補充說明 Others :	
雙語教學方式 (可多選, 或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input type="checkbox"/> 口頭問答 Q&A <input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input checked="" type="checkbox"/> 協同教學 Collaborative Teaching <input checked="" type="checkbox"/> 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others :	
成績評量方式 Grading	<input type="checkbox"/> 期中/期末考 : _____% 以上英文試題, 學生以英文答題 _____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告 : _100_% 以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答) 20 分鐘以上 <b>(一般科系專業課、碩博專業課程必須包含此評量方式)</b> English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例) Others (please state the proportion of Mandarin and English in grading) :	
<b>課程進度 Course Outline</b>		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Course outline and criteria explanation, self-introduction skill	Explain the main points of self-introduction in English
W2	International Journal Reading Skill	Reading skills and methods for international journals, including quick browsing tips for abstracts
W3	Tips for browsing and searching international journal website	Guide students to use the IEEE Xplore scientific journal search engine to describe how journal or seminar papers are filtered
W4	Idea Generator-Mind map tool	Teach students the extended associative concept of the mind map, and after deciding on the theme or theme, you can start to spread the relevant argument
W5	English Briefing Material Skills	Explain the basic structure of the brief, outline (preface), main body (main thesis), conclusion. and the proportion of time required for each

		stage
W6	Simulation and Implementation of English Publication of Seminar Posters and Wallpaper	Students will choose relevant scientific and technological topics that they are familiar with or interested in, and introduce them in English in the form of poster sharing
W7	Seminar English Oral Presentation Simulation and Implementation	Refer to the format, manner, process, time limit of oral presentation of the seminar, and precautions for questions from the audience
W8	Listening Practice for English Speaking in English Speaking Countries	In the context of dealing with foreigners from English-speaking countries, students can train their English listening through English speech videos on audio-visual platforms
W9	English Speech Listening Practice for Non English speaking Countries	At present, most of our foreign students are exchange students from Indonesia, India, Vietnam, or other non-English speaking countries. In the process of talking with students or interacting with teachers and students in class, due to the foreign accent, it is easy to understand the English meaning of foreign students at the first time. The main focus of this course is to allow students to train their English listening
W10	Customized speech theme for English oral speech (midterm report	Combined with the English oral presentation skills, briefing editing essentials, conference presentation methods and procedures learned before the mid-term report, each student is required to present the results in stages
W11	Practice of English resume writing	English resume writing is an important personal recommendation, so the teacher will explain in detail the structure and writing of the resume
W12	Simulation of Foreign Interview Occasions	Through group practice, students practice in the roles of main examiner and test taker in order. Teachers and practitioners will tour between groups to check the students' practical status and give immediate guidance
W13	Simulation of internal group meetings of foreign companies for discussion	In the process of entering the workplace, it often takes a lot of cross-departmental teamwork to complete the development of a project or the smooth production of a product. The working meetings of internal groups are often discussed in foreign companies
W14	Communication skills for simulation of foreign companies using Con-call remote video conferences	The content is last week's bridging course, and in the process of meeting and discussing with customers, it is impossible to achieve face-to-face direct response and expression, so the Con-call (Conference call) format is used for remote video conference
W15	Using English to communicate with images or texting	Students are individually selected, each student chooses English words or images, and after the students on the stage randomly draw lots to

		select the answer cards of the students' propositions, they try to describe the answers in English
W16	Telling a story - impromptu speech	The teaching purpose of this course is to stimulate students' imagination, based on interesting pictures and coherent story content. Use English to connect the story logic of the whole picture, so as to practice students' impromptu speech and oral expression skills.
W17	English Song Listening Practices	Each student listens carefully to the content of the song and can discuss with each other in the group to try to put together the correct lyrics of the song
W18	Provide full English theoretical explanation in the field of electrical engineering to foreign students	All dialogue and exchange sessions must be filmed (due to course time, it is not possible to invite all interviewed foreign students to the course for on-site interaction). Therefore, it is presented in the form of a video, and at the end of the interview process, there must be a QA part for the interviewed foreign students to ask questions and be answered by the students. Answers can be made with charts, gestures, or any tool that helps with explanation

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	FPGA 電路設計 FPGA System Design	授課教師 Instructor	宋啟嘉 教授 Prof. Dr.-Ing. Chi-Chia Sun
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。</p> <p>This course is designed for graduate students who are interested in advanced FPGA design n concept, design methodology, and basic concept of VLSI design. In the meantime, several Labs about the Xilinx Vivado tutorials will be demonstrated. After that, several lectures with the related topics to ZYNQ FPGA development kits will be given. Of course, we will select some state-the-art researches for computational efficient algorithm in FPGA/ARM implementation and these topics will be assigned as a small colloquium for students. At the end, graduate students shall present their final projects and its implementation on ZYNQ FPGA.</p> <ul style="list-style-type: none"> <li>● 100% Lecture in English</li> <li>● CEF-B2 Level</li> <li>● 本課開放電資學院外籍生修課，過往約台灣學生外籍生各半</li> </ul>			

2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。

Please state bilingual instructor's teaching weeks and hours in course outline section.

無，授課教師本人已具備有全英授課能力 CEF-C1 Level

課程教材 Material	1.指定課本書名 Book：_____ (_____%英文內容 Percentage in English) 2.自製教材 Self-made Materials：採用英文之比例 (Percentage in English)_____% 3.其他補充說明 Others：
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A <input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching <input checked="" type="checkbox"/> 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others：
成績評量方式 Grading	<input type="checkbox"/> 期中/期末考：_____%以上英文試題，學生以英文答題_____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告：_____%以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：

#### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction of VLSI and FPGA	Lecture
W2		High Level Synthesis Lab1
W3		Lecture
W4	Challenges in VDSM and	Lecture

W5	3D-IC technology for FPGA	Lecture
W6	High Level Synthesis	Lecture
W7		High Level Synthesis Lab2
W8		High Level Synthesis Lab3
W9	Midterm	Oral Report
W10	MPSOC (ARM-FPGA)  Introduction	Lecture
W11		Lecture
W12		High Level Synthesis Lab4
W13	Colloquium	Recent FPGA paper study
W14		Recent FPGA paper study
W15	Collaborative Teaching	Xilinx Engineer Lecure
W16	PBL Project	Group Final Project
W17		Group Final Project
W18	Final Term	Oral Report

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	嵌入式系統 Embedded System	授課教師 Instructor	蘇暉凱 Su, Hui-Kai
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材 Material	<p>1.指定課本書名 Book：_____ (_____% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English) <u>100%</u></p> <p>3.其他補充說明 Others：</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/> 教材講述 Lecturing <input type="checkbox"/> 小組討論 Group Discussion <input type="checkbox"/> 口頭問答 Q&amp;A</p> <p><input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input checked="" type="checkbox"/> 協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/> 分組報告 Group Report</p> <p><input checked="" type="checkbox"/> 其他方式說明 Others：</p>		
成績評量方式 Grading	<p><input checked="" type="checkbox"/> 期中/期末考：<u>100%</u>以上英文試題，學生以英文答題 <u>10%</u>。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input checked="" type="checkbox"/> 英文期中/期末報告：<u>90%</u>以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：</p>		
課程進度 Course Outline			
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities	

W1	Introduction to Embedded Computing	Lecturing Introduction to Embedded Computing
W2	Introduction to Embedded Computing	Lecturing Introduction to Embedded Computing
W3	Instruction Sets Lab1: Linux Installation	Lecturing Instruction Sets Experiment Lab1: Linux Installation
W4	Instruction Sets Lab1: Linux Installation	Lecturing Instruction Sets Experiment Lab1: Linux Installation
W5	Linux Driver and Application Programming	Lecturing Linux Driver and Application Programming
W6	Linux Driver and Application Programming Lab2: Driver and Application Programming for Embedded System	Lecturing Linux Driver and Application Programming Experiment Lab2: Driver and Application Programming for Embedded System
W7	Linux Driver and Application Programming Lab2: Driver and Application Programming for Embedded System	Lecturing Linux Driver and Application Programming Experiment Lab2: Driver and Application Programming for Embedded System
W8	Linux Driver and Application Programming Lab2: Driver and Application Programming for Embedded System	Lecturing Linux Driver and Application Programming Experiment Lab2: Driver and Application Programming for Embedded System
W9	Midterm	
W10	ROS Introduction	Lecturing ROS Introduction
W11	ROS Implementation Lab3: Embedded ROS	Lecturing ROS Implementation Experiment Lab3: Embedded ROS
W12	Lab3: Embedded ROS	Experiment Lab3: Embedded ROS
W13	Lab3: Embedded ROS	Experiment Lab3: Embedded ROS
W14	Final Project	Practice and discussion
W15	Final Project	Practice and discussion
W16	Final Project	Practice and discussion

W17	Final Project	Practice and discussion
W18	Final Project	Project Presentation

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	光電檢測 Photonic sensing	授課教師 Instructor	黃鴻基 Huang, Hung Ji
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book：___(___100___% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)___100___%</p> <p>3.其他補充說明 Others：</p>		
雙語教學方式 (可多選，或簡述)  Bilingual Teaching Strategies	<p>■教材講述 Lecturing    ■小組討論 Group Discussion    □口頭問答 Q&amp;A</p> <p>□問題導向 Problem Based Learning    □協同教學 Collaborative Teaching</p> <p>■分組報告 Group Report</p> <p>□其他方式說明 Others：</p>		



成績評量方式 Grading	<div><input type="checkbox"/> 期中/期末考：_____ % 以上英文試題，學生以英文答題_____ %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</div> <div><input type="checkbox"/> 英文期中/期末報告：_____ % 以英文表達。 The percentage of using English in midterm or final oral presentation</div> <div><input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</div> <div><input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading )：</div>	
課程進度 Course Outline		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction of photonic sensing	Selection of group report topics
W2	Introduction of single-board microcontroller	Arduino & Raspberry Pi
W3	System design- layout	
W4	System design- Mechanical parts	Introduction of Freecad
W5	System design- Mechanical parts	Introduction of Freecad
W6	System design- Electronics basic	
W7	Midterm report	Proposal of the group works
W8	Midterm report	Proposal of the group works
W9	Temperature & humidity sensing	Using a single-board microcontroller
W10	Magnetic field sensing	Using a single-board microcontroller
W11	Multiple LED transmission spectrometer	Using a single-board microcontroller
W12	Detection of Brewster’s angle	Using a single-board microcontroller

W13	Imaging of interference pattern	Using a single-board microcontroller
W14	Low-frequency oscilloscope	Using a single-board microcontroller
W15	Low-frequency lock-in measurement	Using a single-board microcontroller
W16	Low-frequency lock-in measurement	Using a single-board microcontroller
W17	Final report	Presentation of the group works
W18	Final report	Presentation of the group works

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	物聯網 Internet of Things	授課教師 Instructor	簡銘伸 JIAN,MING-SHEN
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材 Material	<p>1.指定課本書名 Book：_____（_____ % 英文內容 Percentage in English）</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English) __80__ %</p> <p>3.其他補充說明 Others：</p>		

雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input type="checkbox"/> 小組討論 Group Discussion <input type="checkbox"/> 口頭問答 Q&A  <input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching  <input type="checkbox"/> 分組報告 Group Report  <input checked="" type="checkbox"/> 其他方式說明 Others：口頭報告 Oral Presentation	
成績評量方式  Grading	<input checked="" type="checkbox"/> 期中/期末考：_____ %以上英文試題，學生以英文答題_____ %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告：_____ %以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input checked="" type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading )：	
<b>課程進度 Course Outline</b>		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction	Basics of EPC Training (PPT)
W2	Electronic Product Code	Basics of EPC Training (PPT)
W3	Identification Keys	Basics of EPC Training (PPT)
W4	The Secrets of RFID	Basics of EPC Training (PPT)
W5	Benefits of EPC Applications	Basics of EPC Training (PPT)
W6	Technical Information – RFID Tags	Basics of EPC Training (PPT)
W7	Technical Information – Readers	Basics of EPC Training (PPT)
W8	Technical Information – EPCglobal Network	Basics of EPC Training (PPT)

W9	Exam	Online
W10	EPC Global Certification	EPC Certification Exam Training (PPT)
W11	Implementation – Examples of Projects	IoT_Learning (PPT)
W12	Internet of Things	IoT_Learning (PPT)
W13	Sensor Layer	IoT_Learning (PPT)
W14	Network Layer	IoT_Learning (PPT)
W15	Application Layer	IoT_Learning (PPT)
W16	EPC Global Certification	EPC Certification Exam Training (PPT)
W17	Presentation	Oral Presentation
W18	Exam	Online

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	科技論文寫作 Research Writing for Science and Technology	授課教師 Instructor	蔡柏祥 Tsai, Po-Hsiang
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			

<p>課程教材</p> <p>Material</p>	<p>1.指定課本書名 Book：__ Writing Up Research: Experimental Research Report Writing for Students of English, Weissberg and Buker, 2008, 文鶴_ (10_% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)__100_%</p> <p>3.其他補充說明 Others：</p>	
<p>雙語教學方式 (可多選，或簡述)</p> <p>Bilingual Teaching Strategies</p>	<p><input checked="" type="checkbox"/>教材講述 Lecturing   <input checked="" type="checkbox"/>小組討論 Group Discussion   <input checked="" type="checkbox"/>口頭問答 Q&amp;A</p> <p><input checked="" type="checkbox"/>問題導向 Problem Based Learning   <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/>分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others：</p>	
<p>成績評量方式</p> <p>Grading</p>	<p><input checked="" type="checkbox"/>期中/期末考：__100__%以上英文試題，學生以英文答題_60__%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input type="checkbox"/>英文期中/期末報告：____%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input type="checkbox"/>全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input type="checkbox"/>其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：</p>	
<p style="text-align: center;"><b>課程進度 Course Outline</b></p>		
<p>週次</p> <p>Week</p>	<p>單元/主題</p> <p>Unit/Topic</p>	<p>教學活動重點及教材內容</p> <p>Teaching Activities</p>
<p>W1</p>	<p>Introduction</p>	<p>Introduction to the course</p>
<p>W2</p>	<p>Academic Research Writing</p>	<p>Trends in Scientific Publishing; What Publishers Need; Article Structure; Research Papers</p>
<p>W3</p>	<p>Revisions and Response to Reviewers</p>	<p>The Onset; Main Reasons for Rejection; Cover Letter; Post-referee revision; Plagiarism</p>
<p>W4</p>	<p>Revisions and Response to Reviewers</p>	<p>The Onset; Main Reasons for Rejection; Cover Letter; Post-referee revision; Plagiarism</p>
<p>W5</p>	<p>Article Search and Library Access</p>	<p>Literature Search; Research Performance Assessment; Papers Selection Criteria; Which Journal Articles to Submit</p>

W6	Article Search and Library Access	Literature Search; Research Performance Assessment; Papers Selection Criteria; Which Journal Articles to Submit
W7	Academic writing approach	Types of Serial Research Publication; Experimental Research Report; Academic Writing; Strategy in Academic Writing; Formal Academic Writing Style
W8	Academic writing approach	Types of Serial Research Publication; Experimental Research Report; Academic Writing; Strategy in Academic Writing; Formal Academic Writing Style
W9	Mid-term exam	Mid-term exam
W10	Abstract	Skills and Conventions for Writing Abstract Section
W11	Introduction	Skills and Conventions for Writing Introduction Section
W12	Method	Skills and Conventions for Writing Introduction Method Section
W13	Materials	Skills and Conventions for Writing Introduction Materials Section
W14	Results	Skills and Conventions for Writing Introduction Results Section
W15	Results	Skills and Conventions for Writing Introduction Results Section
W16	Discussion	Skills and Conventions for Writing Introduction Discussion Section
W17	Discussion	Skills and Conventions for Writing Introduction Discussion Section
W18	Final-term exam	Final-term exam

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	資訊工程導論 Introduction to Information Engineering	授課教師 Instructor	蔡柏祥 Tsai, Po-Hsiang
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材 Material	<p>1.指定課本書名 Book:_Computer Science an overview, 13th Edition (_100_% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)___100___%</p> <p>3.其他補充說明 Others：</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing <input checked="" type="checkbox"/>小組討論 Group Discussion <input checked="" type="checkbox"/>口頭問答 Q&amp;A</p> <p><input checked="" type="checkbox"/>問題導向 Problem Based Learning <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/>分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others：</p>		
成績評量方式 Grading	<p><input type="checkbox"/> 期中/期末考：_____%以上英文試題，學生以英文答題_____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input type="checkbox"/> 英文期中/期末報告：_____%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：</p>		
課程進度 Course Outline			
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities	

W1	Syllabus	Syllabus
W2	English Oral Presentation Skills	Report Structure; Effective Paraphrasing; Avoidance of Plagiarism
W3	English Oral Presentation Skills	Academic Oral Presentation; Organization
W4	Introduction Computer Science	Overview; History of Algorithms and Computing
W5	Programming Languages	Historical Perspective; Traditional Programming Concepts
W6	Programming Languages	Procedural Units; Language Implementation
W7	Programming Languages	Object Oriented Programming; Programming Concurrent Activities
W8	Software Engineering	Software Life Cycle; Software Engineering Methodologies
W9	Mid-Term	
W10	Software Engineering	Modularity; Tools of the Trade
W11	Software Engineering	Testing; Documentation
W12	Data Abstractions	Data Structures; Implementing Data Structures
W13	Data Abstractions	Implementing Data Structures; Customized Data Types
W14	Data Abstractions	Classes and Objects
W15	Database System	Database Fundamentals; Relational Model
W16	Database System	Relational Model
W17	Database System	Maintaining Database Integrity
W18	Final-Term	



# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	微處理機實習 Microprocessor Lab	授課教師 Instructor	陳國益 Kuo-Yi Chen
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book：_ Embedded Systems with ARM Cortex-M Microcontrollers in Assembly Language and C _ (_100_% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_50_%</p> <p>3.其他補充說明 Others：</p>		
雙語教學方式 (可多選，或簡述)  Bilingual Teaching Strategies	<p><input type="checkbox"/>教材講述 Lecturing   <input type="checkbox"/>小組討論 Group Discussion   <input checked="" type="checkbox"/>口頭問答 Q&amp;A</p> <p><input checked="" type="checkbox"/>問題導向 Problem Based Learning   <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input type="checkbox"/>分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others：</p>		
成績評量方式  Grading	<p><input checked="" type="checkbox"/>期中/期末考：_50_%以上英文試題，學生以英文答題_50_%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input type="checkbox"/>英文期中/期末報告：_____ %以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/>全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input type="checkbox"/>其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：</p>		
課程進度 Course Outline			

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	NUC140 Cortex-M0Introduction	ARM Cortex-M0 Introduction
W2	NUC140 development	NUC140 and Keil C and project create
W3	SPI experiments	SPI control Flash
W4	Watchdog experiments	The timer as watchdog to protect MCU
W5	TSR experiments	TSR lab project
W6	Interrupter experiments	Interrupter lab project
W7	SRAM experiments	SRAM read/write operation
W8	Buzzer experiments	Buzzer operation
W9	File R/W experiments	Local file read/write operation
W10	Mid term	
W11	GPIO application	GPIO usage and PIN
W12	LCD experiments	LCD usage and LCD project
W13	UART experiments	UART protocol
W14	ADC experiments	ADC converter NuMicro ADC
W15	PWM experiments	PWM controller with motor and buzzer
W16	Timer experiments	Cortex-M0 MCU Interrupt Vector,Timer,WatchDog
W17	I2C experiments	I2C access EEPROM
W18	Final term	

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	作業系統 Operation System	授課教師 Instructor	黃世昌 HUANG,SHIH-CHANG
<p>教學簡要說明</p> <p>1. 請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2. 如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1. 指定課本書名 Book : Abraham Silberschatz et.al. Operating System Concepts, 10th Edition", WILLY, ISBN: 1119454085 (_100_% 英文內容 Percentage in English)</p> <p>2. 自製教材 Self-made Materials : 採用英文之比例 (Percentage in English) __80__%</p> <p>3. 其他補充說明 Others : NA</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/> 教材講述 Lecturing   <input type="checkbox"/> 小組討論 Group Discussion   <input checked="" type="checkbox"/> 口頭問答 Q&amp;A</p> <p><input type="checkbox"/> 問題導向 Problem Based Learning   <input type="checkbox"/> 協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/> 分組報告 Group Report</p> <p><input type="checkbox"/> 其他方式說明 Others :</p>		
成績評量方式 Grading	<p><input checked="" type="checkbox"/> 期中/期末考：__90__%以上英文試題，學生以英文答題__30-60__%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input type="checkbox"/> 英文期中/期末報告：_____%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading) :</p>		

課程進度 Course Outline		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Overview	Overview OS
W2	Introduction	Introduction OS
W3	System structures	System structures
W4	Process concept	Process concept
W5	Multithreaded programming	Multithreaded programming
W6	Process scheduling	Process scheduling
W7	Synchronization	Synchronization
W8	Deadlocks	Deadlocks
W9	Midterm	Midterm
W10	Memory-management strategies	Memory-management strategies
W11	Virtual-memory management	Virtual-memory management
W12	File system	File system
W13	File system	File system
W14	Implementing file systems	Mass-Storage Systems
W15	Implementing file systems	I/O Systems
W16	Secondary-storage structure	System Protection
W17	Secondary-storage structure	System Security

W18	Final	Final
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## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	巨量資料分析 Big Data Analysis	授課教師 Instructor	江季翰 Ji-Han Jiang
教學簡要說明 1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level. 2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.			
課程教材 Material	1.指定課本書名 Book：Big-Data Analytics for Cloud, IoT and Cognitive Computing, First Edition. Kai Hwang and Min Chen. (_100____%英文內容 Percentage in English) 2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_100__% 3.其他補充說明 Others：		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A <input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching <input type="checkbox"/> 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others：		

成績評量方式 Grading	<p>■ 期中/期末考：__100_%以上英文試題，學生以英文答題__20_%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input type="checkbox"/> 英文期中/期末報告：_____%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p>■ 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：</p>
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### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction	<ul style="list-style-type: none"> <li>What is Big Data: many Vs</li> <li>Open Data</li> <li>Big Data Analysis Tools</li> </ul>
W2	Analysis Tools	<ul style="list-style-type: none"> <li>Analysis Tools: R &amp; Python</li> </ul>
W3	Cases Study 1	<ul style="list-style-type: none"> <li>(Problem Based Learning)</li> <li>Analyzing 1.1 Billion NYC Taxi and Uber Trips</li> </ul>
W4	Getting to Know Your Data	<ul style="list-style-type: none"> <li>Data Objects and Attribute Types</li> <li>Basic Statistical Descriptions of Data</li> </ul>
W5	Getting to Know Your Data	<ul style="list-style-type: none"> <li>Data Visualization</li> <li>Measuring Data Similarity and Dissimilarity</li> </ul>
W6	Data Pre-processing	<ul style="list-style-type: none"> <li>Data Preprocessing: An Overview</li> <li>Data Quality</li> <li>Major Tasks in Data Preprocessing</li> </ul>
W7	Data Pre-processing	<ul style="list-style-type: none"> <li>Data Cleaning</li> <li>Data Integration</li> </ul>
W8	Data Pre-processing	<ul style="list-style-type: none"> <li>Data Reduction</li> <li>Data Transformation and Data Discretization</li> </ul>
W9	Midterm	Midterm exam
W10	Outlier Detection	<ul style="list-style-type: none"> <li>Outlier and Outlier Analysis &amp; Detection Methods</li> <li>Statistical Approaches</li> <li>Proximity-Base Approaches</li> <li>Clustering-Base Approaches</li> <li>Classification Approaches</li> </ul>
W11	Big Data Processing & Management	<ul style="list-style-type: none"> <li>Big Data Storage Technologies</li> <li>Hadoop Ecosystem</li> <li>HDFS</li> </ul>
W12	Big Data Processing & Management	<ul style="list-style-type: none"> <li>Big Data Storage Technologies</li> <li>Hadoop Ecosystem</li> </ul>

		<ul style="list-style-type: none"> <li>• HDFS</li> </ul>
W13	Research Challenges and Trends	<ul style="list-style-type: none"> <li>• Big Data Applications</li> <li>• Big Data: Analytical Solutions</li> <li>• Research Challenges and Trends</li> </ul>
W14	Research Challenges and Trends	<ul style="list-style-type: none"> <li>• Big Data Applications</li> <li>• Big Data: Analytical Solutions</li> <li>• Research Challenges and Trends</li> </ul>
W15	Research Challenges and Trends	<ul style="list-style-type: none"> <li>• Big Data Applications</li> <li>• Big Data: Analytical Solutions</li> <li>• Research Challenges and Trends</li> </ul>
W16	Big Data Security	<ul style="list-style-type: none"> <li>• A Survey on Big Data Security Issues Challenges and Techniques</li> <li>• Data-centric Security</li> </ul>
W17	English Oral presentation	Final Project Oral Report and Discussion (in English)
W18	English Oral presentation	Final Project Oral Report and Discussion (in English)

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	機器學習 Machine Learning	授課教師 Instructor	林武杰 LIN,WU-CHIEH
教學簡要說明 1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level. 2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.			
課程教材 Material	1.指定課本書名 Book： <u>Introduction to Machine Learning</u> ( <u>100</u> % 英文內容 Percentage in English) 2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_____ % 3.其他補充說明 Others：		

雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A  <input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching  <input type="checkbox"/> 分組報告 Group Report  <input checked="" type="checkbox"/> 其他方式說明 Others：上台以英文進行論文報告問答	
成績評量方式 Grading	<input type="checkbox"/> 期中/期末考：_____%以上英文試題，學生以英文答題_____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告：_60_%以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input checked="" type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：隨堂練習、報告 60%、學期專案 60%	
<b>課程進度 Course Outline</b>		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction	<ul style="list-style-type: none"> <li>● What is machine learning</li> <li>● Examples of machine learning applications</li> </ul>
W2	Supervised learning	<ul style="list-style-type: none"> <li>● Learning a class from examples</li> <li>● Vapnik-chervonenkis dimension</li> </ul>
W3	Supervised learning	<ul style="list-style-type: none"> <li>● Learning multiple classes</li> <li>● Regression</li> <li>● Dimension curses of a supervised learning algorithms</li> </ul>
W4	Bayesian Decision Theory	<ul style="list-style-type: none"> <li>● Bayesian Theory</li> <li>● Classification</li> <li>● Losses and risks</li> </ul>
W5	Parametric methods	<ul style="list-style-type: none"> <li>● Maximum likelihood estimation</li> <li>● Parametric classification</li> </ul>
W6	Multivariate methods	<ul style="list-style-type: none"> <li>● Multivariate data</li> <li>● Estimation of missing values</li> <li>● Multivariate normal distribution</li> </ul>
W7	Multivariate methods	<ul style="list-style-type: none"> <li>● Multivariate classification</li> <li>● Multivariate regression</li> </ul>
W8	Dimensionality reduction	<ul style="list-style-type: none"> <li>● Principal component analysis</li> <li>● Linear discriminant analysis</li> </ul>
W9	midterm	Finish exercises



W10	Decision trees	<ul style="list-style-type: none"> <li>● Univariate trees</li> <li>● Learning rules from data</li> </ul>
W11	Kernel machines	<ul style="list-style-type: none"> <li>● Optimal separating hyperplane</li> <li>● Support vector machine</li> <li>● Kernel machine for regression</li> </ul>
W12	Multilayer perceptron	<ul style="list-style-type: none"> <li>● The perceptron</li> <li>● Multilayer perceptron</li> <li>● Backpropagation algorithm</li> </ul>
W13	Deep learning	<ul style="list-style-type: none"> <li>● Convolution Neural Network</li> </ul>
W14	Deep learning	<ul style="list-style-type: none"> <li>● Encoder – decoder</li> <li>● Recurrent Neural Network</li> </ul>
W15	Paper presentation and discussions	
W16	Paper presentation and discussions	
W17	Term project presentation	
W18	Term project presentation	

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	電子工程導論 Introduction to Electronic Engineering	授課教師 Instructor	劉育松 Liu, Yu-Suang
<p style="text-align: center;">教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book：_____ (_____%英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_____%</p> <p>3.其他補充說明 Others：</p>		

雙語教學方式 (可多選,或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A  <input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching  <input checked="" type="checkbox"/> 分組報告 Group Report  <input type="checkbox"/> 其他方式說明 Others :
成績評量方式  Grading	<input type="checkbox"/> 期中/期末考：_____%以上英文試題，學生以英文答題_____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告：__100__%以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading) :

### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction to Electronic Engineering	1. Overview of the course and its objectives 2. Introduction to basic electronic concepts and terminology 3. Discussion of the history and development of electronic engineering
W2	Engineering Ethics and Professionalism	1. Overview of engineering ethics and professional responsibilities 2. Discussion of codes of conduct and ethical decision-making 3. Examination of case studies related to engineering ethics
W3	Getting Started with Programming	1. Fundamentals of programming languages 2. Basic programming knowledge such as data types, data containers, flow controls and logic 3. Basic programming practice
W4	Advanced Programming	1. Advanced programming concepts such as functions, classes and objects, etc. 2. Programming practice
W5	Introduction to Programming and Calculus Basics	Overview of Calculus concepts, including 1. limits, 2. derivatives, 3. integrals
W6	Calculus Applications and Advanced	Application of calculus concepts to real-world

	Programming Topics	problems, such as optimization and rate of change
W7	Introduction to Programming and Elementary Mechanics	Kinematics and dynamics in one, two, and three dimensions
W8	Introduction to Programming and Advanced Mechanics	Energy, momentum, and rotation
W9	Midterm Examination	Oral report of project proposal
W10	Introduction to Circuit Design	1. Overview of circuit analysis concepts 2. Setup the tools and environment
W11	Circuit Design of Operational Amplifiers	1. Overview of operational amplifier concepts 2. Basic circuit design practice
W12	Circuit Design of BJT and MOS Amplifiers	1. Basic amplifier circuit design: Choose polarity, bias, coupling capacitor, calculate gain and bandwidth. 2. Differential amplifier circuit design: Design input impedance, calculate gain, choose bias and CMRR. 3. Current mirror circuit design: Design matching ratio, choose mirror and bias circuit, improve accuracy and stability.
W13	Introduction to Microcontroller	1. Overview of microcontroller concepts 2. Setup the tools and environment
W14	General Purpose Input and Output	1. Basic data types, flow controls and logic 2. Introduction to functions of GPIO controls
W15	Concepts of Controlling Heavy Loads	1. Introduction to the concepts between signal control and power control 2. Basic programming practice
W16	Analog Input and Output	1. Introduction to the concepts of ADC 2. Implement the analog control programming 3. Practice analog sensor and actuators
W17	Communication between Devices	1. Overview of microcontroller communication concepts 2. Implement serial, I2C, SPI communications
W18	Final Examination	Oral report of project design

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	數量研究方法 Quantitative Research Methodology	授課教師 Instructor	趙偉成 Wei-Cheng Chao
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教學簡要說明

1.請依照授課班級英文分級程度規劃課程計畫書。

Please design the course plan by following the English using percentage of the course English level.

2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。

Please state bilingual instructor's teaching weeks and hours in course outline section.

課程教材  Material	1.指定課本書名 Book：__ <u>Quantitative Analysis for Management /Design and Analysis of Experiments</u> __ ( __100__%英文內容 Percentage in English) 2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_____ % 3.其他補充說明 Others：
雙語教學方式 (可多選，或簡述)  Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A <input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching <input checked="" type="checkbox"/> 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others：
成績評量方式  Grading	<input checked="" type="checkbox"/> 期中/期末考：__100__%以上英文試題，學生以英文答題__100__%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告：__100__%以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：

課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction	Introduction to Quantitative Research Methodology
W2	Designed Experiments	Designed Experiments
W3	Basic Statistical Methods	Basic Statistical Methods
W4	Basic Statistical Methods	Basic Statistical Methods

W5	Analysis of Variance	Analysis of Variance
W6	Analysis of Variance	Analysis of Variance
W7	Experiments with Blocking Factors	Experiments with Blocking Factors
W8	Experiments with Blocking Factors	Experiments with Blocking Factors
W9	Midterm exam	Midterm exam
W10	Factorial Experiments	Factorial Experiments
W11	Factorial Experiments/ Two-Level Factorial Designs	Factorial Experiments/ Two-Level Factorial Designs
W12	Two-Level Factorial Designs	Two-Level Factorial Designs
W13	Two-Level Fractional Factorial Designs	Two-Level Fractional Factorial Designs
W14	Two-Level Fractional Factorial Designs	Two-Level Fractional Factorial Designs
W15	Regression Modeling	Regression Modeling
W16	Regression Modeling	Regression Modeling
W17	Response Surface Methodology	Response Surface Methodology
W18	Final exam	Final exam

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	資料探勘 Data Mining	授課教師 Instructor	李英聯 Ying-Lien Lee
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教學簡要說明

1.請依照授課班級英文分級程度規劃課程計畫書。

Please design the course plan by following the English using percentage of the course English level.

2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。

Please state bilingual instructor's teaching weeks and hours in course outline section.

課程教材 Material	1.指定課本書名 Book：Data Mining for Business Analytics: Concepts, Techniques and Applications in Python, 1st ed., Galit Shmueli, John Wiley & Sons, Inc. (100% 英文內容 Percentage in English) 2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_____ % 3.其他補充說明 Others：
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A <input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching <input checked="" type="checkbox"/> 分組報告 Group Report <input checked="" type="checkbox"/> 其他方式說明 Others：實作課程 Hands-on sessions
成績評量方式 Grading	<input checked="" type="checkbox"/> 期中/期末考：100%以上英文試題，學生以英文答題100%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input type="checkbox"/> 英文期中/期末報告：_____ %以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：

課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction	Lecture on the overview of Data Mining, the tools we will be using, and the topics we will cover in the course
W2	Data Visualization	Visualization techniques for data exploration
W3	Dimension Reduction (I)	Group presentation; Lecture on Dimension Reduction
W4	Dimension Reduction (II)	Group presentation; Lecture on Dimension Reduction
W5	Multiple Linear Regression	Group presentation; Lecture on Multiple Linear Regression
W6	k-Nearest Neighbors	Group presentation; Lecture on k-Nearest Neighbors

W7	The Naive Bayes Classifier	Group presentation; Lecture on Naive Bayes Classifier
W8	Classification and Regression Trees	Group presentation; Lecture on Trees
W9	Midterm exam	Students have to solve problems presented in a Jupyter Notebook
W10	Combining Methods	Group presentation; Lecture on Combining Methods
W11	Cluster Analysis	Group presentation; Lecture on Cluster Analysis
W12	Association Rules and Collaborative Filtering (I)	Group presentation; Lecture on Collaborative Filtering
W13	Association Rules and Collaborative Filtering (II)	Group presentation; Lecture on Collaborative Filtering
W14	Social Network Analytic	Group presentation; Lecture on Social Network Analytic
W15	Handling Time Series	Group presentation; Lecture on Time Series
W16	Regression-Based Forecasting	Group presentation; Lecture on Regression-Based Forecasting
W17	Text Mining	Group presentation; Lecture on Text Mining
W18	Final exam	Students have to solve problems presented in a Jupyter Notebook

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	模擬學 Simulation	授課教師 Instructor	胡智熊 Chih-Hsiung Hu
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book： <u>Getting Started with AutoMod</u> _ (100 % 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English) <u>100</u> %</p> <p>3.其他補充說明 Others：</p>		

雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input type="checkbox"/> 小組討論 Group Discussion <input type="checkbox"/> 口頭問答 Q&A  <input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching  <input checked="" type="checkbox"/> 分組報告 Group Report  <input type="checkbox"/> 其他方式說明 Others：
成績評量方式 Grading	<input checked="" type="checkbox"/> 期中/期末考： <u>100</u> %以上英文試題，學生以英文答題 <u>100</u> %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告： <u>100</u> %以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：

### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Course Introduction	
W2	Simulation Introduction	The computer simulation approach
W3	Getting Started with AutoMod (GSWA) Chap 1	Principles of Simulation
W4	GSWA Chap 2, 3	Using the software/AutoMod concepts
W5	GSWA Chap 4	Introduction to AutoMod Syntax
W6	GSWA Chap 5	Process System Basics
W7	GSWA Chap 5, 7	Process System Basics Advanced Process System Features
W8	GSWA Chap 13	Indefinite Delays



W9	Midterm	Basic programming skill test
W10	GSWA Chap 8	Basic Statistical Analysis Using AutoStat
W11	GSWA Chap 10	Intermediate Statistical Analysis
W12	Case Study 1	Convey & AGV System case
W13	Case Study 2	Supply chain case
W14	GSWA Chap 14	Additional Features
W15	GSWA Chap 15	Warmup Analysis Using AutoStat
W16	Simulation Methodology	Discrete Event Simulation- The three-phase approach
W17	Simulation Research Review	Research papers review
W18	Final Exam	Final Project presentation

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	永續工程與管理 Sustainable Engineering and Management	授課教師 Instructor	李孟樺 Li, Meng-Hua
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材	1.指定課本書名 Book： ____Smart Manufacturing: National Implementation Framework____		

Material	(__100__% 英文內容 Percentage in English)  2. 自製教材 Self-made Materials：採用英文之比例(Percentage in English)_____%  3. 其他補充說明 Others：
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A <input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input checked="" type="checkbox"/> 協同教學 Collaborative Teaching <input type="checkbox"/> 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others：
成績評量方式 Grading	<input checked="" type="checkbox"/> 期中/期末考：__50__%以上英文試題，學生以英文答題__50__%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告：__100__%以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：

### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Sustainable Development	Explore how companies can achieve long-term economic benefits, while also positively impacting society and the environment, through sustainable development in the economic, social, and environmental aspects.
W2	Climate Change Risk Management in Sustainable Development	This course focuses on the risks that climate change poses to business operations, and how to effectively manage these risks.
W3	The Carbon Neutrality Trend and its Responses	Introduce the concept and importance of carbon neutrality, and how to achieve it through the use of renewable energy and technologies such as carbon capture and storage.
W4	Green Supply Chain Management	Explore how to achieve a company's green goals through green supply chain management.
W5	Sustainable Supply Chain Design	Use sustainable supply chain design to achieve a company's green goals, understand the product lifecycle, reduce resource consumption, and improve recycling rates.
W6	Green Logistics and Cold Chain Management	Reduce a company's carbon emissions through green logistics and cold chain management, assess the carbon

		emissions of logistics transportation, reduce transportation distance, and use clean energy.
W7	Product-Service Systems	Introduce the concept and implementation methods of product service systems, which combine products and services, and explain their architecture.
W8	Awareness and Knowledge of Smart Manufacturing	Provide a deep understanding and knowledge of the basic concepts, features, objectives, and value of smart manufacturing.
W9	Current Status of Promoting and Implementing Smart Manufacturing	Analyze the promotion and implementation status of smart manufacturing in China and internationally, and propose corresponding solutions to factors affecting its development.
W10	Smart Advanced Manufacturing and Rapid Transformation Center	Introduce the concept and functions of smart advanced manufacturing and rapid transformation centers, and explore their roles and importance in promoting the transformation of smart manufacturing.
W11	Midterm Exam - Practical Applications	Test students' understanding and mastery of practical applications related to smart manufacturing.
W12	Smart Manufacturing in Industrial Organizations and Academic Institutions	Analyze the application of smart manufacturing in industrial organizations and academic institutions, and the impact and value of smart manufacturing on them.
W13	Tools and Technologies for Enterprise Readiness Assessment	Provide students with knowledge of existing tools and technologies for evaluating a company's smart manufacturing capabilities, and propose improvement plans.
W14	Industry 3.5 Strategy and Industry 4.0 Revolution	Introduce the concepts and features of Industry 3.5 and the Fourth Industrial Revolution, and explore their impact and significance on the development of smart manufacturing.
W15	International Framework for Smart Manufacturing	Provide an understanding of the international framework and related standards of smart manufacturing, and the trends and importance of international smart manufacturing development.
W16	Technical Capabilities of Smart Manufacturing	Introduce the technical capabilities of smart manufacturing and related technical fields, and provide students with an understanding of the core technologies of smart manufacturing.
W17	Affordability of Smart Manufacturing Technology	Evaluate and manage the investment, costs, and risks involved in implementing smart manufacturing technologies.
W18	Final Exam - Results Report	Conduct a final project report on practical projects related to smart manufacturing and their analysis.

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	商業智慧 Introduction to Business Intelligence	授課教師 Instructor	侯雍聰 Yung-Tsung Hou
<p>教學簡要說明</p> <p>This course aims at giving students an understanding of fundamental BI concepts, terminologies and technologies. Students will learn the theoretical and practical knowledge from both the technical and organization perspectives. The topics of lecturing and discussions include the analysis, design and implementation of BI systems, such as data warehousing, OLAP, decision supporting system, knowledge management system, data mining, big data and other issues.</p>			
課程教材 Material	<p>1.指定課本書名 Book：'Business Intelligence, Analytics, and Data Science: A Managerial Perspective' by R. Sharda (100%英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：補充講義 Lecture Notes 採用英文之比例(Percentage in English)100%</p> <p>3.其他補充說明 Others：網路補充資源 Web Resources 採用英文之比例(Percentage in English)100%</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing <input checked="" type="checkbox"/>小組討論 Group Discussion <input checked="" type="checkbox"/>口頭問答 Q&amp;A</p> <p><input type="checkbox"/>問題導向 Problem Based Learning <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/>分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others：</p>		
成績評量方式 Grading	<p><input type="checkbox"/> 期中/期末考：_____%以上英文試題，學生以英文答題_____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input checked="" type="checkbox"/>英文期中/期末報告：_____%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/>全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：</p>		
課程進度 Course Outline			

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction of Business Intelligence	An overview and the big picture of BI systems
W2	The Framework for Business Intelligence	Definitions of BI, the Architecture of BI
W3	BI Descriptive Analytics I	Nature of Data and Statistics Modeling
W4	BI Descriptive Analytics II	Data Visualization
W5	BI Descriptive Analytics III	BI Data Model and Star Schema
W6	BI Descriptive Analytics IV	Data Warehouses
W7	BI Predictive Analytics I	Introduction of Data Mining
W8	BI Predictive Analytics II	Data Mining Process and Methods
W9	Midterm	Report
W10	BI Predictive Analytics III	Data Mining Algorithms
W11	BI Predictive Analytics IV	Text, Web and Social Media Analytics
W12	BI Prescriptive Analytics I	Optimization
W13	BI Prescriptive Analytics II	Simulation
W14	Big Data Concepts	Definition of Big Data
W15	Big Data Tools	Big Data Ecosystems
W16	BI Privacy Management	Issues of Legality, Privacy and Ethics
W17	The future of BI	Future Trends of BI
W18	Final Exam	Report

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	大數據彙整與建模 ETL and Modeling of Big Data	授課教師 Instructor	胡念祖 Nian -Ze Hu
<p style="text-align: center;">教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。</p> <p>This introductory course gives an overview of many concepts, techniques, and processes in Big Data, beginning with topics such as business process and data business matrix and ending up with more recent topics such as slowly changing dimension, bridge tables and some advance fact table techniques.. The course will give the students the basic ideas and intuition behind modern data modeling methods as well as a bit more formal understanding of how, why, and when they work. The underlying theme in the course is ETL method as it provides the data flow for most of the scenarios covered.</p> <p>Help students obtain the skills of:</p> <p>The goal of this course is to give an introduction to the modeling technique of Big Data. The course will teach student basic skills to decide which approaches to use for what scenarios, build up your own data warehouse structure., etc</p> <p>Instructor introduces the concepts and provides some workshop for students.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。</p> <p>Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材 Material	<p>1.指定課本書名 Book：Data Science from Scratch, Joel Grus, O'Reilly ( <u>100</u> % 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_____ %</p> <p>3.其他補充說明 Others：</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing   <input checked="" type="checkbox"/>小組討論 Group Discussion   <input type="checkbox"/>口頭問答 Q&amp;A</p> <p><input type="checkbox"/>問題導向 Problem Based Learning   <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/>分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others：</p>		

成績評量方式 Grading	<p>■期中/期末考： <u>30</u> %以上英文試題，學生以英文答題_____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p>■英文期中/期末報告： <u>30</u> %以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p>■其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading )： Attendance 20%, Workshop 20%</p>
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#### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Big Data	
W2	•Introduction to Big Data	
W3	•Architecture	
W4	•Database fundamental	
W5	•Data Modeling	
W6	•Dimensions	
W7	•Modeling Myths	
W8	• Project and team group discussion	
W9	Midterm	
W10	• Fact Table Techniques	
W11	• Dimension Table Techniques	
W12	Machine Learning	

W13	• Design for various Scenarios	
W14	• ETL Modeling	
W15	•ETL Plan	
W16	•ETL Implmentation	
W17	•Project and team group discussion	
W18	Final Exam	

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	資訊管理專題研討(一) Seminar on Information Management(1)	授課教師 Instructor	林彥昆 Yen-Kun Lin
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。</p> <p>The goal of the seminar on information management(1) is to introduce the underlying concepts, methods, and the potential of intelligent systems in the medicine field. We will explore foundational methods in artificial intelligence(AI), virtual reality(VR) and augmented reality(AR), and apply them to digital dentistry including, but not limited to, landmark detection in lateral cephalometry, diagnosis and problem analysis, treatment planning and prognosis, prediction of facial attractiveness, determination of the degree of <b>cervical vertebra</b> maturation, the need for extractions and suturing training. As a research and project-based course, students could have the chances to identify and specialize in particular AI methods, dentistry application and relevant tools.</p> <p>All students are assigned to a set of smaller groups (4-6 students) and each group is supposed to work together to carry out the assigned project. The assigned project includes paper survey, slides making, presentation and implementation. Every member of the team is expected contribute equally to the project. The entire team will share the same score for each release; however, if the instructor/members identify others who have not contributed (or have contributed above and beyond), the score will be varied accordingly.</p> <p>At the end of this course, each student will be able to</p> <p>(a) Understand the benefit of the information management in the business such as Amazon.</p> <p>(b) Comprehend a collection of machine learning models and VR/AR (identified and covered in this course),</p>			



<p>and their applications in dentistry.</p> <p>(c) Identify and apply appropriate intelligent systems models and computational tools to specific problem in dentistry.</p> <p>(d) Analyze the performance of specific models as applied to dental problem such orthodontics, and justify their use and limitation.</p> <p>(e) Identify, understand and interpret methods and evidence from AI/VR/AR and other relevant literature.</p> <p>(f) Effectively communicate and <b>disseminate</b> knowledge in any science and engineering domain.</p>		
<p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>		
<p>課程教材</p> <p>Material</p>	<p>1..指定課本書名 Book： (0%英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)___100___%</p> <p>3.他補充說明 Others：All material is from journal paper, Amazon shareholder letter and other online material about information management.</p>	
<p>雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies</p>	<p>■教材講述 Lecturing   ■小組討論 Group Discussion   □口頭問答 Q&amp;A □問題導向 Problem Based Learning   □協同教學 Collaborative Teaching ■分組報告 Group Report ■其他方式說明 Others：The instructor introduces how the AI and information management improve the performance and overcome the current challenge in the dental field via review papers. Then, students could choice one of the techniques and implement it based on the review papers. During the implementation, discussions could be done several times in courses. Finally, students have a presentation showing the implementation, results, discussion and conclusion.</p>	
<p>成績評量方式</p> <p>Grading</p>	<p>■期末考： <u>100</u> %以上英文試題，學生以英文答題<u>100</u> %，佔學期成績:20%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. ■英文期中/期末報告： <u>100</u> %以英文表達，佔學期成績:30%。 The percentage of using English in midterm or final oral presentation ■全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have ■其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading )： Attendance:5%, Implementation:30%, Discussion:15%</p>	
<p align="center"><b>課程進度 Course Outline</b></p>		
<p>週次</p> <p>Week</p>	<p>單元/主題</p> <p>Unit/Topic</p>	<p>教學活動重點及教材內容</p> <p>Teaching Activities</p>
<p>W1</p>	<p>•Course Introduction</p>	<p>1.What is Information Management? <a href="http://www.aiim.org/What-is-Information-Management#">http://www.aiim.org/What-is-Information-Management#</a> 甲、 Bring on shareholders who align with your value 3.Review paper reading: Scope and performance of</p>

		artificial intelligence technology in orthodontic diagnosis, treatment planning, and clinical decision-making-A systematic review
W2	•The Current State of Play	1.A Happy Place to Be <a href="http://www.egltd.com/dmrarchive/1996-10.pdf">http://www.egltd.com/dmrarchive/1996-10.pdf</a> 2.1998 Stay terrified of your customers 3.Review paper reading: Scope and performance of artificial intelligence technology in orthodontic diagnosis, treatment planning, and clinical decision-making-A systematic review
W3	•A Short Survey of Existing Technologies and Practices	1.Predictive Analytics Business Applications <a href="https://predictionimpact.com/predictive.analytics.html">https://predictionimpact.com/predictive.analytics.html</a> 2.1999 Build on top of infrastructure that's improving on its own 3.Review paper reading: Scope and performance of artificial intelligence technology in orthodontic diagnosis, treatment planning, and clinical decision-making-A systematic review
W4	•Content Management Project phases	1.10 principles of effective information management <a href="https://www.steptwo.com.au/papers/kmc_effectiveim/">https://www.steptwo.com.au/papers/kmc_effectiveim/</a> 2.2000 <a href="#">In lean times, build a cash moat</a> 3.Review paper reading: Machine learning and orthodontics, current trends and the future opportunities: A scoping review
W5	•Paper reading & discussion	1.2001 <a href="#">Measure your company by your free cash flow</a> 2.Review paper reading: Machine learning and orthodontics, current trends and the future opportunities: A scoping review
W6	•Paper reading & discussion	1.2002 <a href="#">Build your business on your fixed costs</a> 2.Review paper reading: Machine learning and orthodontics, current trends and the future opportunities: A scoping review
W7	•Mid-term presentation (Motivation/Objective)	1.Decision about the paper for the implementation 2.2003 <a href="#">Long-term thinking is rooted in ownership</a>
W8	•Paper reading & method discussion	1.2004 <a href="#">Free cash flow enables more innovation</a> 2.Review paper reading: PointNet++
W9	• Paper reading & method discussion	1.Presentation 2.2007 <a href="#">Missionaries build better products</a>
W10	•Paper reading & method discussion	1. Presentation 2. 2009 <a href="#">Focus on inputs — the outputs will take care of themselves</a>
W11	•Paper reading & method discussion	1. Presentation 2. 2010 <a href="#">R&amp;D should pervade every department</a>
W12	•Paper reading & method discussion	1. Presentation 2. 2012 <a href="#">Surprise and delight your customers to build long-term trust</a>
W13	•Paper reading & method discussion	1. Presentation 2. 2013 <a href="#">Decentralize decision-making to generate innovation</a>

W14	•Paper reading & method discussion	1. Presentation 2. 2015 <a href="#">Don't deliberate over easily reversible decisions</a>
W15	• <b>Final presentation</b> (Implementation/Discussion/Conclusion)	1. Presentation 2. 2016 <a href="#">Move fast and focus on outcomes</a>
W16	• <b>Final presentation</b> (Implementation/Discussion/Conclusion)	1. Presentation 2. 2017 <a href="#">Build high standards into company culture</a>
W17	• <b>Final presentation</b> (Implementation/Discussion/Conclusion)	1. Presentation 2. 2019 <a href="#">In times of crisis, be aggressive and agile &amp;</a> 2020 <a href="#">(final letter): Company culture can be both employee-centric and customer-centric</a>
W18	• <b>Final exam</b>	Amazon shareholder letter

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	社群網路分析 Social Network Analysis	授課教師 Instructor	羅亦斯 Louis Yi-Shih Lo
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book：_Social Network Analysis 4th Edition by John Scott (_100% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)___30___%</p> <p>3.其他補充說明 Others：網路補充資源 Web Resources 採用英文之比例(Percentage in English) 50%</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing   <input type="checkbox"/>小組討論 Group Discussion   <input type="checkbox"/>口頭問答 Q&amp;A</p> <p><input type="checkbox"/>問題導向 Problem Based Learning   <input checked="" type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/>分組報告 Group Report</p>		

	<input type="checkbox"/> 其他方式說明 Others：
成績評量方式 Grading	<input checked="" type="checkbox"/> 期中/期末考： <u>30</u> %以上英文試題，學生以英文答題 <u>20</u> %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input type="checkbox"/> 英文期中/期末報告： _____ %以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：

### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	What is Social Network Analysis?	An overview of social network analysis in IS field.
W2	The History of Social Network Analysis	A rapid overview of the ways in which social network analysis has developed in sociology, social anthropology and social psychology.
W3	Mathematical Foundations	Graphs, paths, adjacency matrices, ways and modes, matrix products
W4	Data Collection for Social Network Analysis (I)	Introduction of types of data collection in social network analysis
W5	Data Collection for Social Network Analysis(II)	Introduction of network questions, question formats, interviewee burden, data reliability, and data from electronic sources
W6	Organizing and Analyzing Network Data	Introduction of matrices, relational data matrix conventions
W7	Terminology for Network Analysis	
W8	Popularity, Mediation and Exclusion	Introduction of the concept of local and overall centrality, mediation, betweenness centrality, centralisation and graph centres.
W9	Midterm	Report
W11	Groups, Factions and Social Divisions	Focusing on the Identifying subgraphs, the components of a network, the strength and stability of components, and cycles and circuits.
W12	Structural Locations, Classes and Positions	The structural equivalence of points Clusters and similarity

W13	Social Change and Development	Structural change and unintended consequences, Small-world networks
W14	Visualizing and Modelling	Using multi-dimensional scaling and principal components and factors to visualize network
W15	UCINET Software Practice(I)	Data Management
W16	UCINET Software Practice(II)	Multivariate Techniques Used in Network Analysis
W17	UCINET Software Practice(III)	Visualization and Testing Hypothesis
W18	Final exam	Report

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	程式設計 (一) Computer Programming (I)	授課教師 Instructor	藍友烽 LAN, YU-FENG
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book： ( _100%英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English) <u>30</u> %</p> <p>3.他補充說明 Others：網路補充資源 Web Resources 採用英文之比例(Percentage in English) 70%</p>		

雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input type="checkbox"/> 小組討論 Group Discussion <input type="checkbox"/> 口頭問答 Q&A  <input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching  <input type="checkbox"/> 分組報告 Group Report  <input type="checkbox"/> 其他方式說明 Others：
成績評量方式  Grading	<input checked="" type="checkbox"/> 期中/期末考： <u>30</u> %以上英文試題，學生以英文答題 <u>30</u> %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.  <input type="checkbox"/> 英文期中/期末報告： _____%以英文表達。 The percentage of using English in midterm or final oral presentation  <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have  <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：

### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction to Course	Overview of the course and learning environment
W2	Variables	How to declare and use variables, data types, and expressions
W3	Input and Output	Using input and output
W4	Conditional Statements	Analysis and application of if/else statements and switch/case statements
W5	Looping Concept (I)	Writing techniques for for loops and fixed number loops
W6	Looping Concept (II)	Writing techniques for while loops and indefinite loops
W7	Advanced Flow Control	Writing techniques for combining conditional statements and loops
W8	Lists	Overview and application of List methods and concepts

W9	Midterm	Test
W10	Midterm Review	Review of exam questions and discussion
W11	Functions	Writing and calling custom functions and using built-in functions
W12	Sets and Tuples	Overview and application of set and tuple concepts
W13	Dictionaries	Using multi-dimensional scaling and principal components and factors to visualize network
W14	Strings	How to use string in data processing
W15	Strings, Lists, Sets, Dictionaries (I)	What different application about data type techniques
W16	Strings, Lists, Sets, Dictionaries (II)	Integration of strings and lists, and their practical application
W17	File Management	Overview and application of file concepts
W18	Final exam	Final assessment

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	行銷管理 Marketing Management	授課教師 Instructor	徐怡 Yi Hsu
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			

課程教材  Material	1.指定課本書名 Book：Principles of Marketing 18 <sup>th</sup> Edition（100 % 英文內容 Percentage in English） 2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)100 % 3.其他補充說明 Others：	
雙語教學方式 (可多選，或簡述)  Bilingual Teaching Strategies	■教材講述 Lecturing   ■小組討論 Group Discussion   ■口頭問答 Q&A  ■問題導向 Problem Based Learning   ■協同教學 Collaborative Teaching  ■分組報告 Group Report  ■其他方式說明 Others：Field Trip	
成績評量方式  Grading	■期中/期末考：100 %以上英文試題，學生以英文答題 100 %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. ■英文期中/期末報告：100 %以英文表達。 The percentage of using English in midterm or final oral presentation ■全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have ■其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：Field Trip 全程英文導覽 100% 英文表達	
課程進度 Course Outline		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Part 1: Defining Marketing and the Marketing Process: Ch1 Marketing: Creating Customer Value and Engagement	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W2	Ch2 Company and Marketing Strategy: Partnering to Build Customer Engagement, Value, and Relationship	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W3	Part 2: Understanding the Marketplace and Customer Value Ch3 Analyzing the Marketing Environment	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W4	Ch4 Managing Marketing Information to Gain Customer Insights	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report



W5	Ch5 Customer Markets and Buyer Behavior	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W6	Ch6 Business Markets and Business Buyer Behavior	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W7	Part 3 Designing a Customer Value-Driven Strategy and Mix Ch7 Customer Value-Driven Marketing Strategy: Creating Value for Target Customers	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W8	Ch8 Products, Services, and Brands: Building Customer Value	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W9	Midterm Exam – Field Trip	
W10	Ch9 Developing New Products and Managing the Product Life Cycle	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W11	Ch10 Pricing: Understanding and Capturing Customer Value	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W12	Ch11 Pricing Strategies: Additional Considerations	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W13	Ch12 Marketing Channels: Delivering Customer Value	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W14	Ch13 Retailing and Wholesaling	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W15	Ch14 Engaging Consumers and Communicating Customer Value: Integrated Marketing Communications Strategy	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W16	Ch15 Advertising and Public Relations	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W17	Ch16 Personal Selling and Sales Promotion	Lecturing, Group Discussion, Q&A, Problem Based Learning, Group Report
W18	Final Project Presentation	

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	公司財務管理 Corporate Financial Management	授課教師 Instructor	呂麒麟 Chilin Lu
<p style="text-align: center;">教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level. This course studies fundamentals of corporate finance and capital markets, emphasizing the financial aspects of managerial decisions. The course introduces most areas of corporate finance, including the financial statements, valuation of financial assets, capital budgeting, risk management, long term financial policy, short term financial planning, cash management and dividend policy. The course draws heavily on empirical research to help guide managerial decisions, so students have to read some journal papers and present it in the class on the same times.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book : <u>Corporate finance core principles &amp; applications, 5<sup>th</sup> ed.</u> ( __100__% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials : 採用英文之比例(Percentage in English)_____%</p> <p>3.其他補充說明 Others :</p>		
雙語教學方式 (可多選，或簡述)  Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing    <input type="checkbox"/>小組討論 Group Discussion    <input checked="" type="checkbox"/>口頭問答 Q&amp;A</p> <p><input type="checkbox"/>問題導向 Problem Based Learning    <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input type="checkbox"/>分組報告 Group Report</p> <p><input checked="" type="checkbox"/>其他方式說明 Others :</p>		
成績評量方式  Grading	<p><input checked="" type="checkbox"/> 期中/期末考：__100__%以上英文試題，學生以英文答題__100__%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input type="checkbox"/> 英文期中/期末報告：_____ %以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading ) :</p>		

課程進度 Course Outline		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction	Lecturing and discussion
W2	Financial statements	Lecturing and discussion
W3	Cash flow	Lecturing and discussion
W4	Financial long term planning	Lecturing and discussion
W5	Discounted cash flow valuation	Lecturing and discussion
W6	Interest rates and financial market	Lecturing and discussion
W7	Bond valuation	Lecturing and discussion
W8	Stock valuation	Lecturing and discussion
W9	Mid-term exam.	Examination
W10	Net present value	Lecturing and discussion Lecturing and discussion
W11	IRR and other criteria	Lecturing and discussion Lecturing and discussion
W12	Making capital investment decisions	Lecturing and discussion Lecturing and discussion
W13	Risk analysis	Lecturing and discussion Lecturing and discussion
W14	Capital budgeting	Lecturing and discussion Lecturing and discussion
W15	Risk and return	Lecturing and discussion Lecturing and discussion
W16	CAPM	Lecturing and discussion Lecturing and discussion

W17	Efficient capital markets	Lecturing and discussion Lecturing and discussion
W18	Final exam.	Examination

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	企業資料分析 Business Data Analysis	授課教師 Instructor	梁直青 Liang, Chih-Chin
<p style="text-align: center;">教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。</p> <p>Experiments and surveys need statistics to find the useful implications behind to the audiences. Nowadays, the use of structural equation modeling (SEM) and advanced statistics methods have mushroomed in these decades. SEM is widely recognized as one of the most powerful and most comprehensive methods for testing causal relationships among factors. Data mining, or intelligent analysis of information stored in data sets, has recently gained a substantial interest among practitioners in a variety of fields and industries. Nowadays, almost every organization collects data, which can be analyzed to make better decisions, conclude customer patterns, improve policies, detect credit fraud, predict important events, monitor, and evaluate reliability, etc.</p> <p>The course will provide conceptual bases of SEM and advance statistics as well as applications necessary to undertake research. Students will learn to critically think about causal relations, measurement of variables, and testing of theories. There will also be plenty of demonstrations and hands-on exercises using SPSS AMOS version 18. Additionally, this course will provide the participants with understanding of the data mining methodologies, and with the ability of formulating and solving problems with them. Students will have a chance to understand the complicated environment of today's data mining business market.</p>			
課程教材 Material	<p>1.指定課本書名 Book : _____ (_____% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials : 採用英文之比例(Percentage in English)_100_%</p> <p>3.其他補充說明 Others :</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/> 教材講述 Lecturing <input type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&amp;A</p> <p><input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching</p> <p><input type="checkbox"/> 分組報告 Group Report</p>		

	<input type="checkbox"/> 其他方式說明 Others：
成績評量方式 Grading	<p>V 期中/期末考：__100__%以上英文試題，學生以英文答題__100__%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p>V 英文期中/期末報告：__100__%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p>V 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：</p>

### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction	Lecturing
W2	What is research?	Lecturing
W3	Define questions	Lecturing
W4	How to write motivations? What is a good research motivation?	Lecturing and 20 mins of student's presentation
W5	What are the famous theories within 3 years in MIS, Finance, or Industrial Management?	Lecturing and 20 mins of student's presentation
W6	Compare the PLS-SEM and Consistent PLS-SEM algorithms	Lecturing and 20 mins of student's presentation
W7	What is Bootstrapping and Consistent Bootstrapping algorithm?	Lecturing and 20 mins of student's presentation
W8	What is Blindfolding and when do we need it?	Lecturing
W9	Mid-Exam	Mid-exam
W10	Introduce Confirmatory Tetrad Analysis (CTA).	Lecturing
W11	Introduce Importance Performance Map Analysis (IPMA).	Lecturing and 20 mins of student's presentation

W12	Introduce Prediction-Oriented Segmentation (POS) and Introduce PLS Predict Algorithm.	Lecturing and 20 mins of student's presentation
W13	Introduce Finite Mixture Segmentation (FIMIX)	Lecturing and 20 mins of student's presentation
W14	Introduce Multi-group Analysis (PLS-MGA)	Lecturing and 20 mins of student's presentation
W15	Introduce Permutation algorithm	Lecturing
W16	How to do spotlight analysis	Lecturing and Practicing
W17	How to run PROCESS (an embedded component for testing the analytical results of SPSS Statistics)?	Lecturing and Practicing
W18	Final Report	Final Report

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	激勵與領導 Motivation and Leadership	授課教師 Instructor	劉慶湘 Ching-Hsiang Liu
<p style="text-align: center;">教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book：__Principles of Leadership__ ( __100__% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_100__%</p> <p>3.其他補充說明 Others：</p>		

雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A <input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching <input type="checkbox"/> 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others：
成績評量方式 Grading	<input type="checkbox"/> 期中/期末考：_____%以上英文試題，學生以英文答題_____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告：_100_%以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：

### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction	Introduce the class requirements and formats
W2	Motivation Theories	Understanding the contemporary motivation theories
W3	The Nature and Importance of Leadership	The meaning of leadership The impact of leadership on organizational performance Leadership roles
W4	Traits, Motives, and Characteristics of Leaders	Personality traits of effective leaders Leadership Motives
W5	Charismatic and Transformational Leadership	The meanings of charisma Types of charismatic leaders Characteristics of charismatic leaders Transformational leadership
W6	Leadership Behaviors, Attitudes, and Styles	Task-related attitudes and behaviors Relationship-oriented attitudes and behaviors
W7	Contingency and Situational Leadership	Situational influences on effective leadership behavior The path-goal theory of leadership effectiveness

W8	Leadership Ethics and Social Responsibility	Principles and practices of ethical and moral leadership What Makes a Leader? <i>Daniel Goleman</i>
W9	Power, Politics, and Leadership	Sources and types of power Factors that contribute to organizational politics What Makes an Effective Executive? <i>Peter F. Drucker</i>
W10	Influence Tactics of Leaders	A model of power and influence The Work of Leadership. <i>Roanld A. Heifetz and Donald L. Laurie</i>
W11	Developing Teamwork	Leader's action that foster teamwork What Leaders Really Do. <i>John P. Kotter</i>
W12	Motivation and Coaching Skills	Expectancy theory and motivation skills Discovering Your Authentic Leadership. <i>Bill George, Peter Sims, Andrew N. McLean, and Diana Mayer</i>
W13	Communication and Conflict Resolution Skills	Inspirational and powerful communication Listening as a leadership skill Crucibles of Leadership. <i>Warren G. Bennis and Robert J. Thomas</i>
W14	Creativity, Innovation, and Leadership	Characteristics of creative leaders Overcoming traditional thinking as a creative strategy Why Should Anyone Be Led by you? <i>Robert G. Bennis and Robert J. Thomas</i>
W15	International and Culturally Diverse Aspects of Leadership	Cultural factors influencing leadership practice Seven Transformations of Leadership. <i>David Rooke and William R. Torbert</i>
W16	Strategic Leadership and Knowledge Management	The nature of strategic leadership Knowledge management and the learning organization Level 5 Leadership: The Triumph of Humility and Fierce Resolve. <i>Jim Collins</i>
W17	Leadership Development and Succession	Development through self-awareness and self-discipline Development through education, experience, and mentoring In Praise of the Incomplete Leader. <i>Deborah Ancona, Thomas W. Malone, Wanda J. Orlikowski and Peter M. Senge</i>
W18	Final Project Due	Reflections



# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	創業管理 Entrepreneurial Management	授課教師 Instructor	陳鈺淳 Yu-Chun Chen
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材 Material	<p>1.指定課本書名 Book : Barringer, B. R., &amp; Ireland, R. D. (2018). <i>Entrepreneurship: Successfully Launching New Ventures (6th Edition)</i>. New York: Pearson. (_100_% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials : 採用英文之比例(Percentage in English)_100_%</p> <p>3.其他補充說明 Others : Inc., Entrepreneur, and Fast Company</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input type="checkbox"/> 口頭問答 Q&amp;A</p> <p><input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/> 分組報告 Group Report</p> <p><input type="checkbox"/> 其他方式說明 Others :</p>		
成績評量方式 Grading	<p><input checked="" type="checkbox"/> 期中/期末考 : _100_%以上英文試題，學生以英文答題_100_%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input checked="" type="checkbox"/> 英文期中/期末報告 : _100_%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading ) : Harvard Simulation (English)</p>		
課程進度 Course Outline			
週次	單元/主題	教學活動重點及教材內容	

Week	Unit/Topic	Teaching Activities
W1	<ul style="list-style-type: none"> <li>• Overview of class</li> <li>• The entrepreneurship ecosystem</li> </ul>	
W2	<ul style="list-style-type: none"> <li>• Chapter 1: Introduction to Entrepreneurship</li> </ul>	<p>This chapter (1) introduces the book, (2) provides an overview of the entrepreneurial process, and (3) introduces a conceptual model that shows how the entrepreneurial process typically unfolds. The model, which is shown at the top of the next page, depicts the entrepreneurial process as a 10-step process, beginning with the decision to become an entrepreneur. The chapters of the book follow the model. We hope that this approach provides your students a nice visual way of understanding how the entrepreneurial process unfolds.</p>
W3	<ul style="list-style-type: none"> <li>• Chapter 2: Recognizing Opportunities and Generating Ideas</li> </ul>	<p>This chapter begins by describing the difference between an opportunity and an idea. Students are reminded that many firms fail, not because the entrepreneurs involved didn't work hard, but because there was no real opportunity to begin with. The four components of a favorable opportunity (attractive, durable, timely, and anchored in a product, service, or business that adds value) are then discussed. The middle of the chapter focuses on the three primary ways that entrepreneurs discover opportunities: by studying environmental trends, solving a problem, or finding gaps in the marketplace. This material is followed by a discussion of the personal characteristics of entrepreneurs that heighten their ability to recognize business opportunities. The chapter then transitions to talking about techniques that can help entrepreneurs come up with new business or product ideas. The techniques introduced include brainstorming, focus groups, library and Internet research, and an assortment of other techniques.</p>
W4	<ul style="list-style-type: none"> <li>• Chapter 2: Recognizing Opportunities and Generating Ideas</li> </ul>	
W5	<ul style="list-style-type: none"> <li>• Chapter 3: Feasibility Analysis</li> </ul>	<p>This chapter introduces feasibility analysis, and makes the case for the importance of feasibility analysis as a way of testing the potential viability of a business idea. The chapter stresses that the proper time to complete a feasibility analysis is after opportunity recognition but before the completion of a business plan. The value of completing a concept statement is discussed. A concept statement is a one-page description of a business idea, which an entrepreneur uses to solicit feedback about the potential viability of the idea.</p>
W6	<ul style="list-style-type: none"> <li>• Chapter 3: Feasibility Analysis</li> </ul>	<p>The four stages of feasibility analysis are introduced, including product/service feasibility, industry/target market feasibility, organizational feasibility, and financial feasibility. The major issues to consider in each stage of feasibility analysis are introduced and discussed. The chapter concludes by introducing First Screen, which is a</p>

		feasibility analysis template. It is called First Screen because a feasibility analysis is an entrepreneur's initial pass at determining the feasibility of a business idea.
W7	<ul style="list-style-type: none"> <li>Chapter 4: Developing an Effective Business Model</li> </ul>	<p>This chapter introduces the concept of the business model. A business model is defined as a firm's plan or recipe for how it creates, delivers and captures value. The chapter discussed the two general categories of business models: standard business models and disruptive business models. Examples of both standard and disruptive business models are provided.</p> <p>The middle portion of the chapter introduces The Barringer/Ireland Business Model Template. It is slightly more comprehensive than the Business Model Canvas in that it consists of 4 major categories and 12 individual parts.</p>
W8	<ul style="list-style-type: none"> <li>Chapter 4: Developing an Effective Business Model</li> </ul>	<p>The final section of the chapter explains each of the components of the Barringer/Ireland Business Model Template. The first category, Core Strategy, consists of Business Mission, Basis of Differentiation, Target Market, and Product/Market Scope. The second category, Resources, consists of core competencies and key assets. The third category, Financials, consists of Revenue Streams, Cost Structure, and Financing/Funding. The final category, Operations, consists of Product (or service) Production, Channels, and Key Partners.</p>
W9	<i>Mid-term Exam</i>	
W10	<ul style="list-style-type: none"> <li>Chapter 5: Industry and Competitor Analysis</li> </ul>	<p>Chapter 5 focuses on industry analysis. A critical aspect of any start-up's chances for success is the industry it enters, and how it positions itself relative to its industry rivals. The Greenvelope feature at the beginning of the chapter provides an example of how a start-up positioned itself in a savvy manner in a difficult industry. The chapter examines industry dynamics by first talking about the importance of studying industry trends and then by walking through Porter's five forces that determine industry profitability. This discussion concludes with an explanation of the four industry-related questions that a new firm should ask before proceeding. The five industry types and the opportunities they offer are explained and discussed.</p>
W11	<ul style="list-style-type: none"> <li>Chapter 5: Industry and Competitor Analysis</li> </ul>	<p>The chapter concludes with a discussion of competitor analysis. The three groups of competitors a new firm must face are introduced and discussed. A description of how firms collect competitive analysis is provided. The chapter concludes with a description of how to complete a competitive analysis grid.</p>
W12	<ul style="list-style-type: none"> <li>Harvard Simulation</li> </ul>	

W13	<ul style="list-style-type: none"> <li>• Chapter 6: Writing a Business Plan</li> </ul>	This chapter introduces the important topic of writing a business plan, which is a step that all start-up firms should go through. An emphasis is placed on the proper time to write a business plan – it should follow the completion of a feasibility analysis. An emphasis is also placed on the reasons for writing a business plan, who reads the plan and what they’re looking for, and guidelines for writing a business plan.
W14	<ul style="list-style-type: none"> <li>• Chapter 6: Writing a Business Plan</li> </ul>	The bulk of the chapter provides an outline of a comprehensive business plan. The chapter ends with a section titled “Presenting the Business Plan to Investors.” This section provides guidelines on how to present a business plan to a group of investors in the most effective manner possible.
W15	<ul style="list-style-type: none"> <li>• Harvard Simulation</li> </ul>	
W16	<ul style="list-style-type: none"> <li>• Chapter 7: Unique Marketing Issue</li> </ul>	This chapter focuses on the ethical and legal challenges involved with starting a firm. Most entrepreneurs overestimate their knowledge of the legal issues involved with starting and running a business. As a result, it is necessary for an entrepreneur to thoroughly review the legal issues involved to make sure that a costly mistake isn’t made.
W17	<ul style="list-style-type: none"> <li>• Chapter 7: Unique Marketing Issue</li> </ul>	The chapter begins by discussing the most important ethical and legal issues facing a new firm, including establishing a strong ethical culture for the firm, choosing an attorney, drafting a founder’s (or shareholder’s) agreement, and avoiding legal disputes. The chapter next discusses the licenses and permits that businesses need before they can start conducting business. The chapter ends with a discussion of the different forms of business organization available to new firms, including sole proprietorships, partnerships, corporations, and limited liability companies.
W18	<i>Startup Challenge</i>	

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	公司理財 Corporate Finance	授課教師 Instructor	王若愚 Wang Jo-Yu
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book：_ GuerardJr2021_Book_QuantitativeCorporateFinance / by Guerard Jr., John B., and Gultekin, Mustafa. (2021) __ (_100% 英文內容 Percentage in English) 圖書館電子書</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_100_%</p> <p>3.其他補充說明 Others：</p>		
雙語教學方式 (可多選，或簡述)  Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing <input checked="" type="checkbox"/>小組討論 Group Discussion <input checked="" type="checkbox"/>口頭問答 Q&amp;A</p> <p><input checked="" type="checkbox"/>問題導向 Problem Based Learning <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/>分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others：</p>		
成績評量方式  Grading	<p><input checked="" type="checkbox"/>期中/期末考：_100_____%以上英文試題，學生以英文答題_100_____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input checked="" type="checkbox"/>英文期中/期末報告：_100_____%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/>全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input checked="" type="checkbox"/>其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading )：課堂討論</p>		

**課程進度 Course Outline**

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction of the course 1. discounted cash flow 2. NPV method 3. bond and stock valuation	
W2	Efficient Market Hypothesis the reference and research	
W3	risk and return: how do we measure the risk of a listed firm	
W4 W5	CAPM: theory and empirical studies CAPM: Fama-French three-factor model (1993) CAPM: Stambaugh and Yuan (2016) 4-factor model Carhart, Mark (1997), "On Persistence in Mutual Fund Performance," The Journal of Finance, vol. 52, 57–82. CAPM: Fama-French five factor-model: A five-factor asset pricing model (2015, Journal of financial economics, 116, 1-22.)	CAPM discussion
W6 W7	Capital Expenditure (CE) and firm value (FV): 1. how to apply CE in test FV changes 2. reference and assigned readings	
W8	Mid-term report and discussion	
W9 W10	Payout policy: 1. dividend policy 2. share repurchase programme JM Miller, JJ McConnell (1995) Open-market share repurchase programs and bid-ask spreads on the NYSE: Implications for corporate payout policy, JFQA D Ikenberry, J Lakonishok, T Vermaelen (1995) Market underreaction to open market share repurchases, Journal of financial economics	Payout policy case studies
W11	1. Paper and theory review 2. Discussion	Paper Discussion
W12 W13 W14	Capital structure: MM theory and optimal capital structure Bradley, G. Jarrell, E. KimOn (1984). The existence of an optimal capital structure: Theory and evidence, The	

	journal of Finance.  Abeywardhana, Y. (2017) Capital structure theory: An overview, Accounting and finance research	
W15	Students presentation I	presentation
W16	Students presentation II	presentation
W17	Term review	
W18	Final exam	

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	計量經濟學 Econometrics	授課教師 Instructor	蔡豐澤 Tsai, Feng-Tse
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book：__ Introductory Econometrics: a modern approach __ (_100_% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_____%</p> <p>3.其他補充說明 Others：</p>		

雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A  <input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching  <input type="checkbox"/> 分組報告 Group Report  <input type="checkbox"/> 其他方式說明 Others：	
成績評量方式 Grading	<input checked="" type="checkbox"/> 期中/期末考：_100_%以上英文試題，學生以英文答題____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input type="checkbox"/> 英文期中/期末報告：____%以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：	
<b>課程進度 Course Outline</b>		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Course introduction	Course contents, evaluation, programming
W2	Nature of econometrics and economic data	Econometrics Empirical economic analysis Structure of economic data
W3	Simple regression model	Definition Deriving OLS Properties of OLS
W4	Simple regression model	Unit of measurement and functional form Expected values and variances of OLS estimators Regression with/without constants Regression on binary explanatory variable
W5	Multiple regression model	Motivation Mechanics and interpretation Expected value of OLS estimators
W6	Multiple regression model	Variance of OLS estimators Efficiency Applications
W7	Multiple regression model	Sample distributions Testing hypotheses Confidence intervals
W8	Multiple regression model	Consistency Asymptotic normality



		Large sample inference
W9	Mid-term exam	W1-W8 contents
W10	Multiple regression model	Dummy variable Binary dependent variable
W11	Multiple regression model	Policy analysis
W12	Heteroskedasticity	Consequences Heteroskedasticity-robust inference Testing WLS
W13	Specification and data issues	Misspecification Proxy variables Measurement error Missing data, nonrandom samples, and outliers
W14	Instrumental variables estimation	Omitted variables Two-stage least squares
W15	Instrumental variables estimation	IV and errors-in-variables problems Testing for endogeneity
W16	Empirical project	Posing a question Literature review Data collection
W17	Empirical project	Econometric analysis Writing
W18	Final presentation	Presentation of project

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	企業管理概論 Introduction to Business	授課教師 Instructor	邱慧昀 Candy H.Y. Chiu
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			

<p>課程教材</p> <p>Material</p>	<p>1.指定課本書名 Book：___Understanding of Management Myths and Debuked!10th edition___ (___100___%英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例 (Percentage in English)___100___% . To suit the level of the students, the lecturer will self-design the contexts of the slides.</p> <p>3.其他補充說明 Others：</p>
<p>雙語教學方式 (可多選，或簡述)</p> <p>Bilingual Teaching Strategies</p>	<p>V 教材講述 Lecturing V 小組討論 Group Discussion V 口頭問答 Q&amp;A</p> <p><input type="checkbox"/>問題導向 Problem Based Learning <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p>V 分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others：</p>
<p>成績評量方式</p> <p>Grading</p>	<p>V 期中/期末考：___100___%以上英文試題，學生以英文答題___100___%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. The exam format will be multiple choice. Vocabularies that students may not know will be given definition in Chinese. Additionally, students can bring their dictionaries to the exams</p> <p>V 英文期中/期末報告：___40-50___%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p>V 其他方式(請說明中英文比例) Others(please state the proportion of Mandarin and English in grading)：</p> <p>Student's class participation points will be given based on their efforts in the classroom, how much they participate to the discussion in the class. Students can choose to use either English or Chinese, language which they feel more comfortable with.</p>
<p>課程進度 Course Outline</p>	

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Course introduction	
W2	Ch. 1 Managers and Management	1. Is there one best “style” of management? Why or why not?
W3	Ch. 2 The Management Environment	1. Why do managers need an understanding of what happens outside their organization? Give examples of how changes in the external environment affect their job.
W4	Ch. 3 Integrative Management Issues	1. How does the concept of a global village affect organizations and managers?
W5	Ch. 4 How Do Managers Make Decisions?	. Why do companies invest in nurturing group decision making rather than individual decision making? Explain the advantages and disadvantages of both techniques?
W6	Ch. 5 Foundations of Planning	1. Why are formal plans generated?
W7	Ch. 6 Organizational Structure and Design	1. Compared to the strengths and weaknesses of a functional structure, what are the strengths and weaknesses of a simple structure
W8	Review	
W9	Mid-term exam	
W10	Ch. 7 Managing Human Resources	1. How does HRM affect all managers?
W11	Ch. 8 Managing Change and Innovation	1. What can influence innovation in organization?
W12	Ch. 9 Foundations of Individual Behavior	1. How is an organization like an iceberg? Use the iceberg metaphor to describe the filed of organizational behavior.
W13	Ch. 10 Understanding Groups and Managing Work Teams	1. How do you think scientific management theories would react to the increased use of teams in organizations? How would behavioral science theorist react?
W14	Ch. 11 Motivating and Rewarding Employees	
W15	Ch. 12 Leadership and Trust	
W16	Ch. 12 Leadership and Trust	

W17	Review	
W18	Final exam	

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	跨文化管理 Cross-cultural management	授課教師 Instructor	邱慧昀 Candy H.Y. Chiu
<p style="text-align: center;">教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。          Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。          Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材 Material	1.指定課本書名 Book：__Understanding Cross-cultural management 3 rd edition__ (__100__%英文內容 Percentage in English) 2.自製教材 Self-made Materials：採用英文之比例 (Percentage in English)____100__% . To suit the level of the students, the lecturer will self-design the contexts of the slides. 3.其他補充說明 Others：		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	V 教材講述 Lecturing V 小組討論 Group Discussion V 口頭問答 Q&A <input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching V 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others：		

成績評量方式  Grading	<p>V 期中/期末考：__100__%以上英文試題，學生以英文答題__100__%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. The exam format will be multiple choice. Vocabularies that students may not know will be given definition in Chinese. Additionally, students can bring their dictionaries to the exams</p> <p>V 英文期中/期末報告：__40-50__%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p>V 其他方式(請說明中英文比例) Others(please state the proportion of Mandarin and English in grading) :</p> <p>Student's class participation points will be given based on their efforts in the classroom, how much they participate to the discussion in the class. Students can choose to use either English or Chinese, language which they feel more comfortable with.</p>
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課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Overview the course and syllabus	
W2	Determinants of culture (CH 1)	
W3	Dimensions of culture: Hofstede and GLOBE (CH 2)	
W4	Business cultures in the Western world (CH 3)	
W5	Business cultures in Asia and the Middle East (CH 4)	
W6	Cultural dimensions and dilemmas (CH 5)	Case study Pulling out all the stops pp. 121

W7	Culture and style of management (CH 6)	
W8	Review	
W9	Midterm exam	
W10	Culture and leadership (CH 9)	Group project preparation
W11	Culture and international marketing management (CH 11)	Group project preparation
W12	Business communication across culture (CH 13)	Group project preparation and discussion
W13	Barriers to International communication (CH 14)	Case study English names catch on among Chinese: young bridging a gap with West pp. 352-353
W14	Negotiating internationally (CH 15)	Group project preparation and discussion
W15	Conflicts and cultural differences (CH 16)	Group project preparation and discussion
W16	Developing intercultural communicative competence (CH 18)	Group project preparation and discussion
W17	Group project presentation	
W18	Group project presentation	

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	人機介面互動設計研究 Human Computer Interface Design	授課教師 Instructor	沈思岑 Siu-Tsen Shen
教學簡要說明			
1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.			

2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。

Please state bilingual instructor's teaching weeks and hours in course outline section.

課程教材 Material	1.指定課本書名 Book: <u>Interaction Design: Beyond; Human-Computer Interaction by Preece et al.; John Wiley &amp; Sons, Inc; ISBN 978-0-470-66576-3</u> ( <u>100</u> % 英文內容 Percentage in English) 2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_____ % 3.其他補充說明 Others：
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input type="checkbox"/> v 教材講述 Lecturing <input type="checkbox"/> v 小組討論 Group Discussion <input type="checkbox"/> v 口頭問答 Q&A <input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching <input type="checkbox"/> v 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others：
成績評量方式 Grading	<input type="checkbox"/> 期中/期末考：_____ % 以上英文試題，學生以英文答題_____ %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input type="checkbox"/> 英文期中/期末報告：_____ % 以英文表達。 The percentage of using English in midterm or final oral presentation <input type="checkbox"/> <b>V 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式)</b> <b>English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</b> <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：

#### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Topics covered: Background and introduction to HCI	Broaden View of HCI Design
W2	HCI Design Research & Disciplinary	HCI Design Research & Disciplinary
W3	Reading assignments	Chapters 1-3 of text.
W4	UI Research Design (I)	UI Research Design (I)

W5	UI Research Design (II)	UI Research Design (II)
W6	Reading assignments	Chapter 4-6 of text.
W7	Inclusive Design (I)	Inclusive Design (I)
W8	Inclusive Design (II)	Inclusive Design (II)
W9	Mid Term Assessment	
W10	Service Design (I)	Service Design (I)
W11	Service Design (II)	Service Design (II)
W12	Reading Assignments	Chapter 7-9 of text
W13	Design for Elderly	Design for Elderly
W14	Design for impaired disabilities (I)	Design for impaired disabilities (I)
W15	Design for impaired disabilities (II)	Design for impaired disabilities (II)
W16	Reading Reflections	Reading Reflections and feedbacks.
W17	Final project Presentation mock-up	Final project Presentation mock-up
W18	Final Term Exam	Oral Presentation

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	數位媒體傳播 Digital Media Communication	授課教師 Instructor	沈思岑 Siu-Tsen Shen
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教學簡要說明

1.請依照授課班級英文分級程度規劃課程計畫書。

Please design the course plan by following the English using percentage of the course English level.

2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。

Please state bilingual instructor's teaching weeks and hours in course outline section.

課程教材 Material	1.指定課本書名 Book: <u>Routledge Handbook of Digital Media and Communication by Lievrouw et al.; Routledge; ISBN 978-113-867-209-2</u> (100% 英文內容 Percentage in English) 2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_____ % 3.其他補充說明 Others：	
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input type="checkbox"/> v 教材講述 Lecturing <input type="checkbox"/> v 小組討論 Group Discussion <input type="checkbox"/> v 口頭問答 Q&A <input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching <input type="checkbox"/> v 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others：	
成績評量方式 Grading	<input type="checkbox"/> 期中/期末考：_____ %以上英文試題，學生以英文答題_____ %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input type="checkbox"/> 英文期中/期末報告：_____ %以英文表達。 The percentage of using English in midterm or final oral presentation <input type="checkbox"/> <b>V 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式)</b> <b>English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</b> <input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading )：	
課程進度 Course Outline		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Topics covered: Background and introduction to DMC	Broaden View of DMC
W2	DMC Research & Disciplinary	DMC Design Research & Disciplinary
W3	Reading assignments	Part One of text.

W4	Globalization culture (I)	Globalization culture (I)
W5	Globalization culture (II)	Globalization culture (II)
W6	Reading assignments	Part Two of text.
W7	Examine the development of media (I)	Examine the development of media (I)
W8	Examine the development of media (II)	Examine the development of media (II)
W9	Mid Term Assessment	
W10	Visual Theories and Criticism (I)	Review the classical researches of vision formation and media type in modern sociology, economics, esthetics of art, anthropology, and cultural studies (I)
W11	Visual Theories and Criticism (II)	Review the classical researches of vision formation and media type in modern sociology, economics, esthetics of art, anthropology, and cultural studies (II)
W12	Reading Assignments	Part Three of text
W13	High-tech and Creative Design (I)	Researching into the interaction between technology and digital media art, and the newest development of digital media art, moreover, the opportunity of the development of future creative design (I)
W14	High-tech and Creative Design (II)	Researching into the interaction between technology and digital media art, and the newest development of digital media art, moreover, the opportunity of the development of future creative design (II)
W15	High-tech and Creative Design (III)	Researching into the interaction between technology and digital media art, and the newest development of digital media art, moreover, the opportunity of the development of future creative design (III)
W16	Reading Reflections	Reading Reflections and feedbacks.
W17	Final project Presentation mock-up	Final project Presentation mock-up
W18	Final Term Exam	Oral Presentation

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	中文:創意創新研究 英文 Creativity and Innovation Research	授課教師 Instructor	朱文浩 Wu-Haw Jue
<p style="text-align: center;">教學簡要說明</p> <p>Creativity and innovation research is a broad field that encompasses the study of various aspects related to the generation, development, and implementation of creative and innovative ideas, processes, products, and services. Researchers in this field explore the factors that influence creativity and innovation, as well as their impact on individuals, organizations, and society as a whole.</p>			
課程教材 Material	<p>1.指定課本書名 Book : _____ (_____% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials : 採用英文之比例(Percentage in English)_____%</p> <p>3.其他補充說明 Others : Overall, creativity and innovation research seeks to deepen our understanding of the processes, factors, and conditions that foster creative thinking and drive innovative outcomes. This knowledge can inform the development of strategies and interventions to enhance creativity and innovation in various domains, ranging from individual creative performance to organizational innovation management.</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing   <input checked="" type="checkbox"/>小組討論 Group Discussion   <input checked="" type="checkbox"/>口頭問答 Q&amp;A</p> <p><input checked="" type="checkbox"/>問題導向 Problem Based Learning   <input checked="" type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/>分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others :</p>		
成績評量方式 Grading	<p><input type="checkbox"/> 期中/期末考 : _____%以上英文試題，學生以英文答題_____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input type="checkbox"/> 英文期中/期末報告 : _____%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/>全英語口頭簡報 (含 QA 問答)20 分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading) :</p>		
課程進度 Course Outline			

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W2	創意創新產業概況 Overview of Innovation and Creative Industries	介紹創意創新產業定義 Introduce the definition of Innovation and creative industries
W3	視覺藝術創新 Innovation of Visual arts industry	視覺藝術創新 Innovation of the visual arts industry
W4	音樂及表演藝術產業 Innovation of Music and performing arts industry	音樂及表演藝術產業創新 Innovation of Music and performing arts industries of various countries
W5	文化資產應用及展演設施產業創新 Innovation of Cultural asset application and exhibition facility industry	國際展演分享 Innovation of International performance sharing
W6	工藝產業創新 Innovation of Craft industry	工藝創新分享 Innovation of Sharing of craft industries from various countries
W7	電影產業創新 Innovation of Film Industry	國際電影產業創新 Innovation of National Film Industry
W8	電視產業創新 Innovation of Broadcasting industry	電視產業創新分享 Innovation of TV industry sharing from various countries
W9	視覺傳達設計創新 Innovation of Visual Communication Design Industry	國際視覺傳達創新分享 Innovation of visual communication design industry from various countries
W10	廣告創新 Innovation of Advertising industry	商業設計創新 Innovation of Commercial design includes
W11	產品設計創新 Innovation of Product design industry	各國產品設計創新分享 Innovation of Product design sharing from various countries
W12	時尚產業創新 Innovation of Design brand fashion industry	時尚產業分析創新 Innovation of Design brand fashion industry analysis
W13	數位內容產業創新 Innovation of Digital Content Industry	資訊科技數位化 Innovation of Use information technology
W14	創意生活產業創新 Innovation of Creative life industry	創意生活 Innovation of Creative life
W15	音樂產業創新 Innovation of Pop music and Innovation content industry	特色之音之創新 Innovation of Sharing of music and culture
W16	各國美食創新 Innovation of Food culture of various countries	美食創新分享 Innovation of International food and Innovation exchange and sharing
W17	各國特色創新 Innovation of Unique cultures of various countries	各國特色分享創新 Innovation of Sharing of Innovation characteristics of different countries

W18	創新文創產業分組討論 Innovation of Cultural and creative industry group discussion	創新創意產業分組討論 Innovation of creative industry group discussion
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## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	半導體元件製程 Introduction to semiconductor devices and manufacturing process	授課教師 Instructor	迪克莎喬娜 (Diksha Chauhan)
<p style="text-align: center;">教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>指定課本書名 Book:</p> <p>1. Semiconductor devices, 2<sup>nd</sup> edition, by J.J.Sparks</p> <p>2. Fundamentals of Semiconductor Manufacturing and Process Control, G. May C. Spanos</p> <p>3. Principles of Electronics by VK Mehta</p> <p>4. ( <u>100%</u> 英文內容 Percentage in English)</p> <p>5. 自製教材 Self-made Materials : 採用英文之比例(Percentage in English) <u>100</u> %</p> <p>6. 其他補充說明 Others :</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p>■教材講述 Lecturing   ■小組討論 Group Discussion   ■口頭問答 Q&amp;A</p> <p><input type="checkbox"/>問題導向 Problem Based Learning   <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input type="checkbox"/>分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others : Assignments and surprise test/quiz</p>		

成績評量方式  Grading	<ul style="list-style-type: none"> <li>■ 期中/期末考：<u>100</u>%以上英文試題，學生以英文答題 <u>100</u>%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</li> <li>■ 英文期中/期末報告：<u>100</u>%以英文表達。 The percentage of using English in midterm or final oral presentation</li> <li>■ 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</li> <li>■ 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：Assignments and quiz/surprise test Final grading scheme (all in 100% English):</li> </ul>
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### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Semiconductors and applications of semiconductor devices.	Lecturing, QA, Discussion
W2	Semiconductor materials, Pure semiconductors, Doped semiconductors	Lecturing, QA, Discussion
W3	The Fermi level, Recombination	Lecturing, QA, Discussion
W4	Typical applications of semiconductor devices	Lecturing, QA, Discussion
W5	p-n junction diodes, The silicon p-n junction, Current flow in semiconductors	Lecturing, QA, Discussion
W6	Photodiodes	Lecturing, QA, Discussion, Assignment
W7	Metal-silicon junctions and Schottky diodes	Lecturing, QA, Discussion
W8	Field effect transistors	Lecturing, QA, Discussion
W9	Mid term	
W10	Bipolar junction transistors	Lecturing, QA, Discussion
W11	Integrated circuits	Lecturing, QA, Discussion
W12	Introduction to Semiconductor Manufacturing	Lecturing, QA, Discussion

W13	Historical Evolution	Lecturing, QA, Discussion
W14	Semiconductor Processes and Integrated Circuit Manufacturing	Lecturing, QA, Discussion, Assignment
W15	Goals of Manufacturing	Lecturing, QA, Discussion
W16	Unit Processes	Lecturing, QA, Discussion
W17	Syllabus revision	QA, Discussion
W18	Syllabus revision	QA, Discussion

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	科技論文閱讀與寫作 The reading and writing to scientific paper	授課教師 Instructor	迪克莎喬娜 (Diksha Chauhan)
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book: How to read and write a scientific paper, Barbara Gastel and Robert A. Day, Eighth Edition ( <u>100</u> % 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English) <u>100</u> %</p> <p>3.其他補充說明 Others：</p>		

雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	■教材講述 Lecturing   ■小組討論 Group Discussion   ■口頭問答 Q&A  □問題導向 Problem Based Learning   □協同教學 Collaborative Teaching  ■分組報告 Group Report  □其他方式說明 Others：	
成績評量方式  Grading	■ 期中/期末考：%以上英文試題，學生以英文答題 <u>100</u> %。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. ■ 英文期中/期末報告： <u>100</u> %以英文表達。 The percentage of using English in midterm or final oral presentation ■ 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have ■其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading )： A report on how to read, write and submit a review or research article, where students must write a review article/research paper in the groups of 2 to 4 and submit it at the end of the semester. Final grading scheme (all in 100% English)	
課程進度 Course Outline		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction to Scientific writing, scope and need of clarity, types . Introduction to Scientific Paper: Definition, organization and shape	Lecturing by Power-point presentations, Q/A , Discussion, Reading the papers
W2	Ethics in Scientific Publishing, Where to Submit Your Manuscript, scientific ranking of the journals.	Lecturing by Power-point presentations, Q/A ,  Discussion, Reading the papers
W3	DOING OTHER WRITING FOR PUBLICATION: How to Write a Review Paper, SCIENTIFIC STYLE: Use and Misuse of English, Avoiding Jargon, How and When to Use Abbreviations	Lecturing by Power-point presentations, Q/A , Discussion, Reading the papers and writing, Assignment 1
W4	Preparing the text: How to Prepare the Title, How to List the Authors and Addresses	Lecturing by Power-point presentations, Q/A , Discussion, Reading the papers and writing



W5	How to Prepare the Abstract, How to Write the Introduction	Lecturing by Power-point presentations, Q/A , Discussion, Reading the papers and writing
W6	How to Write the Materials and Methods Section	Lecturing by Power-point presentations, Q/A , Discussion, Reading the papers and writing
W7	How to Write the Results	Lecturing by Power-point presentations, Q/A , Discussion, Reading the papers and writing
W8	How to Write the Discussion	Lecturing by Power-point presentations, Q/A , Discussion, Reading the papers and writing
W9	Mid term exams	
W10	How to State the Acknowledgments	Lecturing by Power-point presentations, Q/A , Discussion, Reading the papers and writing
W11	How to Cite the References	Lecturing by Power-point presentations, Q/A , Discussion, Reading the papers and software demonstration for citing references
W12	PREPARING THE TABLES AND FIGURES: How to Design Effective Tables, How to Prepare Effective Graphs, How to Prepare Effective Photographs	Lecturing by Power-point presentations, software demonstration
W13	PUBLISHING THE PAPER: Rights and Permissions	Lecturing
W14	How to Submit the Manuscript	Lecturing
W15	The Review Process (How to Deal with Editors)	Lecturing
W16	The Publishing Process, (How to Deal with Proofs)—and After Publication	Lecturing, Assignment 2
W17	Revision of the whole syllabus	QA, Discussion
W18	Revision of the whole syllabus	QA, Discussion

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	無線通訊 Wireless Communications	授課教師 Instructor	迪克莎喬娜 (Diksha Chauhan)
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book： Wireless communications, Principle and practice, 2<sup>ND</sup> Edition, by Theodore S. Rappaport ( <u>100</u> % 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：採用英文之比例(Percentage in English)<u>100</u>%</p> <p>3.其他補充說明 Others：</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p>■教材講述 Lecturing    ■小組討論 Group Discussion    ■口頭問答 Q&amp;A</p> <p><input type="checkbox"/>問題導向 Problem Based Learning    <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input type="checkbox"/>分組報告 Group Report</p> <p>■其他方式說明 Others：Assignments and quiz/surprise test</p>		
成績評量方式  Grading	<p>■ 期中/期末考：以上英文試題，學生以英文答題 <u>100</u>%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p>■ 英文期中/期末報告：<u>100</u>%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p>■ 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p>■ 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading)：Assignments and Quiz all in 100% English Final grading scheme (all in 100% English):</p>		
課程進度 Course Outline			

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction to wireless communication system and Basics of wireless communication	Lecturing, QA, Discussion
W2	EM waves, advantages and examples of wireless communication systems	Lecturing, QA, Discussion
W3	Modern wireless communication system: Introduction to cellular systems 1G to 5G.	Lecturing, QA, Discussion
W4	The cellular concepts: Introduction	Lecturing, QA, Discussion
W5	Frequency reuse	Lecturing, QA, Discussion
W6	Channel assignment strategies	Lecturing, QA, Discussion ,Quiz 1
W7	Handoff strategies	Lecturing, QA, Discussion ,Assignment 1
W8	Interference and system capacity, Trunking	Lecturing, QA, Discussion
W9	Mid term exams	
W10	Improving coverage and capacity in cellular systems	Lecturing, QA, Discussion
W11	Mobile radio propagation: small scale fading and multipath	Lecturing, QA, Discussion
W12	Small scale multipath propagation	Lecturing, QA, Discussion
W13	Types of small-scale fading, Rayleigh and Ricean Distribution	Lecturing, QA, Discussion, Quiz 2
W14	Modulation techniques	Lecturing, QA, Discussion ,Assignment 2
W15	Frequency modulation vs Amplitude modulation	Lecturing, QA, Discussion
W16	Digital modulation	Lecturing, QA, Discussion
W17	Multiple access techniques for wireless communication	Lecturing, QA, Discussion
W18	Syllabus Revision	Discussion

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	光電陶瓷材料 Electro-optic Ceramic Materials	授課教師 Instructor	藍吉特 Ranjit A. Patil
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材 Material	<p>1.指定課本書名 Book：</p> <p>1. Ceramic Materials: Science and Engineering- C. Barry Carter, M. Grant Norton, Springer</p> <p>2. Electronic Ceramics: Properties, Devices and Applications - L. M. Levinson, Marcel Dekker Inc.</p> <p>3. SCI published research articles</p> <p>(%英文內容 Percentage in English) 100 %</p> <p>2.自製教材 Self-made Materials：Summarized materials for the various topics, Special teaching on computer modelling. (% 英文內容 Percentage in English)___100 %_____</p> <p>3.其他補充說明 Others：Software resources</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing    <input checked="" type="checkbox"/>小組討論 Group Discussion    <input checked="" type="checkbox"/>口頭問答 Q&amp;A</p> <p><input checked="" type="checkbox"/>問題導向 Problem Based Learning    <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input type="checkbox"/>分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others：</p>		
成績評量方式 Grading	<p><input checked="" type="checkbox"/> 期中/期末考：_%以上英文試題，學生以英文答題。100 % The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input checked="" type="checkbox"/> 英文期中/期末報告：_%以英文表達 100 % The percentage of using English in midterm or final oral presentation.</p> <p><input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p><input checked="" type="checkbox"/> 其他方式(請說明中英文比例)Others (please state the proportion of Mandarin and English in grading )：100 % English</p> <p>Grading system: 10 % (Present in class) + 10 % (Homework) + 40 % (Midterm exam) + 40</p>		

	% (Final exam)	
課程進度 Course Outline		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction to ceramics	Lecturing,
W2	Introduction to ceramics	Lecturing, Q&A
W3	Introduction to ceramics	Lecturing, Group Discussion, Q&A
W4	Bonds and energy bands	Lecturing,
W5	Bonds and energy bands	Lecturing, Q&A
W6	Bonds and energy bands	Lecturing, Group Discussion, Q&A
W7	Crystal systems and chemistry	Lecturing,
W8	Crystal systems and chemistry	Lecturing, Q&A
W9	Mid-term Examination	Mid-term Examination
W10	Crystal systems and chemistry	Lecturing, Group Discussion, Q&A
W11	Crystal systems and chemistry	Computer modelling, Q&A

W12	Electro-optic ceramic properties	Lecturing, Q&A
W13	Electro-optic ceramic properties	Lecturing, Q&A
W14	Electro-optic ceramic properties	Lecturing, Group Discussion, Q&A
W15	Electro-optic ceramic materials	Lecturing, Q&A
W16	Electro-optic ceramic materials	Lecturing, Q&A
W17	Electro-optic ceramic materials	Lecturing, Group Discussion, Q&A
W18	Final Examination	Final Examination

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	半導體製程技術 Semiconductor Process Technology	授課教師 Instructor	藍吉特 Ranjit A. Patil
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			

課程教材 Material	1.指定課本書名 Book : 1.Semiconductor Manufacturing Technology – Michel Quirk, Julian Serda, Prentice Hall 2.Introduction to Semiconductor Manufacturing Technology - Hong Xiao, Prentice Hall (% 英文內容 Percentage in English) <u>100</u> % 2.自製教材 Self-made Materials : Summarized presentation materials for the topics involved. (Percentage in English) <u>100</u> % 3.其他補充說明 Others :	
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A <input type="checkbox"/> 問題導向 Problem Based Learning <input type="checkbox"/> 協同教學 Collaborative Teaching <input checked="" type="checkbox"/> 分組報告 Group Report <input type="checkbox"/> 其他方式說明 Others :	
成績評量方式 Grading	<input checked="" type="checkbox"/> 期中/期末考：_ %以上英文試題，學生以英文答題%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. 100 % <input checked="" type="checkbox"/> 英文期中/期末報告：_ %以英文表達。 The percentage of using English in midterm or final oral presentation. 100 % <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input checked="" type="checkbox"/> 其他方式(請說明中英文比例)Others(please state the proportion of Mandarin and English in grading ) : English 100 % Grading system: 10 % (Present in class) + 10 % (Homework) + 40 % (Midterm exam) + 40 % (Final exam)	
課程進度 Course Outline		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction	Lecturing,
W2	Introduction to IC fabrication	Lecturing, Q&A
W3	Semiconductor basics	Lecturing, Q&A

W4	Wafer manufacturing	Lecturing, Group Discussion, Q&A
W5	Thermal processes	Lecturing, Group Discussion, Q&A
W6	Photolithography	Lecturing, Group Discussion, Q&A
W7	Plasma basics	Lecturing, Group Discussion, Q&A
W8	Ion implantation	Lecturing, Group Discussion, Q&A
W9	Mid-term Examination	Mid-term Examination
W10	Etch	Lecturing, Q&A
W11	CVD and Dielectric thin film	Lecturing, Q&A
W12	Metallization	Lecturing, Q&A
W13	Chemical Metal Polishing	Lecturing, Q&A
W14	Process integration	Lecturing, Group Discussion, Q&A
W15	CMOS processes- I	Lecturing, Q&A
W16	CMOS processes- II	Lecturing, Q&A



W17	CMOS processes- III	Lecturing, Group Discussion, Q&A
W18	Final Examination	Final Examination

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	光電能源元件 Optoelectronic Energy Devices	授課教師 Instructor	藍吉特 Ranjit A. Patil
<p style="text-align: center;">教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材 Material	<p>1.指定課本書名 Book：</p> <p>1. Semiconductor Devices: Physics and Technology- S.M. Sze, John Wiley</p> <p>2. Physics of Semiconductor Devices- S. M. Sze, K. N. Ng, John Wiley</p> <p>3. Photovoltaics-Christiana Honsberg and Stuart Bowden- <a href="https://www.pveducation.org/pvcdrom/introduction/introduction">https://www.pveducation.org/pvcdrom/introduction/introduction</a></p> <p>4. Physics of Solar Cells, P. Wurfel, Wiley-VCH</p> <p>(%英文內容 Percentage in English) 100_%</p> <p>2.自製教材 Self-made Materials：Summarized presentation materials for the topics. (% 英文內容 Percentage in English)_100_%</p> <p>3.其他補充說明 Others：</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing   <input checked="" type="checkbox"/>小組討論 Group Discussion   <input checked="" type="checkbox"/>口頭問答 Q&amp;A</p> <p><input checked="" type="checkbox"/>問題導向 Problem Based Learning   <input type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input type="checkbox"/>分組報告 Group Report</p> <p><input type="checkbox"/>其他方式說明 Others：</p>		

成績評量方式 Grading	<input checked="" type="checkbox"/> 期中/期末考：____%以上英文試題，學生以英文答題____。100 % The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告：____%以英文表達。100 % The percentage of using English in midterm or final oral presentation. <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have <input checked="" type="checkbox"/> 其他方式(請說明中英文比例) Others (please state the proportion of Mandarin and English in grading ) : 100 % English Grading system: 10 % (Present in class) + 10 % (Homework) + 40 % (Midterm exam) + 40 % (Final exam)
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### 課程進度 Course Outline

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction to semiconductors	Lecturing
W2	Introduction to semiconductors	Lecturing, Group Discussion, Q&A
W3	Energy bands and Carrier concentration	Lecturing, Q&A
W4	Energy bands and Carrier concentration	Lecturing, Q&A
W5	Energy bands and Carrier concentration	Lecturing, Group Discussion, Q&A
W6	Carrier transport phenomenon	Lecturing, Q&A
W7	Carrier transport phenomenon	Lecturing, Q&A
W8	Carrier transport phenomenon	Lecturing, Group Discussion, Q&A
W9	Mid-term Examination	Mid-term Examination

W10	Metal-semiconductor contact	Lecturing, Q&A
W11	Metal-semiconductor contact	Lecturing, Q&A
W12	Metal-semiconductor contact	Lecturing, Q&A
W13	Metal-semiconductor contact	Lecturing, Group Discussion, Q&A
W14	PN Junction and photovoltaic cell	Lecturing, Q&A
W15	PN Junction and photovoltaic cell	Lecturing, Q&A
W16	PN Junction and photovoltaic cell	Lecturing, Q&A
W17	PN Junction and photovoltaic cell	Lecturing, Group Discussion, Q&A
W18	Final Examination	Final Examination

## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	高等熱力學 Advanced Thermodynamic	授課教師 Instructor	庫秉弦 (Abhishek Kumar)
教學簡要說明 1.請依照授課班級英文分級程度規劃課程計畫書。			

Please design the course plan by following the English using percentage of the course English level.  
 2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。  
 Please state bilingual instructor's teaching weeks and hours in course outline section.

課程教材  Material	1.指定課本書名 Book：Thermodynamics An Engineering Approach, by Yunus A. Cengel and Michael A. Boles (100% 英文內容 Percentage in English) 2.自製教材 Self-made Materials：Lecture notes (Percentage in English)100% 3.其他補充說明 Others：Lecture notes may cover several books
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<input checked="" type="checkbox"/> 教材講述 Lecturing <input checked="" type="checkbox"/> 小組討論 Group Discussion <input checked="" type="checkbox"/> 口頭問答 Q&A <input checked="" type="checkbox"/> 問題導向 Problem Based Learning <input checked="" type="checkbox"/> 協同教學 Collaborative Teaching <input checked="" type="checkbox"/> 分組報告 Group Report <input checked="" type="checkbox"/> 其他方式說明 Others：Assignment
成績評量方式 Grading	<input checked="" type="checkbox"/> 期中/期末考：100%以上英文試題，學生以英文答題 100%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. <input checked="" type="checkbox"/> 英文期中/期末報告：100%以英文表達。 The percentage of using English in midterm or final oral presentation <input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have 1. <input checked="" type="checkbox"/> 其他方式(請說明中英文比例)Others (please state the proportion of Mandarin and English in grading)：Attendance and in class participation 10% 2. Assignments 20% 3. Mid-term 35% 4. Final-term 35

課程進度 Course Outline		
週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction and Basic Concepts	
W2	Energy, Energy Transfer, and General Energy Analysis	
W3	Energy, Energy Transfer, and General Energy Analysis	

W4	Properties of Pure Substance	
W5	Energy Analysis of Closed System	
W6	Mass and Energy Analysis of Control Volumes	
W7	Mass and Energy Analysis of Control Volumes	
W8	The Second Law of Thermodynamics	
W9	Midterm	
W10	Entropy and Exergy	
W11	Entropy and Exergy	
W12	Thermodynamic Property Relations	
W13	Thermodynamic Property Relations	
W14	Gas Power Cycle	
W15	Vapor and Combined Power Cycle	
W16	Vapor and Combined Power Cycle	
W17	Refrigeration Cycles	
W18	Final-term	

# 國立虎尾科技大學雙語教學課程計畫書

## Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	協同產品設計 Collaborative product design	授課教師 Instructor	庫秉弦 (Abhishek Kumar)
<p>教學簡要說明</p> <p>1.請依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book：Product Development and Design for Manufacturing: A Collaborative Approach to Producibility and Reliability, Second Edition, by John Priest and Jose Sanchez (100% 英文內容 Percentage in English)</p> <p>2.自製教材 Self-made Materials：Lecture notes (Percentage in English)100%</p> <p>3.其他補充說明 Others：Lecture notes may cover several books</p>		
雙語教學方式  (可多選，或簡述)  Bilingual  Teaching  Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing   <input checked="" type="checkbox"/>小組討論 Group Discussion   <input checked="" type="checkbox"/>口頭問答 Q&amp;A</p> <p><input checked="" type="checkbox"/>問題導向 Problem Based Learning   <input checked="" type="checkbox"/>協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/>分組報告 Group Report</p> <p><input checked="" type="checkbox"/>其他方式說明 Others：Assignment</p>		
成績評量方式  Grading	<p><input checked="" type="checkbox"/> 期中/期末考：100%以上英文試題，學生以英文答題 100%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input checked="" type="checkbox"/> 英文期中/期末報告：100%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p> <p>1. <input checked="" type="checkbox"/> 其他方式(請說明中英文比例)Others (please state the proportion of Mandarin and English in grading)：Attendance, Participation, Homework, Quiz 35%</p> <p>2.Midterm Test or Project 30%</p> <p>3.Final Test or Project 35%</p>		

**課程進度 Course Outline**

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Syllabus & introduction of the course and overall review	
W2	Design and Collaboration	
W3	Design and Collaboration	
W4	Project Strategy	
W5	Product Development and Organization	
W6	Stages of Product Development	EARLY DESIGN: REQUIREMENT DEFINITION AND CONCEPTUAL DESIGN
W7	Stages of Product Development	TRADE-OFF ANALYSES: OPTIMIZATION USING COST AND UTILITY METRICS
W8	Stages of Product Development	DETAILED DESIGN: ANALYSIS AND MODELING
W9	Midterm	
W10	Stages of Product Development	TEST AND EVALUATION: DESIGN REVIEWS, PROTOTYPING, SIMULATION, AND TESTING
W11	Stages of Product Development	MANUFACTURING: STRATEGIES, PLANNING, AND METHODOLOGIES
W12	Stages of Product Development	SUPPLY CHAIN: LOGISTICS, PACKAGING, SUPPLY CHAIN, AND THE ENVIRONMENT
W13	Stages of Product Development	DESIGN FOR PEOPLE: ERGONOMICS, REPAIRABILITY, SAFETY, AND PRODUCT LIABILITY
W14	Producibility and Reliability	PRODUCIBILITY: STRATEGIES IN DESIGN FOR MANUFACTURING
W15	Producibility and Reliability	SIMPLIFICATION: COMMONALITY AND PREFERRED METHODS
W16	Producibility and Reliability	PRODUCIBILITY GUIDELINES AND MEASUREMENT
W17	Producibility and Reliability	RELIABILITY: STRATEGIES AND TEST ABILITY

W18	Final-term	
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## 國立虎尾科技大學雙語教學課程計畫書

### Bilingual Education Course Plan

課程名稱(中) 課程名稱(英) Course title in Mandarin and English	科技英文論文寫作 Writing of Scientific English paper	授課教師 Instructor	庫秉弦 (Abhishek Kumar)
<p>教學簡要說明</p> <p>1.依照授課班級英文分級程度規劃課程計畫書。 Please design the course plan by following the English using percentage of the course English level.</p> <p>2.如有聘請雙語導師，請於課程進度註明雙語導師授課之週次時數。 Please state bilingual instructor's teaching weeks and hours in course outline section.</p>			
課程教材  Material	<p>1.指定課本書名 Book：Writing Up Research: Experimental Research Report Writing for Students of English: Robert Weissberg, Suzanne Buker, Prentice Hall Regents, 1990</p> <p>2. (100% 英文內容 Percentage in English)</p> <p>3.自製教材 Self-made Materials：Lecture notes (Percentage in English)100%</p> <p>4.其他補充說明 Others：Lecture notes may cover several books</p>		
雙語教學方式 (可多選，或簡述) Bilingual Teaching Strategies	<p><input checked="" type="checkbox"/>教材講述 Lecturing   <input checked="" type="checkbox"/> 小組討論 Group Discussion   <input checked="" type="checkbox"/>口頭問答 Q&amp;A</p> <p><input checked="" type="checkbox"/>問題導向 Problem Based Learning   <input checked="" type="checkbox"/> 協同教學 Collaborative Teaching</p> <p><input checked="" type="checkbox"/>分組報告 Group Report</p> <p><input checked="" type="checkbox"/> 其他方式說明 Others：Assignment</p>		
成績評量方式  Grading	<p><input checked="" type="checkbox"/> 期中/期末考：100%以上英文試題，學生以英文答題 100%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper.</p> <p><input checked="" type="checkbox"/> 英文期中/期末報告：100%以英文表達。 The percentage of using English in midterm or final oral presentation</p> <p><input checked="" type="checkbox"/> 全英語口頭簡報 (含 QA 問答)20分鐘以上(一般科系專業課、碩博專業課程必須包含此評量方式) English oral presentation including Q&amp;A session at least 20 minutes (Department cores, master's degree and doctoral degree courses so must have</p>		



	5. <input checked="" type="checkbox"/> 其他方式(請說明中英文比例)Others (please state the proportion of Mandarin and English in grading) : Attendance and in class participation 35% 6. Writing template and assignments 25% - Find five journal articles of your relevant field written by good English native speakers as model paper for analysis (due week 3) - Develop your personalized scientific writing template 7. Independent/group scientific writing Task 40%
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**課程進度 Course Outline**

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Syllabus & introduction of the course and overall review	
W2	Introduction	
W3	Introduction	Find five journal articles of your relevant field written by good English native speakers as model paper for analysis (due week 3)
W4	Introduction	
W5	Method	
W6	Method	
W7	Method	
W8	Results	
W9	Midterm	Submission of writing task
W10	Results	
W11	Discussion	
W12	Discussion	

W13	Title and Abstract	
W14	Plagiarism	
W15	References	
W16	Time for independent writing	No classes
W17	Time for independent writing	No classes
W18	Final-term	Submission of writing task