113/1 Bilingual Education Courses (113 學年度第 1 學期雙語授課課程表)

*備註 Notes:

請注意各課程的**開課學制**，以確認該課程是否可納入畢業學分。

Please take note of each course's **course scheduling system (CSS)** to verify whether the course can be counted towards graduation credits.

開課學制縮寫代號如下：

CSS abbreviations are as follows:

1. 學士 (Bachelor, B)　2. 碩士 (Master, M)　　3. 碩在職 (In-Service Master, IM)　　4. 博士 (PhD, P)

5. 二專 (Junior College, J)　6. 二技 (Technical College, T)

No. 編號	Department 開課系所	Course Code 課號 / CSS 開課學制	Course Title 科目名稱	Required/ Elective 必修/選修	Credit Points 學分數	Instructor 授課老師	Mon	Tue	Wed	Thu	Fri	Classroom 上課教室	Course Plan 課程計畫
1	Master's Program, Department of Mechanical Design Engineering 機械設計工程系碩士班	0233 / M+B	Introduction to Semiconductor Device and Manufacturing Process 半導體元件製程	Elective 選修	3	Disksha Chauhan 迪克莎喬娜			2-4			General Classroom, 5F, Academic Building II ATB0501 第二期教學大樓 5F 普通教室	Course Plan
2	Department of Vehicle Engineering 車輛工程系	1337 / B	English for Specific Purposes 專業英文	Required 必修	2	Disksha Chauhan 迪克莎喬娜				1,2		General Classroom, 3F, Academic Building II ATB0304 第二期教學大樓 3F 普通教室	Course Plan

3	Department of Vehicle Engineering 車輛工程系	1326 B	English for Specific Purposes 專業英文	Required 必修	2	Disksha Chauhan 迪克莎喬娜				3,4	General Classroom, 4F, Academic Building II ATB0402 第二期教學大樓 4F 普通教室	Course Plan
4	Master's Program, Department of Electronic Engineering 電子工程系 碩士班	0083 M	Wireless Communications 無線通訊	Elective 選修	3	Disksha Chauhan 迪克莎喬娜				2-4	First Assembly Building 6F Seminar Room (3) BGA0611 綜一館 6F 研討室(三)	Course Plan
5	Master's Program in Materials Science and Green Energy Engineering, Department of Materials Science and Engineering 材料科學與工程系碩士班	0218 M	Electro-optics Ceramic materials 光電陶瓷材料	Elective 選修	3	Ranjit Anandaro Patil 藍吉特				2-4	Mechanical Engineering Building 3F Preparatory Classroom(3) AME0324 機械工程館 3F 預備教室(三)	Course Plan
6	Master's Program, Department of Mechanical and Computer Aided Engineering 機械與電腦輔助工程系 碩士班	0020 M+B	Semiconductor Process Technology 半導體製程技術	Elective 選修	3	Ranjit Anandaro Patil 藍吉特				2-4	Mechanical Engineering Building 2F Seminar Room (1) AME0209 機械工程館 2F 第一專題研討室	Course Plan

7	Master's Program, Department of Electronic Engineering 電子工程系碩士班	0084	Optoelectronic Energy Devices 光電能源元件	Elective 選修	3	Ranjit Anandaro Patil 藍吉特					6-8	First Assembly Building 6F Seminar Room (3) BGA0611 綜一館6F研討室(三)	Course Plan
		M											
8	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班	0280	Advanced Thermodynamic 高等熱力學	Elective 選修	3	Abhishek Kumar 庫秉弦	2-4					First Assembly Building 6F Seminar Room (3) BGA0611 綜一館6F研討室(三)	Course Plan
		M+B											
9	Master's Program, Department of Automation Engineering 自動化工程系碩士班	0051	Collaborative product design 協同產品設計	Elective 選修	3	Abhishek Kumar 庫秉弦				2-4		First Assembly Building 4th floor professional seminar BGA0450 綜一館4F專業講堂	Course Plan
		M+B											
10	Doctoral Degree Program in Smart Industry Technology Research and Development 智慧產業科技研發博士學位學程	2692	Writing of Scientific English paper 科技英文論文寫作	Elective 選修	3	Abhishek Kumar 庫秉弦				2-4		First Assembly Building 6F Seminar Room (3) BGA0611 綜一館6F研討室(三)	Course Plan
		P+M											

11	Doctoral Degree Program in Smart Industry Technology Research and Development 智慧產業科技研發博士學位學程	0016	Elasticity 彈性力學	Elective 選修	3	Zhang Zhen Yuan 張禎元	5-7				Mechanical Engineering Building 2F Seminar Room (1) AME0209 機械工程館 2F 第一專題研討室	Course Plan
		P+M										
12	Master's Program, Department of Mechanical and Computer-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	2-4				(AME0209) Seminar Room I, Mechanical engineering Building 2F 機械工程館 2F AME0209 第一專題研討室	Course Plan
		M+B										
13	Master's Program, Department of Vehicle Engineering 車輛工程系碩士班	0069	Advanced Computer Aided Design 進階電腦輔助設計	Elective 選修	3	Weng, FengTsai 翁豐在			2-4		BGB201 Lab of Vehicle Components and system design 綜二館 201 車輛元件與系統設計室	Course Plan
		M										
14	Master's Program in Materials Science and Green Energy Engineering 材料科學與綠色能源工程碩士班	0224	Semiconductor Devices and Process 半導體元件與製程	Elective 選修	3	Fang, Jau-Shiung 方昭訓		5-7			2F Building of Mechanical Engineering (AME0223) 機械工程館 2F 預備教室(一) AME0223	Course Plan
		M										

15	Master's Program in Materials Science and Green Energy Engineering 材料科學與綠色能源工程碩士班	0213	Thermodynamics of Solids 固態熱力學	Required 必修	3	Tsai, Chau-Yi 蔡朝伊	6-8					3F Building of Mechanical Engineering (AME0324) 機械工程館 3F 預備教室(三) AME0324	Course Plan
		M											
16	Department of Materials Science and Engineering 材料科學與工程系	1596	Mechanical Properties of Materials 材料機械性質	Elective 選修	3	Chen, Yi-Yen 陳苡諺			5,6	3		2F Building of Mechanical Engineering (AME0222) 機械工程館 2F 電腦教室 AME0222	Course Plan
		B											
17	Master's Program, Department of Automation Engineerin 自動化工程系碩士班	0049	Application for Digital Image Processing 數位影像處理實務	Electiv 選修	3	LI, KUANG-CHYI 李廣齊			7-9			(BGA0330) Comprehensive Building 1,3F Computer-Aided Engineering Laboratory 綜一館 3F 電腦輔助工程實驗室	Course Plan
		M											
18	Master's Program, Department of Automation Engineerin 自動化工程系碩士班	0052	Intelligent control 智慧型控制	Electiv 選修	3	LI, KUANG-CHYI 李廣齊		5-7				(BGA0530) Comprehensive Building 1,5F Control Engineering Laboratory 綜一館 5F 控制工程實驗室	Course Plan
		M+B											

19	Master's Program, Department of Automation Engineerin 自動化工程系 碩士班	0050 M+B	Autonomous Unmanned Vehicle System 自動化無人載具系統	Electiv 選修	3	LI, MENG-TSE 李孟澤				2-4		(BGA0340) Comprehensive Building 1,3F Seminar Room 綜一館 3F 研討室	Course Plan
20	Master's Program in Aeronautical and Electronic Engineering, Department of Aeronautical Engineering 飛機工程系航空與電子科技 碩士班	0281 M+B	Aviation Safety 飛航安全	Elective 選修	3	Wang, Shih-Chia 王士嘉		2-4				(BGC0205) Classroom. The 3rd Complex Building 2F 綜合工程三館 2F 專業教室	Course Plan
21	Master's Program, Department of Electrical Engineering 電機工程系 碩士班	0128 M	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	Course Plan
22	Department of Electrical Engineering 電機工程系	1028	English for Specific Purposes 專業英文	Required 必修	2	Chun-Hung Yang 楊峻泓 Jen-Yung Lin 林仁勇				8,9		BEE0301; Computer Aided Design Lab. 3F, Electrical Engineering	Course Plan

		B										Building 電機館 3F BEE0301 電腦 輔助設計室	
23	Department of Electro-Optical Engineering 光電工程系	1076 B	Introduction To Computer Science 計算機概論	Required 必修	3	Hsu Mao-Hsiu 徐茂修					1-3	（BGA0161） The First Assembly Building_1F Microcomputer Lab 綜合工程一館 1F BGA0161 微電腦實驗室	Course Plan
24	Department of Electro-Optical Engineering 光電工程系	1114 B	English for Specific Purposes 專業英文	Required 必修	2	Hsu Mao-Hsiu 徐茂修			5,6			（BGA0250） The First Assembly Building _2F Classroom（1） 綜合工程一館 2F BGA0250 預備教室一	Course Plan
25	Department of Electro-Optical Engineering 光電工程系	1119 B	Principle of Optical Instrument 光電儀器原理	Elective 選修	3	Chen Chia-Hsun 陳佳勳	8		3,4			（BGAB150） The First Assembly Building _B1 Classroom（2） 綜合工程一館 B1 BGAB150 預備教室二	Course Plan

No	Department	Code	Course	Type	Credits	Instructor	Mon	Tue	Wed	Thu	Fri	Location	
26	Master's Program, Department of Computer Science and Information Engineering 資訊工程系碩士班	0112 / M	Technical Research Writing 科技論文寫作	Required 必修	3	TSAI, PO-HSIANG 蔡柏祥					2-4	(BGC0501) The 3rd Assembly Building 5F Basic electricity and professional certification Lab. 綜合工程三館 5F BGC0501 基本電學與證照實驗室	Course Plan
27	Master's Program, Department of Computer Science and Information Engineering 資訊工程系碩士班	0115 / M+B	Big Data Analysis 巨量資料分析	Elective 選修	3	JIANG,JI-HAN 江季翰			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	Course Plan
28	Master's Program, Department of Computer Science and Information Engineering 資訊工程系碩士班	0116 / M+B	Internet of Things 物聯網	Elective 選修	3	JIAN,MING-SHEN 簡銘伸	5-7					(BRA0102) Technology Research center AI Robotics Laboratory 科研大樓 1F BRA0102 AI 機器人實驗室	Course Plan
29	Master's Program, Department of Computer	0113	Pattern Recognition 圖形識別	Elective 選修	3	LIN,WU-CHIEH 林武杰				5-7		(BGC0305) Embedded System Software Design	Course Plan

	Science and Information Engineering 資訊工程系 碩士班	M										Lab. 綜合工程三館 3F BGC0305 嵌入式系統軟體實驗室	
30	Department of Computer Science and Information Engineering 資訊工程系	2045	Operation Systems 作業系統	Required 必修	3	HUANG,SHIH-CHANG 黃世昌		5-7				(BGC0513) The 3rd Assembly Building 5F Bioinformatics Lab. 綜合工程三館 5F BGC0513 生物資訊實驗室	Course Plan
		B											
31	Department of Computer Science and Information Engineering 資訊工程系	2060	Microprocessor 微處理機	Required 必修	3	CHEN,KUO-YI 陳國益		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	Course Plan
		B											
32	Department of Electronic Engineering 電子工程科 (二專)	0404	Microprocessor and Practice 微處理機與實習	Required 必修	3	Yu-Sung Liu 劉育松				7-9		(AME0406) Lab 3, Building of Mechanical Engineering 4F 機械工程館 4F AME0406 物理實驗室(三)	Course Plan
		J											
33	Department of Electronic Engineering 電子工程系 (二技)	0437	Electromagnetics 電磁學	Required 必修	3	Yu-Sung Liu 劉育松	7				3,4	(ATD0704)4th Teaching Building 7F 第四期教學大樓 7F ATD0704 普通教室	Course Plan
		T											

34	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	0305	Quantitative Research Methodology 數量研究方法	Required 必修	3	Chao, Wei-Cheng 趙偉成	5-7					Computer Lab Room (CMA0210) Applied Arts, Sciences and Management Building 2F 文理暨管理大樓 2F CMA0210 電腦教室	Course Plan
		M+P											
35	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	0307	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	Course Plan
		M											
36	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	0306	Simulation 模擬學	Elective 選修	3	Hu ,Chih –Hsiung 胡智熊			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	Course Plan
		M											

37	Master's Program, Department of Information Management 資訊管理系碩士班	0095 M	Software Engineering 軟體工程	Electives 選修	3	Yung-Tsung Hou 侯雍聰	5-7					(CMA0403) ., Applied Arts, Sciences and Management Building 4F 文理及管理大樓 4F CMA0403 專業教室 III	Course Plan
38	Master's Program, Department of Information Management 資訊管理系碩士班	0099 M	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		(CMA0409) ., Applied Arts, Sciences and Management Building 4F 文理暨管理大樓 4 樓 CMA0409 大數據分析電腦教室	Course Plan
39	Master's Program, Department of Information Management 資訊管理系碩士班	0093 M	Seminar on Information Management(1) 資訊管理專題研討(一)	Electives 選修	2	Yen-Kun Lin 林彥昆		2,3				(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	Course Plan
40	Master's Program in Business Management, Department of	0333	Marketing Management 行銷管理	Elective 選修	3	Yi Hsu 徐怡					5-7	(CMA0206) Applied Arts, Sciences and Management Building 2F	Course Plan

	Business Administration 企業管理系經營管理碩士班	M											文理及管理大樓 2F CMA0206 經營模擬與數據分析實驗室	
41	Master's Program in Business Management, Department of Business Administration 企業管理系經營管理碩士班	0334	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	Course Plan
		M												
42	Master's Program in Business Management, Department of Business Administration 企業管理系經營管理碩士班	0336	Business Data Analysis 企業資料分析	Elective 選修	3	Liang, Chih-Chin 梁直青			2-4			(CMA0208) Applied Arts, Sciences and Management Building 2F 文理及管理大樓 2F CMA0208 服務科學實驗室	Course Plan
		M+P												
43	Master's Program in Business Management, Department of Business	0349	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	Course Plan

	Administration 企業管理系經營管理碩士班	M										and Management Building 2F 文理暨管理大樓 2F CMA0209 創業管理實驗室	
44	Master's Program in Business Management, Department of Business Administration 企業管理系經營管理碩士班	0350	Entrepreneurship 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)	Course Plan
		M											
45	Master's Program in Business Management, Department of Business Administration 企業管理系經營管理碩士班	0351	Marketing Research 行銷研究	Elective 選修	3	Chih-Huang Lin 林志皇		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)	Course Plan
		M											
46	Master's Program, Department of Finance 財務金融系碩士班	0034	Corporate Finance 公司理財	Required 必修	3	Wang, Jo-Yu 王若愚		6-8				(CHB0207) Certificate Center, Art and Humanity Building 2F 人文大樓 2F CHB0207 證照中心	Course Plan
		M											

47	Master's Program, Department of Finance 財務金融系 碩士班	0035 M	Econometrics 計量經濟學	Required 必修	3	Tsai, Feng-Tse 蔡豐澤			5-7			(CHB0207) Certificate Center, Art and Humanity Building 2F 人文大樓 2F CHB0207 證照中心	Course Plan
48	Master's Program, Department of Finance 財務金融系 碩士班	0041 M	Derivatives 衍生性金融商品	Required 必修	3	Chang, Bi-Juan 張碧娟		2-4				(CMA0201) Seminar Room II, Applied Arts, Sciences and Management Building 2F 文理暨管理大樓 2F CMA0201 財金研討室 II	Course Plan
49	Department of Applied Foreign Languages 應用外語系	1877 B	Introduction to Business 企業管理概論	Elective 選修	2	Chiu, Hui -Yun 邱慧昀			5-6			(AGR0312) Multi -function Professional Room, Red Building 3F 紅樓 3F AGR0312 多功能專業教室	Course Plan
50	Department of Applied Foreign Languages 應用外語系	1911 B	Cross-cultural Management 跨文化管理	Elective 選修	2	Chiu, Hui -Yun 邱慧昀					3-4	(AGR0302) Multimedia Language Lab., Red Building 3F 紅樓 3F AGR0302 多媒體語言實驗室	Course Plan

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 Device and Manufacturing Process	授課教師 Instructor	迪克莎喬娜 (Diksha Chauhan)

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	指定課本書名 Book: 1. Semiconductor devices,2nd edition, by J.J.Sparks 　　2.　Fundamentals of Semiconductor Manufacturing and Process Control, G. May C. Spanos 　　3.　Principles of Electronics by VK Mehta 1.　（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： Assignments and surprise test/quiz

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)：Assignments and quiz/surprise test 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	Semiconductors and applications of semiconductor devices.	Lecturing, QA, Discussion
W2	Semiconductor materials and types	Lecturing, QA, Discussion
W3	The Fermi-level, Recombination	Lecturing, QA, Discussion
W4	Typical applications of	Lecturing, QA, Discussion, Quiz 1

	semiconductor devices	
W5	P-N junction diodes and current flow in semiconductors	Lecturing, QA, Discussion
W6	Rectifiers	Lecturing, QA, Discussion, Assignment
W7	Photodiodes, Metal-silicon junctions and Schottky diodes	Lecturing, QA, Discussion
W8	Bipolar junction transistors	Lecturing, QA, Discussion
W9	Mid term	
W10	Field effect transistors	Lecturing, QA, Discussion
W11	Integrated circuits	Lecturing, QA, Discussion
W12	Introduction to Semiconductor Manufacturing	Lecturing, QA, Discussion
W13	Historical Evolution	Lecturing, QA, Discussion, Quiz 2
W14	Semiconductor Processes and Integrated Circuit Manufacturing	Lecturing, QA, Discussion, Assignment
W15	Goals of Manufacturing and Unit Processes	Lecturing, QA, Discussion
W16	Syllabus revision	Lecturing, QA, Discussion
W17	Syllabus revision	QA, Discussion
W18	End 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	專業英文 English for Specific Purposes	授課教師 Instructor	迪克莎喬娜 (Diksha Chauhan)

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：English for everyone level 1 beginner course book by Rachel Harding (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：
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)：

<div align="center">

課程進度 Course Outline

</div>

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Introduction English for beginners: Introduction to the English alphabet and pronunciation, numbers	Lecturing, QA, Discussion
W2	Read and write words: vocabulary	Lecturing, QA, Discussion
W3	Learning words vocabulary	Lecturing, QA, Discussion
W4	Basic grammar	Lecturing, QA, Discussion
W5	Reading and writing of short sentences, simple text	Lecturing, QA, Discussion
W6	Making sentences	Lecturing, QA, Discussion
W7	Everyday English: Basic English greetings and expressions Meeting people for the first time	Lecturing, QA, Discussion
W8	Everyday English : Effectively describing ' Myself" (introduction, interests, aims, daily routine)	Lecturing, QA, Discussion
W9	Everyday English: Describing people and places Expressing likes, dislikes, and preferences	Lecturing, QA, Discussion
W10	Mid term	
W11	Everyday English: Simple spoken English conversation in Class Ask and answer the questions	Lecturing, QA, Discussion
W12	Reading and writing basics: Reading	Lecturing, QA, Discussion

	simple texts and comprehension, writing basic sentences and paragraphs	
W13	Practical communication skills in English: Making appointments and arrangements, giving directions and instructions Talking about the weather and seasons	Lecturing, QA, Discussion
W14	Topic presentation in class: Classroom activities , conversation and group discussion on several topics	Lecturing, QA, Discussion
W15	Topic presentation in class: Classroom activities , conversation in English	Lecturing, QA, Discussion
W16	Classroom activities , conversation in English	Lecturing, QA, Discussion
W17	Revision classes	Lecturing, QA, Discussion
W18	End 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	專業英文 English for Specific Purposes	授課教師 Instructor	迪克莎喬娜 (Diksha Chauhan)

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：English for everyone level 1 beginner course book by Rachel Harding 　　(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：

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)：

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 English for beginners: Introduction to the English alphabet and pronunciation, numbers	Lecturing, QA, Discussion
W2	Read and write words: vocabulary	Lecturing, QA, Discussion
W3	Learning words vocabulary	Lecturing, QA, Discussion
W4	Basic grammar	Lecturing, QA, Discussion
W5	Reading and writing of short sentences, simple text	Lecturing, QA, Discussion
W6	Making sentences	Lecturing, QA, Discussion
W7	Everyday English: Basic English greetings and expressions Meeting people for the first time	Lecturing, QA, Discussion
W8	Everyday English : Effectively describing ' Myself' (introduction, interests, aims, daily routine)	Lecturing, QA, Discussion
W9	Everyday English: Describing people and places Expressing likes, dislikes, and preferences	Lecturing, QA, Discussion
W10	Mid term	
W11	Everyday English: Simple spoken English conversation in Class Ask and answer the questions	Lecturing, QA, Discussion
W12	Reading and writing basics: Reading simple texts and comprehension, writing basic sentences and paragraphs	Lecturing, QA, Discussion
W13	Practical communication skills in English: Making appointments and arrangements, giving directions and instructions Talking about the weather and seasons	Lecturing, QA, Discussion

W14	Topic presentation in class: Classroom activities , conversation and group discussion on several topics	Lecturing, QA, Discussion
W15	Topic presentation in class: Classroom activities , conversation in English	Lecturing, QA, Discussion
W16	Classroom activities , conversation in English	Lecturing, QA, Discussion
W17	Revision classes	Lecturing, QA, Discussion
W18	End 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	無線通訊 Wireless Communications	授課教師 Instructor	迪克莎喬娜 (Diksha Chauhan)

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： Wireless communications, Principle and practice, 2nd Edition, by Theodore S. Rappaport (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： Assignments and quiz/surprise test

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) ：Assignments and Quiz all in 100% English 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 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	Lecturing, QA, Discussion
W9	Midterm 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	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	End term exams	

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 Dr. Ranjit A. Patil

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:(100 % 英文內容 Percentage in English) 1. Ceramic Materials: Science and Engineering- C. Barry Carter, M. Grant Norton, Springer 2. SCI-published research articles 2.自製教材 Self-made Materials:Summarized materials for various topics, Special teaching on computer modeling. (% 英文內容 Percentage in English) 100 % 其他補充說明 Others: Software resources
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: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. ● 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):100 % English Grading system: 10 % (Daily Interaction and Participation in Class) + 20 % (Homework/Report) + 30 % (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 of Course	Group Discussion, Q&A
W2	Introduction to Ceramics	Lecturing, Group Discussion, Q&A
W3	Bonds and Energy Bands	Lecturing, Q&A
W4	Bonds and Energy Bands	Lecturing, Group Discussion, Q&A
W5	Crystal Systems and Symmetry	Lecturing, Q&A

W6	Crystal Systems and Symmetry	Lecturing, Group Discussion, Q&A
W7	Binary Compounds	Lecturing, Q&A
W8	Binary Compounds - Computer Modelling	Group Discussion, Q&A
W9	Mid-term Examination	Mid-term Examination
W10	Complex Crystal Structures	Lecturing, Group Discussion, Q&A
W11	Complex Crystal Structures	Lecturing, Q&A
W12	Complex Crystal Structures - Computer Modelling	Lecturing, Group Discussion, Q&A
W13	Interaction with Light	Group Discussion, Q&A
W14	Interaction with Light	Lecturing, Q&A
W15	Electro-optic Response	Lecturing, Group Discussion, Q&A
W16	Electro-optic Devices	Lecturing, Q&A
W17	Review of the Class	Group Discussion, Q&A
W18	Final Examination	Final Examination

Note: The teacher can make appropriate adjustments to the above weekly schedule as the course progresses, and the schedule may be subject to change.

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 Dr. Ranjit A. Patil

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:(%英文內容 Percentage in English) 100 % 　[1] Semiconductor Manufacturing Technology – Michel Quirk, Julian Serda, Prentice Hall 　[2] Introduction to Semiconductor Manufacturing Technology - Hong Xiao, Prentice Hall 2.自製教材 Self-made Materials: Summarized presentation materials for the topics. (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:

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%。 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)：English 100 % Grading system: 10 % (Daily interaction and Participation in Class) + 20 % (Homework) + 30 % (Midterm exam) + 40 % (Final exam)

<table>
<tr><th colspan="3">課程進度 Course Outline</th></tr>
<tr><th>週次
Week</th><th>單元/主題
Unit/Topic</th><th>教學活動重點及教材內容
Teaching Activities</th></tr>
<tr><td>W1</td><td>Introduction</td><td>Lecturing,</td></tr>
<tr><td>W2</td><td>Introduction to IC fabrication</td><td>Lecturing, Q&A</td></tr>
<tr><td>W3</td><td>Semiconductor basics</td><td>Lecturing, Q&A</td></tr>
<tr><td>W4</td><td>Wafer manufacturing</td><td>Lecturing, Group Discussion, Q&A</td></tr>
<tr><td>W5</td><td>Thermal processes</td><td>Lecturing, Group Discussion, Q&A</td></tr>
<tr><td>W6</td><td>Photolithography</td><td>Lecturing, Group Discussion, Q&A</td></tr>
<tr><td>W7</td><td>Plasma basics</td><td>Lecturing, Group Discussion, Q&A</td></tr>
<tr><td>W8</td><td>Ion implantation</td><td>Lecturing, Group Discussion, Q&A</td></tr>
<tr><td>W9</td><td>Mid-term Examination</td><td>Mid-term Examination</td></tr>
<tr><td>W10</td><td>Etch</td><td>Lecturing, Q&A</td></tr>
<tr><td>W11</td><td>CVD and Dielectric thin film</td><td>Lecturing, Q&A</td></tr>
<tr><td>W12</td><td>Metallization</td><td>Lecturing, Q&A</td></tr>
<tr><td>W13</td><td>Chemical Metal Polishing</td><td>Lecturing, Q&A</td></tr>
<tr><td>W14</td><td>Process integration</td><td>Lecturing, Group Discussion, Q&A</td></tr>
<tr><td>W15</td><td>CMOS processes- I</td><td>Lecturing, Q&A</td></tr>
<tr><td>W16</td><td>CMOS processes- II</td><td>Lecturing, Q&A</td></tr>
<tr><td>W17</td><td>CMOS processes- III</td><td>Lecturing, Group Discussion, Q&A</td></tr>
<tr><td>W18</td><td>Final Examination</td><td>Final Examination</td></tr>
<tr><td colspan="3">**Note:** Teacher can make appropriate adjustments to the above weekly schedule as the course progresses, and the schedule may be subject to change.</td></tr>
</table>

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 Dr. Ranjit A. Patil

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:(%英文內容 Percentage in English) 100_% [1] Semiconductor Devices: Physics and Technology- S.M. Sze, John Wiley [2] Photovoltaics-Christiana Honsberg and Stuart Bowden- https://www.pveducation.org/pvcdrom/introduction/introduction [3] Physics of Solar Cells, P. Wurfel, Wiley-VCH 2.自製教材 Self-made Materials: Summarized presentation materials for the topics. (% 英文內容 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:
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。 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):100 % English Grading system: 10 % (Daily Interaction and Participation in Class) + 20 % (Homework/Report) + 30 % (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 to the course	Group Discussion, Q&A
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, Group Discussion, Q&A
W13	Solar/Photovoltaic Cells - I	Lecturing, Group Discussion, Q&A
W14	Solar/Photovoltaic Cells - II	Lecturing, Group Discussion, Q&A
W15	Solar/Photovoltaic Cells - III	Lecturing, Group Discussion, Q&A
W16	Solar/Photovoltaic Cells - IV	Lecturing, Group Discussion, Q&A
W17	Review of the Course	Group Discussion, Q&A
W18	Final Examination	Final Examination
Note: The teacher can make appropriate adjustments to the above weekly schedule as the course progresses, and the schedule may be subject to change.		

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 (0305)	授課教師 Instructor	庫秉弦 (Abhishek Kumar) BAR-509A Kumar0313@nfu.edu.tw BAR-509A, Ph.: 05-6313108
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.Fundamentals of Thermodynamics, by Claus Borgnakke and R.E. Sonntag, SI Version, 9th ed., 2017, John Wiley ＆amp; Sons, Inc. 3.自製教材 Self-made Materials： Lecture notes (Percentage in English)100% 4.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	☑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： Homework and Quiz
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 　1. ☑ 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 and Quiz 15% 　3. Mid-term 35% 　4. Final-term 40%

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	Unit-1	Introduction and Fundamental Concepts
W2	Unit-1	Zeroth Law and Fundamental Concept, Different kind of energy, State of Equilibrium
W3	Unit-2	First law of Thermodynamics
W4	Unit-2	First law of Thermodynamics
W5	Unit-3	Availability and Exergy
W6	Unit-3	Availability and Exergy
W7	Unit-4	Thermodynamic Property Relations
W8	Unit-4	Thermodynamic Property Relations
W9	**Midterm**	**Open Book**
W10	Unit-5	Properties of Pure Substance
W11	Unit-5	Properties of Pure Substance
W12	Unit-5	Properties of Pure Substance
W13	Unit-6	Vapor Power Cycle
W14	Unit-6	Vapor Power Cycle
W15	Unit-7	Gas Power Cycle
W16	Unit-8	Thermodynamics of Reacting and Multicomponent System
W17	Unit-8	Thermodynamics of Reacting and Multicomponent System
W18	**Final-term**	**Open Book**

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) Kumar0313@nfu.edu.tw BAR-509A, 05-6313108

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： 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) 2.Product design and Development by Karl T. Ulrich. Steven D. Eppinger 3.自製教材 Self-made Materials：Lecture notes (Percentage in English)100% 4.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	☑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：Assignment and Quiz

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 1. ☑ 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 25% 2. Midterm Test or Project 35% 3. Final Test or Project 40%

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	Design and Collaboration, Characteristics of successful product development and collaboration
W2	Unit- 1	Introduction to product design and development, Product life-cycle

W3	Unit-1	Product policy of an organization and selection of profitable products, Product design, Product design steps, and product analysis
W4	Unit-2	Value engineering concepts, Problem Identification and VEJP, Function analysis
W5	Unit-2	Functional analysis system technique, Case study on value engineering
W6	Unit-3	Quality function deployment, Computer-aided design, Robust design
W7	Unit-3	Design for X, Ergonomics in product design
W8	Unit-4	DFMA guidelines, Product design for manual assembly, Design guidelines for different processes
W9	**Midterm**	**Open book**
W10	Unit-4	Rapid prototyping: concept, advantages, Rapid prototyping processes
W11	Unit-5	Collaborative assembly design, Evaluation of product assemblability in different assembly sequences
W12	Unit-5	Evaluation of assembly design from assembly planning and redesign, Collaborative assembly planning
W13	Unit-6	Producibility and Reliability
W14	Unit-6	Producibility and Reliability
W15	Unit-7	Product Development Economics
W16	Unit-7	Patents and Intellectual Property
W17	Unit-8	Managing Projects
W18	**Final-term**	**Open Book**

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) Kumar0313@nfu.edu.tw BAR-509A, 05-6313108
教學簡要說明			

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： Writing Up Research: Experimental Research Report Writing for Students of English: Robert Weissberg, Suzanne Buker, Prentice Hall Regents, 1990 2.（英文內容 Percentage in English) 100% 3.自製教材 Self-made Materials： Lecture notes (Percentage in English)100% 4.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	☑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： Assignment and Quiz

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
	1. ☑ 其他方式(請說明中英文比例)Others (please state the proportion of Mandarin and English in grading)：Attendance, Homework and Quiz in class participation 35%
	2. Writing template and assignments 25%
	  - Find five journal articles of your relevant field written by good English native speakers as model papers for analysis (due week 3)
	  - Develop your personalized scientific writing template
	3. Independent/group scientific writing Task 40%

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	Demystifying The Writing Process	What makes good writing?　Are there "good writers" and "bad writers"? Words, word choice, the basic elements of sentences, and sentence structure.　Writing in the active voice.
W2	Writing Basics I	Punctuation and Parallelism.　Tricks for clarity, brevity, and finesse.
W3	Writing Basics II	Paragraphs, logic, and organization.　Organizational strategies.
W4	Writing Basics III	Putting it all together…, In Class Exercise: Individual/group rewrites
W5	How to Write the Scientific Manuscript: Introduction	Getting to the main point and summarizing effectively, structure, and content
W6	How to Write the Scientific Manuscript: Introduction	How to conduct literature reviews, paraphrasing, research gap, objective
W7	How to Write the Scientific Manuscript: Method	Structure of Material and Method
W8	How to Write the Scientific Manuscript: Method	How to write prose that complements a table or figure?
W9	**Midterm**	**Submission of writing task**
W10	How to write the Scientific Manuscript: Result and Discussion	How to present data effectively? Results Format

W11	How to Write the Scientific Manuscript: Result and Discussion	Writing an effective discussion, Grammatical style
W12	How to Write the Scientific Manuscript: Title and Abstract	Effective way of writing Title and Abstract
W13	Wrap-up scientific manuscripts	Submission and authorship for scientific manuscripts
W14	Plagiarism and Reference	
W15	How to address reviewer comment	
W16	Time for independent writing	No classes
W17	Time for independent writing	No classes
W18	**Final-term**	**Submission of writing task**

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	彈性力學 Elasticity	授課教師 Instructor	張禎元 Jen-Yuan (James) Chang

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：＿＿＿＿＿＿＿＿＿＿＿＿ (＿＿％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：

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__50___%。 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：_80_%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)：

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; Strength of Materials I, II	Lecture, in-class Q&A and discussion
W2	• Strength of Materials III, IV	Lecture, in-class Q&A and discussion
W3	• Large Deflection Beam Theory I	Lecture, in-class Q&A and discussion
W4	• Midterm Exam I	Examination for W1-W3 contents
W5	• Large Deflection Beam Theory II, III	Lecture, in-class Q&A and discussion
W6	• Large Deflection Beam Theory IV • Engineering Applications of Large Deflection Beam Theory	Lecture, in-class Q&A and discussion
W7	• Introduction to General Elasticity Theory I, II, III	Lecture, in-class Q&A and discussion
W8	• Two-Dimensional Problem Formulation Group project proposal presentations	Students use English to proposal what they want to do and interim results for their semester term project
W9	• Midterm Exam II	Examination for W5-W7 contents
W10	• Stress Governing Equations & Airy Stress Function	Lecture, in-class Q&A and discussion
W11	• Problem in Rectangular Coordinates	Lecture, in-class Q&A and discussion
W12	• Problem in Polar Coordinates I, II	Lecture, in-class Q&A and discussion
W13	• Midterm Exam III	Examination for W10-W12 contents
W14	• Problem in Polar Coordinates III, IV	Lecture, in-class Q&A and discussion
W15	• Torsion of Non-Circular Cross Sections I	Lecture, in-class Q&A and discussion
W16	• Torsion of Non-Circular Cross Sections II, III	Lecture, in-class Q&A and discussion
W17	• Group project final presentations	Students use English to present their term project
W18	• Final Exam	Examination for the course, covering entire semester

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

<table>
<tr><td colspan="4" align="center">教學簡要說明</td></tr>
<tr><td colspan="4">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.</td></tr>
<tr><td>課程教材
Material</td><td colspan="3">1.指定課本書名 Book：_ Special Topics on Metal Forming _ (_100_%英文內容 Percentage in English)
2.自製教材 Self-made Materials：Special Topics on Metal Forming 採用英文之比例(Percentage in English)_100_%
3.其他補充說明 Others：</td></tr>
<tr><td>雙語教學方式
(可多選，或簡述)
Bilingual Teaching Strategies</td><td colspan="3">■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：</td></tr>
<tr><td>成績評量方式
Grading</td><td colspan="3">■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)：</td></tr>
</table>

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	進階電腦輔助設計 Advanced Computer Aided Design	授課教師 Instructor	翁豐在 FengTsai Weng

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>CREO Parametric</u>　　(<u>70</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)_60_% 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：

成績評量方式 Grading	■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. ■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 □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)：

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 course	Introduction of course
W2	Advanced 3D Modeling	Creo Parametric 3D Modeling
W3	Advanced 3D Modeling	Modeling exercise 1
W4	Advanced 3D Modeling	Modeling exercise 2
W5	Advanced 3D Modeling	Modeling exercise3
W6	Advanced 3D Modeling	Modeling exercise4
W7	Advanced 3D Modeling	Modeling exercise5
W8	Assignment	Assignment 1
W9	Midterm	Midterm
W10	Mold Design	Modeling exercise 6
W11	Mold Design	Modeling exercise 7
W12	Mold Design	Modeling exercise8
W13	Assignment	Assignment 2
W14	Mold Design	Modeling exercise 9
W15	Mold Design	Modeling exercise 10
W16	Mold Design	Modeling exercise 11
W17	Mold Design	Group Discussion & Assignment 3
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	半導體元件與製程 Semiconductor Devices and Processes	授課教師 Instructor	方昭訓 Fang,Jau-Shiung

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：___Introduction to Semiconductor Manufacturing Techlologies__ 　(_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：
成績評量方式 Grading	■期中/期末考：_50％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. □英文期中/期末報告：_____%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)：

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	Brief History, Overview
W2	Introduction to IC Fabrication	Introduction, Yield Clean Room
W3	Semiconductor Basics	Semiconductor and Basic Devices
W4	Wafer manufacturing	Crystal Structure and Defects
W5	Thermal Processes	Hardware and Diffusion

W6	Photolithography	PR, Lithography Technology
W7	Plasma Basics	Plasma
W8	Ion Implantation	Ion implantation basics
W9	Midterm Exam.	Midterm Examination
W10	Etch	Etch Basics and wet and Dry Etch
W11	CVD and Dielectric Thin Film	CVD Thin Films
W12	Metallization	Sputter and Electrochemical Deposition
W13	CMP	CMP Hardware and CMP Basics
W14	Process Integration	IC Fabrication
W15	CMOS Processes	How to integrate a CMOS processes
W16	Discussion and Presentation	Discussion and Presentation
W17	Discussion and Presentation	Discussion and Presentation
W18	Final Exam.	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	固態熱力學 Thermodynamics of Solids	授課教師 Instructor	蔡朝伊 Tsai, Chau-Yi

	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：_____"Introduction to the Thermodynamics of Materials"_____ 　(__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	■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：__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. □ 英文期中/期末報告：_____%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)：

<div align="center">

課程進度 Course Outline

</div>

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	Lecture 1 / Introduction	introduction to Thermodynamics of solid (what is Thermodynamic and why study it ?)
W2	Lecture 2 / Introduction	introduction to Thermodynamics of solid (system, state, function, path and EoS)
W3	Lecture 3 / the first law	the first law of Thermodynamics (work, heat, first law equation and physical meaning)
W4	Lecture 4 / the first law	the first law of Thermodynamics (enthalpy, heat capacity, variety of processes)
W5	Lecture 5 / the first law	the first law of Thermodynamics (applications and calculations)
W6	Lecture 6 / the second law	the second law of Thermodynamics (why need a second law, spontaneous, reversible processes)
W7	Lecture 7 / the second law	the second law of Thermodynamics (definition and physical meaning of entropy and the second law)
W8	Lecture 8 / the second law	the second law of Thermodynamics (heat engines, applications and calculations)
W9	Mid-term exam	Mid-term exam
W10	Lecture 9 / Auxiliary functions	Auxiliary functions (why need auxiliary functions in Thermodynamics, definition and derivation of 5 auxiliary functions)
W11	Lecture 10 / Auxiliary functions	Auxiliary functions (spontaneous conditions, 4 sets of fundamental equations)
W12	Lecture 11 / Auxiliary functions	Auxiliary functions (derivation of Maxwell equations and further relationships)
W13	Lecture 12 / Auxiliary functions	Auxiliary functions (applications and calculations)
W14	Lecture 13 / the third law	the third law of Thermodynamics (definition and physical meaning of the third law)
W15	Lecture 14 / the third law	the third law of Thermodynamics (applications and calculations)

W16	Lecture 15 / Oral presentation (I)	Topic oral presentation (I)
W17	Lecture 16 / Oral presentation (II)	Topic oral presentation (II)
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	材料機械性質 Mechanical Behavior of Materials	授課教師 Instructor	陳苡諺 Yi-Yen Chen

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:_____ (_____%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:

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 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:_____%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):

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	Chapter 1: Introduction	Introduction
W2	Chapter 1: Deformation	Elastic deformation and permanent deformation
W3	Chapter 2: Solid mechanics	Complex stress system
W4	Chapter 2: Solid mechanics	Two-dimensional stress system
W5	Chapter 2: Solid mechanics	Three-dimensional stress system
W6	Chapter 2: Solid mechanics	Mohr's circle
W7	Chapter 2: Solid mechanics	Yield criteria
W8	Chapter 3: Plasticity	Slip systems
W9	Midterm exam	Midterm exam
W10	Chapter 3: Plasticity	Critical resolved shear stress and yielding
W11	Chapter 3: Plasticity	Effect of defects on plastic deformation
W12	Chapter 4: Stress-strain curve	General stress-strain curve
W13	Chapter 4: Stress-strain curve	General stress-strain curve
W14	Chapter 5: Strength mechanisms	Strength mechanisms
W15	Chapter 5: Strength mechanisms	Strength mechanisms
W16	Oral presentation	Oral and Q&A
W17	Oral presentation	Oral and Q&A
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	數位影像處理 Digital Image Processing	授課教師 Instructor	李廣齊 Kuang-Chyi Lee
教學簡要說明			

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：＿＿＿＿＿＿＿＿＿＿＿ (＿＿＿%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	■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：　70％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. □　英文期中/期末報告：_____％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 Englishin 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 Data Mining.	Oral
W2	Data Preprocessing	Oral
W3	Algorithm of Perception	Oral
W4	Introduction to Linux System	Oral & Practice
W5	Introduction to Anaconda	Oral & Practice
W6	Python Programming	Oral & Practice
W7	Introduction to Neural Network	Oral
W8	Midterm Project Presentation	Oral
W9	Midterm Exam	
W10	Association　Analysis	Oral
W11	Introduction to Deep Learning	Oral
W12	Classification and Prediction	Oral
W13	MNIST dataset.	Oral & Practice
W14	Case Study(I): Get Data	Oral & Practice
W15	Case Study(II): Training	Oral & Practice
W16	Case Study(III): Inference	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	智慧型控制 Intelligent Control	授課教師 Instructor	李廣齊 Kuang-Chyi Lee

<table>
<tr><td colspan="4" align="center">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.</td></tr>
</table>

課程教材 Material	1.指定課本書名 Book：<u>A. Zilouchian & M. Jamshidi, Intelligent Control Systems Using Soft Computing Methodologies</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	■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：_70_％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.
	□　英文期中/期末報告：_____％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 Englishin grading)：

<table>
<tr><td colspan="3" align="center">課程進度 Course Outline</td></tr>
<tr><td align="center">週次
Week</td><td align="center">單元/主題
Unit/Topic</td><td align="center">教學活動重點及教材內容
Teaching Activities</td></tr>
<tr><td align="center">W1</td><td align="center">Introduction to Intelligent Control Systems</td><td align="center">Oral</td></tr>
<tr><td align="center">W2</td><td align="center">Foundations of Neural Networks</td><td align="center">Oral</td></tr>
</table>

W3	Neural Network Architectures	Oral
W4	Fundamentals of Fuzzy Logic Control	Oral & Practice
W5	Designing Fuzzy Logic Controllers	Oral & Practice
W6	Overview of Genetic Algorithms	Oral & Practice
W7	Genetic Algorithms for Optimization	Oral
W8	Midterm Project Presentation	Oral
W9	Midterm Exam	
W10	Ant Colony and Other Swarm Intelligent Algorithms	Oral
W11	Adaptive Neural-Based Fuzzy Systems	Oral
W12	Neural Networks for Control Applications	Oral
W13	Fuzzy Logic for Decision Making	Oral & Practice
W14	Advanced Topics in Genetic Algorithms	Oral & Practice
W15	Ant Colony Optimization in Control Systems	Oral & Practice
W16	Current Trends in Intelligent Control Systems	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	自動化無人載具系統 Autonomous Unmanned Vehicle System	授課教師 Instructor	李孟澤 LI,MENG-TSE

<table>
<tr><td colspan="4" align="center">教學簡要說明</td></tr>
<tr><td colspan="4">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.</td></tr>
<tr><td>課程教材
Material</td><td colspan="3">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)__80__%
3.其他補充說明 Others：</td></tr>
</table>

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_____%。 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：_____%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)

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**	**Student's Oral Presentation**
W10	Part-6: The Subsystems of an Autonomous Unmanned Vehicle	Subsystems of an 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**	**Student's 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	飛航安全 Aviation Safety	授課教師 Instructor	王士嘉 Wang, Shih-Chia

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：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	■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：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)：

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	嵌入式系統 Embedded System	授課教師 Instructor	蘇暉凱 Su, Hui-Kai

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：＿＿＿＿＿＿＿＿＿＿＿ (＿＿＿%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：

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＿＿＿%。 　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：＿＿＿%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

<table>
<tr><td></td><td>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)：</td></tr>
</table>

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	專業英文 Professional English	授課教師 Instructor	楊峻泓 / Chun-Hung Yang (與林仁勇 / Jen-Yung Lin 教師共授)

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：＿＿＿＿＿＿＿＿＿＿＿＿ (＿＿＿%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	■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＿＿＿%。 　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：＿＿＿%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)：

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
課程進度 Course Outline		
W1	Course Introduction & Vocabulary Basics	Lecturing / Discussion
W2	Circuit Theory	Lecturing / Group Discussion / Q&A
W3	Electronic Components	Lecturing / Group Discussion / Q&A / Case Study
W4	Signals and Systems	Lecturing / Group Discussion / Q&A / Case Study
W5	Digital Circuits	Lecturing / Group Discussion / Q&A / Case Study
W6	Analog Circuits	Lecturing / Group Discussion / Q&A / Case Study
W7	Microprocessor Architecture	Lecturing / Group Discussion / Q&A / Case Study
W8	Power Systems and Energy Technologies	Lecturing / Group Discussion / Q&A / Case Study
W9	Control Systems	Lecturing / Group Discussion / Q&A / Case Study
W10	Midterm (Oral presentation)	Midterm
W11	Communication Systems	Lecturing / Group Discussion / Q&A / Case Study
W12	Machine Learning and AI	Lecturing / Group Discussion / Q&A / Case Study
W13	Machine Learning and AI	Lecturing / Group Discussion / Q&A / Case Study
W14	Electric Vehicle	Lecturing / Group Discussion / Q&A / Case Study
W15	Robot	Lecturing / Group Discussion / Q&A / Case Study
W16	Final report	Personal oral report
W17	Final report	Personal oral report
W18	Final term (Oral presentation)	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	計算機概論 Introduction to Computer	授課教師 Instructor	徐茂修 Hsu　Mao-Hsiu
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：＿Python 零基礎+ChatGPT 高效率 學程式設計與運算思維_ （＿55＿%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)＿70＿% 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：
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：＿40＿%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)：

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 RISC-V Overview	Course Introduction RISC-V Overview
W2	Introduction to RISC-V Instruction Set	Introduction to RISC-V Instruction Set
W3	Understanding Instruction Formats and Pseudoinstructions	Understanding Instruction Formats and Pseudoinstructions
W4	The Modularity of RISC-V as an ISA	The Modularity of RISC-V as an ISA
W5	Privileges and the Memory Model	Privileges and the Memory Model
W6	Python Language for RISC-V	Python Language for RISC-V
W7	Writing and Debugging RISC-V and Python Code	Writing and Debugging RISC-V and Python Code
W8	High-Level Languages for RISC-V (Python Programming)	High-Level Languages for RISC-V (Python Programming)
W9	Midterm exam	
W10	Python Introduction and Setting up the Environment	-Introduction to programming - Choosing Python as a languag
W11	Setting up the Python environment	- Exploring Python IDEs
W12	Python Basic Syntax and Data Types	- Input/output - Comments - Variables

		- Data types (integers, floats, strings, etc.) - Typecasting
W13	Operators in Python	- Arithmetic operators - Assignment operators - Comparison operators - Logical operators - Identity and membership operators - Bitwise operators
W14	Strings in Python	- Creating and formatting strings - Indexing and slicing - String methods
W15	Lists in Python	- Creating lists - Properties of lists - Indexing and slicing lists - List methods - Modifying lists
W16	Tuples in Python	- Syntax and properties - Indexing and slicing tuples - Tuple methods
W17	Sets in Python	- Syntax - Updating sets - Set operations - Set methods
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	專業英文 Professional English	授課教師 Instructor	徐茂修 Hsu　Mao-Hsiu
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：__ understanding artificial intelligence fundamentals and applications_ 　　(__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：
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)：

<div align="center">

課程進度 **Course Outline**

</div>

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
W2	neural network	neural network
W3	machine vision	machine vision
W4	nature language	nature language
W5	language processing	language processing
W6	autonomous vehicle	autonomous vehicle
W7	drone	drone
W8	healthcare	healthcare
W9	Midterm exam	
W10	retail manufacturing agricuture	retail manufacturing agricuture
W11	smart city	smart city
W12	computing platform	computing platform
W13	kneron neural	kneron neural
W14	processing unit	processing unit
W15	object detection	object detection
W16	python installation	python installation
W17	image detection	image detection
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	光電儀器原理 Principle of Optical Instrument	授課教師 Instructor	陳佳勳 Chen　Chia-Hsun

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：＿＿＿＿＿＿＿＿＿＿＿＿ (＿＿＿%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：
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：_80_%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)：

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 Optoelectronic Devices and Systems	Teaching class&Practice
W2	Basic Concepts	**Teaching class** ● Understanding Nature of Light ● Reflection and Refraction ● Diffraction and Interference

		Practice
W3	Basic Concepts	**Teaching class** ● Polarization ● Dispersion **Practice**
W4	Basic Concepts	**Teaching class** ● Electromagnetic Spectrum ● Optical Spectral Bands **Practice**
W5	Light Propagation	**Teaching class** ● Introduction To Optical Fibers ● Classification Of Optical Fiber ● Light Propagation in Optical Fibers **Practice**
W6	Optical System	**Teaching class** ● Attenuation ● Amplification **Practice**
W7	Study of Light	**Teaching class** ● Radiometry ● Photometry ● Scotopic and Photopic Vision ● Parameters in Photometry **Practice**
W8	Photometry	**Teaching class** ● Luminous Flux ● Luminous Intensity ● Luminous Efficiency **Practice**
W9	Midterm Exams	
W10	Radiometry	**Teaching class** Radiometric Quantities **Practice**
W11	Optical Phenomena	**Teaching class** ● Double Refraction ● Absorption **Practice**
W12	UV-visible Spectrophotometer	**Teaching class** ● UV-visible Spectrophotometer Works ● Data Analysis ● How to estimate the size of nanoparticles by using UV-Vis absorbance ● Calculate band gap energy from UV-Vis absorbance ● Calculate Urbach energy **Practice**
W13	Energy Band Theory	**Teaching class** ● Energy Band Diagram ● Bandgap Modulation ● Doping Method

		• Quantum Size Effect **Practice**
W14	Principles of Various Measurement Systems	**Teaching class** • Atomic Force Microscope • Transmission Electron Microscope • Scanning Electron Microscopy **Practice**
W15	Optical Measurements of Si-Photonic	**Teaching class** • Co-Packaged Optics • Challenges and Opportunities for CPO • Si-photonic **Practice**
W16	Final report	Personal oral report
W17	Final report	Personal oral report
W18	Final report	Personal 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	科技論文寫作 Research Writing for Science and Technology	授課教師 Instructor	蔡柏祥 TSAI, PO-HSIANG
教學簡要說明				

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：Book：_Writing Up Research: Experimental Research Report Writing for Students of English, Weissberg and Buker, 2008, 文鶴_ (_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	■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：_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.

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 the course
W2	Academic Research Writing	Trends in Scientific Publishing;　What Publishers Need; Article Structure;　Research Papers
W3	Revisions and Response to Reviewers	The Onset; Main Reasons for Rejection; Cover Letter; Post-referee revision; Plagiarism
W4	Revisions and Response to Reviewers	The Onset; Main Reasons for Rejection; Cover Letter; Post-referee revision; Plagiarism
W5	Article Search and Library Access	Literature Search; Research Performance Assessment; Papers Selection Criteria; Which Journal Articles to Submit
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	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	■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__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：_____%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)：

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	• What is Big Data: many Vs • Open Data • Big Data Analysis Tools
W2	Analysis Tools	• Analysis Tools: R & Python
W3	Cases Study 1	• (Problem Based Learning)

		• Analyzing 1.1 Billion NYC Taxi and Uber Trips
W4	Getting to Know Your Data	• Data Objects and Attribute Types • Basic Statistical Descriptions of Data
W5	Getting to Know Your Data	• Data Visualization • Measuring Data Similarity and Dissimilarity
W6	Data Pre-processing	• Data Preprocessing: An Overview • Data Quality • Major Tasks in Data Preprocessing
W7	Data Pre-processing	• Data Cleaning • Data Integration
W8	Data Pre-processing	• Data Reduction • Data Transformation and Data Discretization
W9	Midterm	Midterm exam
W10	Outlier Detection	• Outlier and Outlier Analysis & Detection Methods • Statistical Approaches • Proximity-Base Approaches • Clustering-Base Approaches • Classification Approaches
W11	Big Data Processing & Management	• Big Data Storage Technologies • Hadoop Ecosystem • HDFS
W12	Big Data Processing & Management	• Big Data Storage Technologies • Hadoop Ecosystem • HDFS
W13	Research Challenges and Trends	• Big Data Applications • Big Data: Analytical Solutions • Research Challenges and Trends
W14	Research Challenges and Trends	• Big Data Applications • Big Data: Analytical Solutions • Research Challenges and Trends
W15	Research Challenges and Trends	• Big Data Applications • Big Data: Analytical Solutions • Research Challenges and Trends
W16	Big Data Security	• A Survey on Big Data Security Issues Challenges and Techniques • Data-centric Security
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	物聯網 Internet of Things	授課教師 Instructor	簡銘伸 JIAN,MING-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：＿＿＿＿＿＿＿＿＿＿＿ (＿＿＿%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)＿80＿%
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＿＿＿％。 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)：證照考試

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	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	圖形識別 Pattern Recognition	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：_Pattern Recognition_ (_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	■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：學生進行隨堂練習、上台英文報告論文、專題結果

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_____%。 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：_____%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)： 　　　學生進行隨堂練習(50%)、上台英文報告論文(100%)、專題結果報告(100%)

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	Classifier based on Bayes Decision Theory	1. Bayes Decision Theory 2. Discriminant functions and decision surfaces
W2	Classifier based on Bayes Decision Theory	1. Estimation of unknown probability density functions 2. The nearest neighbor rule
W3	Linear lassifiers	3. Linear discriminant functions and decision hyperplanes 4. The perceptron algorithm
W4	Linear lassifiers	1. Least squares methods 2. Support vector machines
W5	Nonlinear classifiers	The XOR problem The two-layer perceptron Three-layer perceptron
W6	Nonlinear classifiers	Backpropagation algorithm
W7	Nonlinear classifiers	Network size/cost function choices
W8	Nonlinear classifiers	Support vector machine (non-linear case)
W9	Dimensionality reduction	The Karhunen-Loeve transform
W10	Dimensionality reduction	Independent component analysis
W11	Dimensionality reduction	Nonlinear dimensionality reduction
W12	Clustering	1. Introduction 2. Proximity measures 3. Estimation of the number of clusters
W13	Clustering	Hierarchical algorithm
W14	Clustering	Schemes based on function optimization
W15	Paper presentation	
W16	Paper presentation	
W17	Final project presentation	
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	作業系統 Operation System	授課教師 Instructor	黃世昌 HUANG,SHIH-CHANG

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：Abraham Silberschatz et.al. Operating System Concepts, 10th Edition",WILLY, ISBN: 1119454085 (_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)__80__% 3. 其他補充說明 Others：NA

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：__80___%以上英文試題，學生以英文答題__80___%。 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：_____%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)：

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

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 Microprocessor	授課教師 Instructor	陳國益 CHEN,KUO-YI

<table>
<tr><td colspan="4" align="center">教學簡要說明</td></tr>
<tr><td colspan="4">3.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.
4.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.</td></tr>
<tr><td>課程教材
Material</td><td colspan="3">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)_100_%
3.其他補充說明 Others：</td></tr>
<tr><td>雙語教學方式
(可多選，或簡述)
Bilingual Teaching Strategies</td><td colspan="3">■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：</td></tr>
</table>

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：_____%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)：

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	SPI experiments	SPI protocol

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	微處理機與實習 Microprocessor and Practice	授課教師 Instructor	劉育松 Yu-Sung Liu

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：＿＿＿＿＿＿＿＿＿＿＿ (＿＿＿%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：
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＿＿＿%。 　　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：＿＿＿%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)：

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	*Ch1 preparation week and integrated development environment setup*	Understand Arduino and integrated development environment
W2	*Ch2 basic concepts of electronic components*	Understand electronic parts and tools
W3	*Ch3 basic concepts of computer*	Introduction to Arduino board and programming

	programming	
W4	*Ch4 digital signal and switches*	Switches, Ohm's law, and selective statements
W5	*Ch5 UART communication*	UART serial port communication
W6	*Ch6 LED seven-segment display*	LED seven-segment display, serial to parallel output IC
W7	*Ch7 SPI serial interface*	SPI serial interface and LED matrix display
W8	*Ch8 I2C serial communication*	I2C serial communication interface and LCD display
W9	*Midterm Examination*	*Oral report of project proposal*
W10	*Ch9 Analog Signal*	Analog Signal Processing
W11	*Ch10 Pulse width modulation*	Pulse width modulation of LED lights and motors
W12	*Ch11 Solution of Electrostatic Problems III*	Ultrasonic distance sensing, object-oriented programming and user-defined function library
W13	*Ch12 motor control I*	DC motor control and stepper motor control
W14	*Ch13 motor control II*	Servo motor control, digital filtering, data sorting programming
W15	*Ch14 Infrared remote control*	Infrared remote control, Schmitt trigger
W16	*Ch15 Bluetooth remote control*	Bluetooth remote control
W17	*Ch16 ESP8266 based Wi-Fi*	ESP8266 control board Wi-Fi IoT application implementation
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	電磁學 Electromagnetics	授課教師 Instructor	劉育松 Yu-Sung Liu

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：＿＿＿＿＿＿＿＿＿＿＿＿ (＿＿＿%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：
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_____%。 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：_____%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)：

<div align="center">

課程進度 Course Outline

</div>

週次 Week	單元/主題 Unit/Topic	教學活動重點及教材內容 Teaching Activities
W1	*Ch1 The Electromagnetic Model*	Introduce lesson requirements and physics SI units and universal constants.
W2	*Ch2 Vector Analysis I*	Introduce vector addition, subtraction and products, orthogonal coordinate systems.
W3	*Ch2 Vector Analysis II*	Gradient, Divergence, Curl of a vector field.
W4	*Ch2 Vector Analysis III*	Stokes's theorem and Helmholtz's theorem.
W5	*Ch3 Static Electric Fields I*	Coulomb's law, Gauss's law, and electric potential
W6	*Ch3 Static Electric Fields II*	Conductors and Dielectrics in static electric field, electric flux density, dielectric constant.
W7	*Ch3 Static Electric Fields III*	Boundary conditions for electrostatic fields.
W8	*Ch3 Static Electric Fields IV*	Capacitors, electrostatic energy and forces.
W9	*Midterm Examination*	Oral report of project proposal
W10	*Ch4 Solution of Electrostatic Problems I*	Poisson's and Laplace's equations, uniqueness of electrostatic solutions
W11	*Ch4 Solution of Electrostatic Problems II*	Method of images, boundary-value problems in Cartesian coordinates
W12	*Ch4 Solution of Electrostatic Problems III*	Boundary-value problems in cylindrical and spherical coordinates
W13	*Ch5 Steady Electric Currents I*	Current density, Ohm's law, Kirchhoff's voltage and current law.
W14	*Ch5 Steady Electric Currents II*	Power dissipation and Joule's law
W15	*Ch6 Static Magnetic Fields I*	Vector magnetic potential, Biot-Savart law, magnetic dipole, magnetization and equivalent current densities.
W16	*Ch6 Static Magnetic Fields II*	Magnetic field intensity, relative permeability, boundary conditions for magnetostatic fields.
W17	*Ch6 Static Magnetic Fields III*	Inductors, magnetic energy, forces, and torques.

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

<table>
<tr><td colspan="4" align="center">教學簡要說明</td></tr>
<tr><td colspan="4">1.請依照授課班級英文分級程度規劃課程計畫書。
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<tr><td>課程教材
Material</td><td colspan="3">1.指定課本書名 Book：__ Quantitative Analysis for Management __ (__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：</td></tr>
<tr><td>雙語教學方式
(可多選，或簡述)
Bilingual Teaching Strategies</td><td colspan="3">■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：</td></tr>
<tr><td>成績評量方式
Grading</td><td colspan="3">■　期中/期末考：_100____%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.
■　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)：</td></tr>
<tr><td colspan="4" align="center">課程進度 Course Outline</td></tr>
<tr><td align="center">週次
Week</td><td colspan="2" align="center">單元/主題
Unit/Topic</td><td align="center">教學活動重點及教材內容
Teaching Activities</td></tr>
<tr><td align="center">W1</td><td colspan="2">Introduction to Quantitative Analysis</td><td>**1.1** Describe the quantitative analysis approach and understand how to apply it to a real situation.
1.2 Describe the three categories of business analytics.</td></tr>
</table>

		1.3 Describe the use of modeling in quantitative analysis.
W2	Introduction to Quantitative Analysis	**1.4** Prepare a quantitative analysis model. **1.5** Use computers and spreadsheet models to perform quantitative analysis. **1.6** Recognize possible problems in using quantitative analysis. **1.7** Recognize implementation concerns of quantitative analysis
W3	Probability Concepts and Applications.	**2.1** Understand the basic foundations of probability analysis. **2.2** Use Bayes' Theorem to establish posterior probabilities. **2.3** Use Bayes' Theorem to establish further probability revisions.
W4	Probability Concepts and Applications.	**2.4** Describe and provide examples of both discrete and continuous random variables. **2.5** Explain the difference between discrete and continuous probability distributions. **2.6** Understand the binomial distribution.
W5	Probability Concepts and Applications.	**2.7** Understand the normal distribution and use the normal table. **2.8** Understand the F distribution. **2.9** Understand the exponential distribution and its relation to queuing theory. **2.10** Understand the Poisson distribution and its relation to queuing theory.
W6	Decision Analysis	**3.1** List the steps of the decision-making process. **3.2** Describe the types of decision-making environments. **3.3** Make decisions under uncertainty. **3.4** Use probability values to make decisions under uncertainty. **3.5** Use computers to solve basic decision-making problems. **3.6** Develop accurate and useful decision trees. **3.7** Revise probability estimates using Bayesian analysis. **3.8** Understand the importance and use of utility theory in decision making.
W7	Regression Models	**4.1** Identify variables, visualize them in a scatter diagram, and use them in a regression model. **4.2** Develop simple linear regression equations from sample data and interpret the slope and intercept. **4.3** Calculate the coefficient of determination and the coefficient of correlation and interpret their meanings. **4.4** List the assumptions used in regression and use residual plots to identify problems. **4.5** Interpret the F test in a linear regression model
W8	Regression Models	**4.6** Use computer software for regression analysis. **4.7** Develop a multiple regression model and use it for prediction purposes. **4.8** Use dummy variables to model categorical data. **4.9** Determine which variables should be included in a multiple regression model. **4.10** Transform a nonlinear function into a linear one for use in regression. **4.11** Understand and avoid mistakes commonly made in the use of regression analysis.
W9	Midterm exam	Midterm exam
W10	Forecasting	**5.1** Understand and know when to use various families of forecasting

		models.
		5.2 Compare moving averages, exponential smoothing, and other time-series models.
		5.3 Calculate measures of forecast accuracy.
		5.4 Apply forecast models for random variations.
W11	Forecasting	**5.5** Apply forecast models for trends and random variations.
		5.6 Manipulate data to account for seasonal variations.
		5.7 Apply forecast models for trends, seasonal variations, and random variations.
		5.8 Explain how to monitor and control forecasts.
W12	Analysis of Variance	One-way ANOVA
		Two-way ANOVA
W13	Factorial Experiments	2 levels Factorial experiment
		Application
W14	Inventory Control Models	**6.1** Understand the importance of inventory control.
		6.2 Understand the various types of inventory related decisions.
		6.3 Use the economic order quantity (EOQ) to determine how much to order.
		6.4 Compute the reorder point (ROP) in determining when to order more inventory.
		6.5 Handle inventory problems that allow noninstantaneous receipt.
		6.6 Handle inventory problems that allow quantity discounts.
W15	Inventory Control Models	**6.7** Understand the use of safety stock.
		6.8 Compute single period inventory quantities using marginal analysis.
		6.9 Understand the importance of ABC analysis.
		6.10 Describe the use of material requirements planning in solving dependent-demand inventory problems.
		6.11 Discuss just-in-time inventory concepts to reduce inventory levels and costs.
		6.12 Discuss enterprise resource planning systems
W16	English oral presentation	English oral presentation including Q&A session at least 20 minutes
W17	English oral presentation	English oral presentation including Q&A session at least 20 minutes
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

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	■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：實作課程 Hands-on sessions
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_____%。 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：_____%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)：

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
教學簡要說明			

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： Getting Started with AutoMod (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：
成績評量方式 Grading	■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. ■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)：

<div align="center">

課程進度 Course Outline

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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	軟體工程 Software Engineering	授課教師 Instructor	侯雍聰 Yung-Tsung Hou

教學簡要說明

This course aims at giving students an understanding of basic software development concepts, terminologies and technologies. The student will learn the theoretical and practical knowledge from both the technical and organization perspectives. Students will gain essential information about the software development lifecycle which includes phases of requirements,, analysis, design, coding, testing, implementing, and maintenance.

課程教材 Material	1.指定課本書名 Book：_____ Head First Software Development_____ 　(__100___%英文內容 Percentage in English) 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___%

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_____%。 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)：

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 Software Engineer	Learn what is great software development: pleasing your customer.
W2	Basic Software Development Approaches	Waterfall development and software development life cycle

W3	Gathering Requirements	Knowing what the customer wants Bluesky with the customer Cubicle conversation Playing planning poker
W4	Estimate Iteration Cycles	Put assumptions on trial User story estimate The total project estimate
W5	Project Planning: Planning for success	Prioritize with the customer Milestone 1.0 The Big Board method
W6	User Stories and Tasks	UML use case Getting to the real work Unexpected tasks and the burn-down rate Velocity estimation
W7	Good-Enough Design	Getting it done with great design Spotting multiple responsibilies in your design
W8	Single-responsibility Principle	Going from multiple responsibilies to a single responsibility Obey the SRP, but also be DRY. The post refactoring
W9	Midterm	Midterm Report
W10	Version Control	Defensive development The functionality of version control tools Tags, branches, and trunks
W11	Building the Code	Building your project in one step Projects, properties, targets, tasks Build scripts
W12	Testing and Continuous Integration I	Black-box testing Grey-box testing White-box testing
W13	Testing and Continuous Integration II	Automate your tests with a testing framework Use a coverage report to see what's covered
W14	Test-Driven Development	Holding your code accountable Test FIRST, not last TDD methods
W15	Ending an Iteration: It's all coming together.	System testing The iteration review
W16	Delivering the Software	Completing the iteration's work Passing all your tests Satisfying your customer
W17	Bugs: Squashing bugs like a pro	Priority one: get things buildable Figure out what functionality works Give your customer the bug fix estimate
W18	Final	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	中文：大數據彙整與建模 英文： Big Data and Modeling	授課教師 Instructor	胡念祖 Nian-Ze Hu

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：_The Data Warehouse Toolkit, 3rd 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)_____% 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：
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__60_%。 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：_____%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)：

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	遠距平台使用教學 Introduction to Distance Learning	口頭說明 Verbal Explanation
W2	資料處理基本技巧（1） Fundamental Skills about data processing #1	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.

W3	資料處理基本技巧（2） Fundamental Skills about data processing #2	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W4	資料處理基本技巧（3） Fundamental Skills about data processing #3	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W5	資料處理進階技巧（1） Advanced Skills about data Processing #1	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W6	資料處理進階技巧（2） Advanced Skills about data Processing #2	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W7	資料處理進階技巧（3） Advanced Skills about data Processing #3	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W8	資料建模概念 Concept of Data Modeling	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W9	期中考 Midterm Exam	英文試題 English test questions
W10	資料維度（一） Regular Dimension #1	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W11	資料維度（二） Regular Dimension #2	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W12	時間維度 Time Dimension	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W13	關鍵績效指標 Key Performance Indicator	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W14	儀表板設計 Dashboard Development	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W15	實務演練 Case Study	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W16	視覺化分析 Visual Analysis	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W17	成果簡報 Final Report	上機實作，助教協助解決問題 Hands-on practice with the teaching assistant providing assistance in problem-solving.
W18	期末考 Final Exam	英文簡報 English 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	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

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。

The seminar on Information Management in Medicine aims to provide students with a comprehensive understanding of the underlying concepts, methods, and potential applications of intelligent systems in the field of medicine, with a focus on dentistry. Through a combination of theoretical lectures, hands-on projects, and practical applications, students will explore foundational methods in artificial intelligence (AI), virtual reality (VR), and augmented reality (AR) and their integration into digital dentistry practices. Emphasis will be placed on identifying, analyzing, and applying appropriate intelligent systems models and computational tools to address specific problems in dentistry. Besides, students could understand the benefit of the information management in the business such as Amazon.

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.

By the end of the course, students will be able to:

a. Understand the benefits of information management in various business contexts, including industries such as Amazon.
b. Comprehend a collection of machine learning models, VR/AR technologies, and their applications in dentistry.
c. Identify and apply appropriate intelligent systems models and computational tools to specific problems in dentistry.
d. Analyze the performance of specific models applied to dental problems, such as orthodontics, and justify their use and limitations.
e. Identify, understand, and interpret methods and evidence from AI/VR/AR and other relevant literature.
f. Effectively communicate and disseminate knowledge in any science and engineering domain.

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：＿＿＿＿＿＿＿＿＿＿＿＿ (＿＿＿％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：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.
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__%，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：_100__%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&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%

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	1.What is Information Management? http://www.aiim.org/What-is-Information-Management# 2.1997 Bring on shareholders who align with your value 3.Review paper reading: Scope and performance of 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 http://www.egltd.com/dmrarchive/1996-10.pdf 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 https://predictionimpact.com/predictive.analytics.html 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 https://www.steptwo.com.au/papers/kmc_effectiveim/ 2.2000 In lean times, build a cash moat 3.Review paper reading: Machine learning and orthodontics, current trends and the future opportunities: A scoping review
W5	•Paper reading & discussion	1.2001 Measure your company by your free cash flow 2.Review paper reading: Machine learning and orthodontics, current trends and the future opportunities: A scoping review
W6	•Paper reading & discussion	1.2002 Build your business on your fixed costs 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 Long-term thinking is rooted in ownership
W8	•Paper reading & method discussion	1.2004 Free cash flow enables more innovation 2.Review paper reading: PointNet++
W9	• Paper reading & method discussion	1.Presentation 2.2007 Missionaries build better products
W10	•Paper reading & method discussion	1. Presentation 2. 2009 Focus on inputs — the outputs will take care of themselves
W11	•Paper reading & method discussion	1. Presentation 2. 2010 R&D should pervade every department
W12	•Paper reading & method discussion	1. Presentation 2. 2012 Surprise and delight your customers to build long-term trust
W13	•Paper reading & method discussion	1. Presentation 2. 2013 Decentralize decision-making to generate innovation
W14	•Paper reading & method discussion	1. Presentation 2. 2015 Don't deliberate over easily reversible decisions
W15	•**Final presentation** (Implementation/Discussion/Conclusion)	1. Presentation 2. 2016 Move fast and focus on outcomes
W16	•**Final presentation** (Implementation/Discussion/Conclusion)	1. Presentation 2. 2017 Build high standards into company culture
W17	•**Final presentation** (Implementation/Discussion/Conclusion)	1. Presentation 2. 2019 In times of crisis, be aggressive and agile & 2020 (final letter): Company culture can be both employee-centric and customer-centric
W18	•**Final exam**	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	行銷管理 Marketing management	授課教師 Instructor	徐怡 Yi Hsu

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： Kotler and Armstrong (2021), Principles of Marketing, 18th edition, Pearson (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 % 其他補充說明 Others：Harvard Business Review：Current academic literature review (100%英文內容 100% in English) Wall Street Journal：Current economic news (100%英文內容 100% in English) You Tube：Current innovated cases (100%英文內容 100% in English) 3.DW：Current innovated cases (100%英文內容100% in English)

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：參觀見學 Field Trip: Toyota 國瑞汽車; BOSS 動態決策模式系統上機; café startup 和 I'm a big boss 桌遊

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)：

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	Ch1 Marketing: Creating Customer Value and Engagement	Ch1 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report

W2	Ch1 Marketing: Creating Customer Value and Engagement Case 1: Argos: Creating Customer Value amid Change and Turbulence	Ch1 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W3	Ch2 Company and Marketing Strategy: Partnering to Build Customer Engagement, Value, and Relationship Case 2: Dyson: Solvng Customer Problems in Ways They Never Imagined	Ch2 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W4	Ch3 Analyzing the Marketing Environment Case 3: Square: In Relentless Pursuit of a More Elegant Payment Experience	Ch3Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W5	Ch4 Managing Marketing Information to Gain Customer Insights Case 4: Bayer: Big Data for Customer Insight	Ch4 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W7	Ch6 Marketing management Information Systems and Research Case 6 Shopify: An E-commerce Giant That Doesn't Sell to End Users	Ch6 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W8	Ch7 Customer Value-Driven Marketing Strategy: Creating Value for Target Customers Case 7: 5-Hour Energy: Hours of Energy without the Beverage	Ch7 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W9	**Mid-term Exam Field trip to Toyota, Taoyuan**	
W10	**Card game: Café Startup; I'm a big boss**	Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W11	**Video game: Boss -marketing management, supply chain management**	Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W12	Ch8 Products, Services, and Brands: Building Customer Value Case 8: MINI: Focus on the Essential-Maximize the Experience	Ch8 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W13	Ch9 Developing New Products and Managing the Product Life Cycle Case 9: Toyota: Developing a Million New Product Ideas Every Year	Ch9 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W14	Ch10 Pricing: Understanding and Capturing Customer Value Case 10: Gillette: Searching for the Right Price in a Volatile Market Case11: Casper: A Pricing Strategy That Flipped the Mattress Industry	Ch10 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report

W15	Ch11 Marketing Channels: Delivering Customer Value Case12: Casper: A Pricing Strategy That Flipped the Mattress Industry Case13: Target: A Serious Contender in the Same Day Delivery Business	Ch11 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W16	Ch12 Engaging Consumers and Communicating Customer Value: Integrated Marketing Communications Strategy Case14: Ulta Beauty: Where the Experience Is Beautiful	Ch12 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W17	Ch13 Advertising and Public Relations Case 15: Nestle: Integrating Marketing Communication into Daily Operations	Ch13 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group Report
W18	Ch15 Digital, Online, Social Media, and Mobile Marketing	Ch15 Lecturing; Group Discussion; Q&A; Problem Based Learning; Group 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	公司財務管理 Corporate Financial Management	授課教師 Instructor	呂麒麟 Chi-Lin Lu

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.

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.

	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： Corporate finance core principles & applications, 5th ed. (_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	■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：_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：_____％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)：

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 paper study
W11	IRR and other criteria	Lecturing and paper study
W12	Making capital investment decisions	Lecturing and paper study
W13	Risk analysis	Lecturing and paper study
W14	Capital budgeting	Lecturing and paper study
W15	Risk and return	Lecturing and paper study
W16	CAPM	Lecturing and paper study

W17	Efficient capital markets	Lecturing and paper study
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

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。

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.

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.

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)_100_% 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　□小組討論 Group Discussion　V 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	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. 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 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&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)：

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

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:__ Principles of Leadership ____ (_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:
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_____%。 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)

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? *Daniel Goleman*
W9	Power, Politics, and Leadership	Sources and types of power Factors that contribute to organizational politics What Makes an Effective Executive? *Peter F. Drucker*
W10	Influence Tactics of Leaders	A model of power and influence The Work of Leadership. *Roanld A. Heifetz and Donald L. Laurie*
W11	Developing Teamwork	Leader's action that foster teamwork What Leaders Really Do. *John P. Kotter*
W12	Motivation and Coaching Skills	Expectancy theory and motivation skills Discovering Your Authentic Leadership. *Bill George, Peter Sims, Andrew N. McLean, and Diana Mayer*
W13	Communication and Conflict Resolution Skills	Inspirational and powerful communication Listening as a leadership skill Crucibles of Leadership. *Warren G. Bennis and Robert J. Thomas*
W14	Creativity, Innovation, and Leadership	Characteristics of creative leaders Overcoming traditional thinking as a creative strategy Why Should Anyone Be Led by you? *Robert G. Bennis and Robert J. Thomas*
W15	International and Culturally Diverse Aspects of Leadership	Cultural factors influencing leadership practice Seven Transformations of Leadership. *David Rooke and William R. Torbert*
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. *Jim Collins*
W17	Leadership Development and Succession	Development through self-awareness and self-discipline Development through education, experience, and mentoring In Praise of the Incomplete Leader. *Deborah Ancona, Thomas W. Malone, Wanda J. Orlikowski and Peter M. Senge*
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	行銷研究 Marketing Research	授課教師 Instructor	林志皇 Chih-Huang Lin

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>Business Research Method</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)<u>100%</u> 3.其他補充說明 Others：輔助中文教材:行銷研究-理論與實務應用(第四版，邱志聖著，智勝出版)
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：<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. ■ 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)：

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	Lecture & Group Formation
W2	INTRODUCTION TO MARKETING RESEARCH	Lecture / Reading / Course work

W3	THE ROLE OF MARKETING RESEARCH	Lecture / Reading / Course work / Student Oral Presentation
W4	THE MARKETING RESEARCH PROCESS	Lecture / Reading / Course work / Student Oral Presentation
W5	THE HUMAN SIDE OF MARKETING RESEARCH	Lecture / Reading / Course work / Student Oral Presentation
W6	PROBLEM DEFINITION: JUMP-STARTING THE RESEARCH PROPOSAL	Lecture / Reading / Course work / Student Oral Presentation
W7	MEASUREMENT CONCEPTS	Lecture / Reading / Course work / Student Oral Presentation
W8	ATTITUDE MEASUREMENT	Lecture / Reading / Course work / Student Oral Presentation
W9	QUESTIONNAIRE DESIGN	Lecture / Reading / Course work / Student Oral Presentation
W10	Mid-Term Exam or Presentation	
W11	BEGINNING STAGES OF THE RESEARCH PROCESS	Lecture / Reading / Course work / Student Oral Presentation
W12	QUALITATIVE RESEARCH TOOLS	Lecture / Reading / Course work / Student Oral Presentation
W13	SECONDARY DATA RESEARCH IN A DIGITAL AGE	Lecture / Reading / Course work / Student Oral Presentation
W14	SAMPLING AND FIELDWORK	Lecture / Reading / Course work / Student Oral Presentation
W15	RESEARCH DESIGNS FOR COLLECTING PRIMARY DATA - SURVEY RESEARCH(1)	Lecture / Reading / Course work / Student Oral Presentation
W16	RESEARCH DESIGNS FOR COLLECTING PRIMARY DATA - SURVEY RESEARCH(2)	Lecture / Reading / Course work / Student Oral Presentation
W17	DATA ANALYSIS AND PRESENTATION	Lecture / Reading / Course work / Student Oral Presentation
W18	Final Exam or 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	公司理財 Corporate Finance	授課教師 Instructor	王若愚 Wang, Jo-Yu
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：__ Guerard Jr. 2021_ "Quantitative Corporate Finance" by 　Guerard Jr., John B., and Gultekin, Mustafa. (2021) _____ (_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：
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)：課堂討論 70% in English, 30% in other language

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 an 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	CAPM discussion

	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.)	
W6 and 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 and W10	Payout policy:
	 1. dividend policy
	
	 2. share repurchase program
	    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	Capital structure: MM theory and optimal capital structure	
W14	1. Capital structure issues in Taiwan. 2. Paper reading and discuss: 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 and W16	R language application in corporate finance: Corporate bond issues, SEO and repurchase in corporate finance.	
W17	Students presentation I	presentation
W18	Students presentation II	presentation

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

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: Introductory Econometrics: a modern approach (_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	■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:_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. □ 英文期中/期末報告:_____%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):

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	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
W5	Simple regression model	Regression with/without constants Regression on binary explanatory variable
W6	Multiple regression model	Motivation Mechanics and interpretation Expected value of OLS estimators
W7	Multiple regression model	Variance of OLS estimators Efficiency Applications
W8	Multiple regression model	Sample distributions Testing hypotheses Confidence intervals
W9	Mid-term exam	W1-W8 contents
W10	Multiple regression model	Consistency Asymptotic normality Large sample inference
W11	Multiple regression model	Dummy variable Binary dependent variable Policy analysis
W12	Heteroskedasticity	Consequences Heteroskedasticity-robust inference
W13	Heteroskedasticity	Testing WLS
W14	Specification and data issues	Misspecification Proxy variables Measurement error Missing data, nonrandom samples, and outliers
W15	Instrumental variables estimation	Omitted variables Two-stage least squares 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	衍生性金融商品 Derivatives	授課教師 Instructor	待聘 N/A

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：Fundamentals of Futures and Options Markets　(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	V 教材講述 Lecturing　□小組討論 Group Discussion　□口頭問答 Q&A V 問題導向 Problem Based Learning　　□協同教學 Collaborative Teaching V 分組報告 Group Report □其他方式說明 Others：
成績評量方式 Grading	V 期中/期末考：100%以上英文試題，學生以英文答題 5%。 　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：_____%以英文表達。 　The percentage of using English in midterm or final oral presentation 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&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)：

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 financial derivatives	Chapter 1
W2	Mechanics of Futures Markets	Chapter 2
W3	Trading Strategies Using Futures	Chapter 3
W4	Determination of Forward and Futures Prices	Chapter 5
W5	Determination of Forward and Futures	Chapter 5

W6	Mechanics of Options Markets	Chapter 9
W7	Mechanics of Options Markets	Chapter 9
W8	Put-Call Parity	Chapter 10
W9	Mid-term Exam	
W10	Trading Strategies Using options	Chapter 11
W11	Binomial Options Pricing	Chapter 12
W12	The Black-Scholes Model	Chapter 13
W13	Presentation	Research articles
W14	Presentation	Research articles
W15	Valuating Options in Practice	Chapter 18
W16	The Greek Letters	Chapter 17
W17	Interest Rate Futures	Chapter 4 & 6
W18	Final Exam	

(Note: the first visible row above W6 reads "Prices" in the second column.)

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 Chiu, Hui -Yun

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：__Fundamentals of Management Management Myths and Debunked! (10th 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)_____% 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 □口頭問答 Q&A □問題導向 Problem Based Learning □協同教學 Collaborative Teaching V 分組報告 Group Report □其他方式說明 Others：

成績評量方式 Grading	□ Ｖ 期中/期末考：___40__%以上英文試題，學生以英文答題___10__%。 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：_____%以英文表達。 The percentage of using English in midterm or final oral presentation □ 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&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)：

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	Ch. 1 Managers and Management	Is it the best style of management? Why or why not?
W3	Ch. 2 The Management Environment	Why do managers need an vunderstanding of what happens outside their organization? Give examples of how changes in the external environment affect their job.
W4	Ch. 3 Integrative Management Issues	Discuss your gorup work. Hand in your discussion.
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 d isadvantages of both techniques?
W6	Ch. 5 Foundations of Planning	Why are formal plans generated?
W7	Ch. 6 Organizational Structure and Design	Compared to the strengths and weaknesses of a functional structure, what are the strengths and weaknesses of a simple structure?
W8	Review	
W9	Midterm Exam	

W10	Ch. 7 Managing Human Resources	How does HRM affect all managers?
W11	Ch. 8 Managing Change and Innovation	What can influence innovation in organization?
W12	Ch. 9 Foundations of Individual Behavior	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	How do you think scientific management theories would react to the increased use of teams in organizations? How would behavioral science theor
W14	Ch. 11 Motivating and Rewarding Employees	Discuss your gorup work. Hand in your discussion.
W15	Ch. 12 Leadership and Trust	Discuss your gorup work. Hand in your discussion.
W16	Ch. 12 Leadership and Trust	Discuss your gorup work. Hand in your discussion.
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 Chiu, Hui -Yun
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：_____Understanding Cross-cultural management 3 rd edition　(100％英文內容 Percentage in English) 2.跨文化管理（陳曉萍（100%　中文內容） 3.自製教材 Self-made Materials：採用英文之比例(Percentage in English)_____% 4.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　□口頭問答 Q&A □問題導向 Problem Based Learning　□協同教學 Collaborative Teaching Ｖ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_____%。 The percentage of English using in designing midterm/final exam; the percentage of English using in answering the exam paper. Ｖ　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 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&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)：

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	文化的含義、文化如何影響管理 Determiternats of cultre (Facets of culture) 20 min. (EMI)	Explain the meaning of culture and why do we have to learn?

W3	文化的含義、文化如何影響管理 Determiternats of cultre (Facets of culture) 20 min. (EMI)	Explain the meaning of culture and why do we have to learn?
W4	跨文化管理理論與實踐 Dimensions of culture: Hofstede 20 min. (EMI)	When come to cross-cultural management, what kind of tools can we use to help us learn　more?
W5	跨文化管理理論與實踐 Dimensions of culture: Hofstede 20 min. (EMI)	When come to cross-cultural management, what kind of tools can we use to help us learn　more?
W6	跨文化溝通 Busines cultures in the Western world 20 min. (EMI) 『小孩不笨』電影以文化理論授課與討論（第一組）	Students apply cultural dimenstions to movie.
W7	跨文化溝通 Busines cultures in the Western world 25 min. (EMI) 『同名之人 ＝ The Namesake』電影以文化理論授課與討論 （第二組）	How to talk to other cultures? What are hints that we can observe in order to cause barriers? Students apply cultural dimenstions to movie.
W8	跨文化溝通 Business cultures in Asia, Africa, and the Middle East 25 min. (EMI) 『喜宴』電影以文化理論授課與討論 （第三組）	How to talk to other cultures? What are hints that we can observe in order to cause barriers? Students apply cultural dimenstions to movie.
W9	Midterm exam	
W10	『巧克力情人』電影以文化理論授課與討論 （第五組）	Students apply cultural dimenstions to movie.

W11	跨文化人力資源管理 Mini-case disucssion Culture turned Fukushima from disaster to crisis :made in Japan 25 min. (EMI) disucussion Please read the case and answer the questions in group. 『艾蜜莉的異想世界』電影 以文化理論授課與討論 （第六組）	How does a manager manage different culture backfrounds surbodinates? Students apply cultural dimenstions to movie.
W12	跨文化人力資源管理 Culture and styles of management 40 min. (EMI)	How does a manager manage different culture backfrounds surbodinates?
W13	全球化經理人的文化底蘊 Barriers to intercultural communication 40 min. (EMI)	
W14	Quiz	
W15	Preparation for final presentation	
W16	Final presentation	
W17	Final presentation	
W18	Final presentation	