

★接續議程一提案

提案三十一：資訊管理系 111 學年度第一學期全英語 EMI 課程開設追認案及 111 學年度第二學期教師開授 EMI 全英語課程開設案，提請審議。(提案單位：資訊管理系)

說明：

一、111 學年度第一學期申請科目如下：

(一)碩士班 EMI

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩士班	巨量資料分析	3	3	選修	董俊良	P1-P4

(二)本案業經 111.06.09 系課程會議及 111.06.30 系務會議審議通過。

二、111 學年度第二學期申請科目如下：

(一)大學部 EMI

學制	課程名稱	學分	時數	修別	授課教師	課程大綱
四技	行動裝置應用程式設計	3	3	選修	黃展鵬	P5-P7

(二)碩士班 EMI

學制	課程名稱	學分	時數	修別	授課教師	課程大綱
碩士班	服務創新與管理	3	3	選修	劉宜菁	P7-P9

(三)碩士班全英語

學制	課程名稱	學分	時數	修別	授課教師	課程大綱
碩士班	企業電子化策略	3	3	選修	劉熒潔	P9-P11

上述企業電子化策略全英語課程，係依據教師全英語 EMI 授課課程開授要點第四條第 7 項，當學年外籍博士生、碩士生新生人數合計 5 人之系所，全英語授課獎勵以每學期補助 3 門為上限。

(四)本案業經 111.11.09 系課程會議及 111.11.16 系務會議審議通過。

三、教學大綱詳如下表：

國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 第 1 學期課程大綱  
Year of 2022 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	董俊良 Chun-Liang Kevin Tung	開課代碼 Course Code	GA04
科目名稱 Course Name	巨量資料分析 Big Data Analytics	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	一年級 First-year graduate school	開課學期 Semester	<input checked="" type="checkbox"/> 上 Fall <input type="checkbox"/> 下 Spring
開課單位 Course Department	資訊管理系 Department of Information Management	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英文 English

先修課程 Prerequisite course(s)	NO
優質課程類別 Course attributes (可複選)	<p>■一般課程 General Courses、□智慧財產權 Intellectual Property、 □內涵式服務學習課程 Service Learning、□性別平等 Gender Equality、 □綠色課程 Green Technology□創新創意課程 Innovation、□工作（職場）倫理課程 Career Ethics、 □工具機技術研發 Tool Machine Technology Development</p> <p>創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.</p>
課程與校核心 能力關聯 Core competence (可複選，至多選4 項)	<p>■表達溝通能力 Communication and Presentation Skill □創意創新能力 Innovation Skill □關懷服務能力 Community Care and Service Skill ■思考推理能力 Thinking and Reasoning Skill ■專業實務能力 Professional Practice Skill □宏觀視野能力 Macro Skill</p>
教科書 Textbook	自編教材 self-made textbook
參考書目 Other References	<ol style="list-style-type: none"> <li>1. N. Marz and J. Warren, "Big Data: Principles and best practices of scalable read-time data system", Manning Publications.</li> <li>2. T. Hastie, R. Tibshirani, and J. Friedman, "The Elements of Statistical Learning (Data Mining, Inference, and Prediction)", Springer.</li> <li>3. David J.C. Mackay, "Information Theory, Inference, and Learning Algorithm", Cambridge University Press.</li> <li>4. David Barber, "Bayesian Reasoning and Machine Learning", Cambridge University Press.</li> <li>5. G. James, D. Witten, T. Hastie, and R. Tibshirani, "An Introduction to Statistical Learning", Springer.</li> </ol>
課程目標 Course objectives	<p>在現今資料如洪水般湧入的紀元裏，許多不同領域的資料產生速度是我們從來沒有過的經驗，因此在大量資料的處理過程中，基礎科學的最大挑戰是如何去開發有效率的計算工具去分析及轉化資料，甚至是預測分析。資料分析是完成這些目標的科學研究方法，在資料分析這門學科中整合了機器學習、資料探勘及統計等不同學科的分析方法。本門課程的目標在於提供資料分析應用中會使用到的機器學習、資料探勘及統計技術的整體概述，學生可以透過這門課程學習到多種的資料分析方法：學習演算法、搜尋演算法、分類演算法、分群演算法、關聯演算法及預測。</p> <p>In the era of data deluge, data are generated from many areas with a phenomenal speed that we have never experienced before. Given the dynamic, large and disparate volumes of data, a fundamental scientific challenge is how to develop efficient and effective computational tools to analyze the data revealing insight and make predictions. Data analytics is the science of achieving these goals. It is an inter disciplines of machine learning, data mining, and statistics. This class aims to provide an overview of advanced machine learning, data mining and statistical techniques that arise in data analytics applications. In this class, students will learn and practice advanced data analytic techniques, including: learning algorithms, searching algorithms, classification algorithms, clustering algorithms, and prediction algorithms. The course plan detailed below reflects the course goals and learning objectives.</p>
評量方式 Evaluation	<p>出席 attend (0%) 作業 Homework (15%) 平時考 Quiz(15%) 期中考 Midterm Exam (30%) 期末考 Final Exam (40%) 其他：(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams)</p>
內容綱要 Course Outline	<p>本課程內容綱要及學生學習目標包括：</p> <ol style="list-style-type: none"> <li>1. 巨量資料的介紹及定義</li> <li>2. 機器學習簡介與相關學習理論說明</li> </ol>

	<p>3. 監督式學習理論與決策樹說明  4. 決策樹與過度適配說明  5. 線性迴歸與梯度下降法說明  6. 感知機、線性分類器及邏輯迴歸說明  7. VC 維度與泛化邊界說明  8. 支援向量機說明</p> <p>機器學習在巨量資料分析的應用  The typical course goals as follows:  The definitions and characteristics of big data  Introduction to Machine Learning and related learning theories  Introduction to supervised learning theory and decision tree  Introduction to decision tree and the problem of overfitting  Introduction to linear regression and gradient decent  Introduction to perceptron linear classification and logistic regression  Introduction to VC dimension  Introduction to Support Vector Machine  Applications of machine learning for big data analysis</p>
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 cause:
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 cause:
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	<p>巨量資料分析簡介: 巨量資料的定義與特性、傳統資料分析與巨量資料分析、科技的使用潮流、巨量資料生命週期  Introduction to Big Data Analytics: (1) The definitions and characteristics of big data, (2) Traditional data analytics and big data analytics, (3) Technology megatrends and (4) Big data life cycle</p>	
2	<p>巨量資料分析簡介: 巨量資料的好處與風險(管理、結構、使用、品質、安全、隱私)  Introduction to Big Data Analytics: (1) The benefits and risks of big data and (2) Governance, management, architecture, usage, quality, security and privacy</p>	
3	<p>機器學習簡介:機器學習的使用時機、機器學習的應用狀況及學習理論的種類(監督式學習、非監督式學習、半監督式學習、加強式學習)  Introduction to Machine Learning: (1) When do we use machine learning? (2) Sample applications and (3) Types of learning: Supervised learning, Unsupervised learning, Semi-supervised learning, and Reinforcement learning</p>	
4	<p>機器學習簡介: 學習模型的結構及機器學習的歷史演進  Introduction to machine learning: (1) Framing a learning problem and (2) A brief history of machine learning</p>	

5	決策樹：函式的估算、不確定性的評估、決策樹相關應用 Decision trees: (1) Function approximation, (2) Entropy: a common way to measure impurity, (3) Information gain, (4) Entropy-based automatic decision tree construction and (5) Sample applications	
6	決策樹與過度適配：過度適配的定義及過度適配的避免 Decision trees and overfitting: (1) The definition of overfitting, (2) Overfitting in decision trees, (3) Avoiding overfitting, (4) Pruning decision trees and (5) Converting decision trees to rules	
7	最近鄰居法與實例基礎學習演算法：1 個與多個最近鄰居法、距離的估算 K-Nearest neighbor and Instance-based learning: (1) 1-Nearest neighbor, (2) Distance Metrics and (3) K-Nearest neighbor	
8	線性迴歸：迴歸、線性迴歸、最小平方線性迴歸、成本函數、基本搜尋程序、梯度下降法、線性基礎函數模型 Linear regression: (1) Regression, (2) Linear regression, (3) Least squares linear regression, (4) Cost function, (5) Basic search procedure, (6) Gradient descent, (7) Gradient descent for linear regression and (8) Linear basis function models	
9	期中考 Midterm Exam	
10	線性分類法與感知器：線性分類器、感知器、即時感知器演算法、批次感知器 The perceptron linear classification: (1) Linear classifiers, (2) The perceptron, (3) Online perceptron algorithm and (4) Batch perceptron	
11	邏輯迴歸：非線性決定邊界、邏輯迴歸目標函數、梯度下降法在邏輯迴歸的使用、多層次邏輯迴歸 Logistic regression: (1) Non-Linear decision boundary, (2) Logistic Regression Objective Function, (3) Gradient descent for logistic regression and (4) Multi-class logistic regression	
12	學習理論：計算式學習理論、樣本複雜度、函數估算、模型複雜度的評估、VC 維度 Learning Theory: (1) Computational learning theory, (2) Sample complexity, (3) Function approximation, (4) A measure of model complexity, (5) VC dimension	
13	支援向量機與核心函數：預測、支援向量機、核心函數 Support vector machine and kernels: (1) Prediction, (2) Support vector machines and (3) Kernels	
14	整體學習：結合式分類器、AdaBoost 演算法、AdaBoost 演算法與過度適配 Ensemble learning: (1) Combining classifiers, (2) AdaBoost algorithm and (3) AdaBoost and overfitting	
15	單純貝氏：基本機率理論、機率密度估算、邏輯機率、單純分類器、單純貝氏的應用 Naive Bayes: (1) Essential probability concepts, (2) Density Estimation, (3) Log probabilities, (4) The Naive Bayes classifier and (5) Naive Bayes applications	
16	維度降低：主成份分析、主成份、主成份分析演算法及應用 Dimensionality reduction: (1) Principal components analysis, (2) The principal components, (3) PCA algorithm and applications	
17	非監督式學習：K-平均數分群法、高斯混合模型 Unsupervised learning: (1) K-means clustering and (2) Gaussian mixture models	
18	期末考 Final Exam	

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## National Chin-Yi University of Technology

111 學年度 2 學期課程大綱

Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	黃展鵬 / J.-P. Hwang	開課代碼 Course Code	
科目名稱 Course Name	行動裝置應用程式設計 Programming for mobile devices	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	二年級 Sophomore year of college	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	資訊管理系 Dept. of Information Management	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	物件導向程式語言或其它程式設計課程 Object-oriented programming languages or other programming courses		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作(職場)倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	自編教材及自製實務案例 Self-compiled teaching materials and self-made practical cases		
參考書目 Other References	Android App 程式設計教本之無痛起步，施威銘，旗標。 Painless Start of Android App Programming Textbook, Shi Weiming, Banner. Android 初學特訓班：最新 Android Studio 開發實戰！，文淵閣工作室 鄧文淵，碁峰。 Android Beginner Special Training Class: The latest Android Studio development practice!, Wenyuan Pavilion Studio Deng Wenyuan, Qifeng. Android 5.X + SQLite POS 前端銷售 App 系統設計寶典，孫惠民，經緯。 Android 5.X + SQLite POS Front-end Sales App System Design Collection, Sun Huimin, Jingwei.		

課程目標 Course objectives	<p>本課程主要目的是教導學生在行動裝置上發展 Android 平台之應用程式，課程主要會配合相關規範與實際應用範例來說明。Android 是為了行動裝置而開發的作業系統，是目前全球使用最廣泛的智慧手機平台。因應產業界需求，本課程針對 Android 行動裝置程式設計進行專業知識與程式撰寫之課程講授，課程中將介紹開發工具與基礎程式設計概念，使學生具有足夠之開發能力。課程中會透過實機演練與測試，讓同學可經由實作加強整體學習效果。</p> <p>The main purpose of this course is to teach students to develop Apps on the Android platform on mobile devices. The course will mainly explain with practical application examples. Android is an operating system developed for mobile devices and is currently the most widely used smartphone platform in the world. In response to the needs of the industry, this course provides professional programming knowledge for Android mobile device. The course will introduce development tools and basic programming concepts to enable students to have sufficient development capabilities. Practical exercises and tests will be used in the course, so that students can enhance the overall learning effect through practice.</p>
評量方式 Evaluation	<p>出席 Attendance ( 10% ) 作業 Assignments ( 20 % ) 平時考 Quizzes/Tests ( 10 % )          期中考 Midterm Exam ( 30 % ) 期末作品 Final Project ( 30 % )          其他: (請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams)</p>
內容綱要 Course Outline	<p>行動裝置開發之基礎概念 /Basic concepts of mobile device development          開發平台之架設及使用 /The establishment and use of the development platform          行動應用程式介面設計 /Mobile application interface design          行動裝置與後端整合 /Mobile and backend integration          行動裝置進階功能 /Advanced features for mobile devices          上機測驗與分組作品展示 /Final project demo and peer assessment</p>
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<p><input checked="" type="checkbox"/>是 Yes <input type="checkbox"/>否 No,原因 Reason(s):</p>
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<p><input checked="" type="checkbox"/>是 Yes <input type="checkbox"/>否 No,原因 Reason(s):</p>
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	課程介紹及開發平台與環境介紹 Introduce for the course and android studio IDE	
2	程式設計基礎(一) Basics of Android programming I	
3	程式設計基礎(二) Basics of Android programming II	
4	介面設計 Interface of Android APPs	錄影 1
5	基礎元件介紹 Introduce for basic components	
6	事件處理 (一) Event Handling I	錄影 2
7	事件處理 (二) Event Handling II	
8	進階 UI 元件 Advanced UI Components	

9	期中考(上機測試+紙本) Middle Test (practical and paper)	
10	即時訊息與交談窗 Instant messaging and Dialog	錄影 3
11	Intent 及多媒體的使用 Use of Intent & Multimedia	錄影 4
12	地圖相關應用 Google Maps for Android	
13	行動裝置感測器應用 Mobile Device Sensor Applications	
14	資料存取及應用 Access and application for SQLite & Firebase	
15	相關延伸應用 Extension applications for Web API, JSON, Open Data	
16	實務案例操作(一) Practical project operation I	錄影 5
17	實務案例操作(二) Practical project operation II	
18	期末作品展示及互評 Final project demo and peer assessment	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	劉宜菁/Yiching Liou	開課代碼 Course Code	
科目名稱 Course Name	服務創新與管理/Service Innovation and Management	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	一年級 First-year graduate school	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	資訊管理系 Department of Information Management	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	All required courses in related undergraduate program		

優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input checked="" type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill
教科書 Textbook	Self-Compiled Materials, KMCC cases, TMCC cases, HBR cases
參考書目 Other References	101 Design Methods – A Structured Approach for Driving Innovation in Your Organization, ISBN 9781118083468, Wiley.
課程目標 Course objectives	To teach and discuss the strategy, implementation and practice of service innovation thru theoretical materials and practical cases to improve students' understanding of those types, design, process and management of service operations of various industries
評量方式 Evaluation	出席 Attendance ( 10%) 作業 Assignments ( 20%) 平時考 Quizzes/Tests ( 15%) 期中考 Midterm Exam (15%) 期末考 Final Exam ( 40%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams): Discussion Participation
內容綱要 Course Outline	Part 1: Service Science Part 2: Service Innovation and Design Part 3: Business Cases
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Course Introduction + WISE contest	
2	Service Science + Innovation	
3	New Perspectives on Marketing in the Service Economy + Innovation	
4	Consumer Behavior in a Services Context	
5	Positioning Services in Competitive Markets	
6	Developing Service Products: Core and Supplementary Elements	



7	Case I (PCM/PCL)	
8	Service Design I	
9	期中考/ Midterm Exam	
10	Case II (PCM/PCL)	
11	Service Design II	
12	Special Topic Presentation	
13	Case III (PCM/PCL)	
14	Service Design III	
15	Business Visit / Field Trip	
16	Case IV (PCM/PCL)	
17	Service Design IV	
18	期末考/ Final Exam	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	劉熒潔 (Ying Chieh Allan Liu)	開課代碼 Course Code	
科目名稱 Course Name	企業電子化策略 (e Business Strategy)	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	一年級 First-year graduate school	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	資訊管理系 Department of Information Management	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	NO		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作(職場)倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：		

	Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill
教科書 Textbook	SAP GBIKE 1809 企業資源規劃 SAP GBIKE 1809 Enterprise Resource Planning
參考書目 Other References	Selected paper, material by lecturer
課程目標 Course objectives	協助學生具備企業 e 化管理以及策略設定能力 Help students obtain the ability of managing e-business management and setting strategy
評量方式 Evaluation	出席 Attendance ( 10 %) 作業 Assignments ( 30 %) 平時考 Quizzes/Tests ( 20 %) 期中考 Midterm Exam ( 20 %) 期末考 Final Exam ( 20 %) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):
內容綱要 Course Outline	講授古典策略的演進、歷史以及各種策略學派的差異性 Introduce classic strategy history, evolvement and the differences between strategy schools 企業在使用資訊系統的策略理論以及應用 The application of applying strategy theory on information system for enterprises ERP 的操作 The manipulation of ERP system ERP 導入程序、問題以及解決 The procedures, problems and solutions of introducing ERP 延伸 ERP 與數位轉型 Extended ERP and digital transformation
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s): 自編教材以及使用現有教材混用
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	課程介紹 (Introduction of the course)	
2	策略概論 1 (Introduction of strategy schools)	
3	策略概論 2 (Introduction of strategy schools)	
4	資訊系統策略 1 (Strategy of information systems)	
5	資訊系統策略 2 (Strategy of information systems)	
6	企業資源規劃系統介紹-配銷 1 (ERP-sales and distribution)	
7	企業資源規劃系統介紹-配銷 2 (ERP-sales and distribution)	

8	企業資源規劃系統介紹-採購 1 (ERP-procurement)	
9	期中考/ Midterm Exam	
10	企業資源規劃系統介紹-庫存 1 (ERP- material management)	
11	企業資源規劃系統介紹-庫存 2 (ERP- material management)	
12	企業資源規劃系統介紹-生產 1 (ERP-Production)	
13	企業資源規劃系統介紹-生產 2 (ERP-Production)	
14	企業資源規劃系統介紹-會計 1 (ERP-Financial accounting)	
15	企業資源規劃系統介紹-會計 2 (ERP-Financial accounting)	
16	企業資源規劃系統導入介紹 (Introducing ERP)	
17	延伸式企業資源規劃系統與數位轉型 (Extended ERP and digital transformation)	
18	期末考/ Final Exam	

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決議：照案通過。

提案三十二：流通管理系 111 學年度第一學期全英語 EMI 課程開設追認案及 111 學年度第二學期教師開授 EMI 全英語課程開設案，提請審議。(提案單位：流通管理系)

說明：

一、111 學年度第一學期申請科目如下：

(一)大學部 EMI

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
四技	連鎖與加盟管理	3	3	選修	顏婉竹	P11-P13

(二)本案業經本系 111 年 9 月 14 日第 1 學期第 1 次系課程委員會議審議通過。

二、111 學年度第二學期申請科目如下：

(一)碩士班 EMI

學制	課程名稱	學分	時數	修別	授課教師	課程大綱
碩士班	無店鋪行銷	3	3	選修	彭國芳	P13-P16

(二)本案業經 111 年 11 月 16 日第 1 學期第 3 次系課程委員會議審議通過。

三、教學大綱詳如下表：

國立勤益科技大學  
National Chin-Yi University of Technology

111 學年度第 1 學期課程大綱

Year of 2022 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree
	<input type="checkbox"/> 進修部 Division of Continuing Education		<input type="checkbox"/> 碩士 Master's Degree
授課教師	顏婉竹 Wan-Chu Yen	開課代碼	3302

Instructor(s)		Course Code	
科目名稱 Course Name	連鎖與加盟管理 Franchise Business Management	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	2 Second Grade	開課學期 Semester	<input checked="" type="checkbox"/> 上 Fall <input type="checkbox"/> 下 Spring
開課單位 Course Department	流通管理系 Department of Distribution Management	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	NO		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	Grossmann, R. and Katz, M. J. (2021). Franchise Bible: How to Buy a Franchise or Franchise Your Own Business (9th). Irvine: Entrepreneur Press. [ISBN: 9781642011388]		
參考書目 Other References	1. Siebert, M. (2016). Franchise Your Business: The Guide to Employing the Greatest Growth Strategy Ever. Irvine: Entrepreneur Press. [ISBN: 9781599185811] 2. Teaching Cases		
課程目標 Course objectives	The objectives of this course is to enable students to understand the operational aspects of franchising and the application and trend of franchising in line with technological development. This course also provides an insight into what makes a franchise operation successful by case discussion. Ultimately, we hope that students have the ability to plan and organize how to franchise own business or operate a franchise with an international perspective.		
評量方式 Evaluation	1. Class Participation (Attendance, Case Discussion, Exercises, Assignments) (40%) 2. Midterm Exam (15%) 3. Final Exam (15%) 4. Final Group Presentation (30%)		
內容綱要 Course Outline	1. Knowledge: to help students understand the knowledge and skills in the essential aspects of franchise management. 2. Skills: to help students develop skills in planning and organizing for franchising. 3. Attitude: to cultivate students with an international perspective of franchise management.		

自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	Note: The syllabus may be changed depending on the progress. Lecture handouts and announcement will be available on e-learning/ Google Classroom.

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction to Franchise Management	
2	The Basics	
3	Franchise Best Practices and Franchise Strategies	
4	Understanding Franchise Legal Documents and Legal Considerations	
5	Franchising Fundamentals	
6	Building A Strong Franchise Organization	
7	Strategize to Thrive	
8	Building Your Franchise Community	
9	Midterm Exam	
10	Franchise Marketing	
11	The Changing Landscape of Franchise Marketing and Recruiting	
12	Choosing the Right Franchise Opportunity	
13	Obtaining Start-Up Financing or Funding	
14	Choosing Your Site and Building Out Your Location	
15	Building a Winning Team	
16	Franchise Finance Basics	
17	Final Exam	
18	Final Group Presentation	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士Doctoral Degree <input checked="" type="checkbox"/> 碩士Master' s Degree <input type="checkbox"/> 四技Bachelor' s Degree (4-year College) <input type="checkbox"/> 二技Bachelor' s Degree (2-year College) <input type="checkbox"/> 二專Associate Degree (2-year program)
授課教師 Instructor(s)	彭國芳 Jimmy KF. Peng	開課代碼 Course Code	
科目名稱 Course Name	Non-store Marketing無店鋪行銷	必/選修 Required/Elective	<input type="checkbox"/> 必修Required <input checked="" type="checkbox"/> 選修Elective
開課年級 Grade	碩一、二 / Master 1, 2	開課學期 Semester	<input type="checkbox"/> 上Fall <input checked="" type="checkbox"/> 下Spring
開課單位 Course Department	流通管理系 Department of Distribution Management	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是Yes <input type="checkbox"/> 否No	主要授課語言 Main language	英語English
先修課程 Prerequisite course(s)	None		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程General Courses <input type="checkbox"/> 智慧財產權Intellectual Property <input type="checkbox"/> 內涵式服務學習課程Service Learning <input type="checkbox"/> 性別平等Gender Equality <input type="checkbox"/> 綠色課程Green Technology <input checked="" type="checkbox"/> 創新創意課程Innovation <input type="checkbox"/> 工作(職場)倫理課程Career Ethics <input type="checkbox"/> 工具機技術研發Tool Machine Technology Development  創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力 關聯 Core competence (可複選，至多選4 項)	<input checked="" type="checkbox"/> 表達溝通能力Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力Innovation Skill <input type="checkbox"/> 關懷服務能力Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力Macro Skill		
教科書Textbook	Selected journal papers		
參考書目 Other References	Selected journal papers		
課程目標 Course objectives	This course is designed to equip graduate students with the conceptual foundations of current practices and research of non-store retailing in distribution industry. We expect students to develop managerial planning and methodological rigor capabilities in conducting business studies for direct marketing without physical stores. Hopefully, the exploration of their theses directions in this course area		

	will be facilitated as well.
評量方式 Evaluation	Participation (20%), Exercises (20%), Midterm (30%), Final (30%)
內容綱要 Course Outline	Non-store shoppers e-Commerce Online streaming marketing Catalog shopping TV shopping Radio marketing Direct selling Vending machine business Social network marketing practicing Final & Term Report
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是Yes <input type="checkbox"/> 否No, 原因Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是Yes <input type="checkbox"/> 否No, 原因Reason(s):
備註Note	

教學進度Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註Note
1	Introduction to Non-store shoppers	
2	Non-store shoppers paper discussion & exercise	
3	e-Commerce	
4	e-Commerce paper discussion & exercise	
5	Online streaming marketing	
6	Online streaming marketing paper discussion & exercise	
7	Catalog shopping	
8	Catalog shopping paper discussion & exercise	
9	Mid-Term & Online streaming marketing presentations	
10	TV shopping	
11	TV shopping paper discussion & exercise	
12	Radio marketing	
13	Direct selling	

14	Direct selling paper discussion & exercise	
15	Vending machine business	
16	Vending machine business paper discussion & exercise	
17	Social network marketing practicing	
18	Final & Term report	

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決 議：照案通過。

**提案三十三：資訊工程系 111 學年度第一學期全英語 EMI 課程開設追認案及 111 學年度第二學期教師開授 EMI 全英語課程開設案，提請審議。(提案單位：資訊工程系)**

說 明：

一、依據本校教師全英語 EMI 授課課程開授要點第四條第 7 項第 3 及 4 款規定辦理。本學年院外籍學生人數 7 人，全英語授課獎勵以每學期補助 3 門為上限。

二、111 學年度第 1 學期申請科目如下：

(一)大學部 EMI

學制	課程名稱	學分	時數	修別	授課教師	課程大綱
四技	數位影像處理導論	3	3	選修	楊惟中	P16-P18

(二)碩士班 EMI

學制	課程名稱	學分	時數	修別	授課教師	課程大綱
碩博合開	研究方法與論文寫作	3	3	選修	陳建賓	P19-P21

(三)碩士班全英語

學制	課程名稱	學分	時數	修別	授課教師	課程大綱
碩博合開	醫療保健經濟	3	3	選修	陳建賓	P21-P24

(四)本案業經 111 年 8 月 15 日、111 年 9 月 6 日及 111 年 10 月 19 日系課程委員會議審議通過。

三、111 學年度第 2 學期申請科目如下：

(三)大學部 EMI

學制	課程名稱	學分	時數	修別	授課教師	課程大綱
四技	C#程式語言	3	3	選修	黃聖維	P24-P26

(四)碩士班 EMI

學制	課程名稱	學分	時數	修別	授課教師	課程大綱
碩士班	多媒體安全技術	3	3	選修	林家禎	P26-P28

(三)本案業經 111 年 11 月 15 日系課程委員會議審議通過。

四、教學大綱詳如下各表：

國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度第 1 學期課程大綱  
Year of 2022 Syllabus



部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	楊惟中 Wei-Jong Yang	開課代碼 Course Code	1721
科目名稱 Course Name	數位影像處理導論 Introduction to Digital Image Processing	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	四訊二選 Second grade	開課學期 Semester	<input checked="" type="checkbox"/> 上 Fall <input type="checkbox"/> 下 Spring
開課單位 Course Department	資訊工程系 Department of Computer Science and Information Engineering	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	NO		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development  創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	數位影像處理－Python 程式實作(第三版)，張元翔，全華圖書，2022/04 Digital Image Processing - Python Program Implementation (3rd Edition), Zhang Yuanxiang, Quanhua Books, 2022/04		
參考書目 Other References	數位影像處理－活用 Matlab, 繆紹綱，全華圖書，2011/01 Digital Image Processing - Using Matlab, Miao Shaogang, Quanhua Books, 2011/01		
課程目標 Course objectives	提升學生對影像處理的基礎理解與興趣，培養專業領域的英文的能力。 To strengthen students' basic understanding in image processing and to develop English language skills in specialized areas.		
評量方式 Evaluation	出席 Attendance (10%) 作業 Assignments (30%) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam (30%) 期末考 Final Exam (30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):		

內容綱要 Course Outline	基礎影像處理技巧、影像壓縮原理、影像處理到機器學習的轉變、基礎深度學習原理、影像處理應用。 Basic image processing skills, principles of image compression, transition from image processing to machine learning, introduction of basic deep learning, and applications of image processing.
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction I and preparation 簡介與準備	
2	Introduction II and Python tools 簡介與 python 工具介紹	
3	Digital Image Fundamentals 數位影像基礎	
4	Geometric Transformations 幾何轉換	
5	Image Enhancement (Part I) 影像增強 (Part I)	
6	Image Enhancement (Part II) 影像增強 (Part II)	
7	Image Processing in Frequency Domain 頻率域影像處理	
8	Image Restoration 影像還原	
9	<b>期中考 Midterm Exam</b>	
10	Color space representation 色彩影像處理	
11	Image Segmentation 影像分割	
12	Binary Image Processing 二值影像處理	
13	Image Compression 影像壓縮	
14	Feature Extraction 特徵擷取	
15	Feature Extraction and machine learning 特徵擷取與機器學習	
16	Deep Learning 深度學習	
17	Presentation 期末報告	
18	<b>期末考 Final Exam</b>	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度第 1 學期課程大綱  
Year of 2022 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	陳建賓 Chien-Ping Chen	開課代碼 Course Code	LT36 G808
科目名稱 Course Name	Research Method and Paper Structure 研究方法與論文寫作	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	碩一 Master of first grade	開課學期 Semester	<input checked="" type="checkbox"/> 上 Fall <input type="checkbox"/> 下 Spring
開課單位 Course Department	資訊工程系 Department of Computer Science and Information Engineering	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	None		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input checked="" type="checkbox"/> 工作(職場)倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development  創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	N/A		
參考書目 Other References	<a href="https://www.indeed.com/career-advice/career-development/example-of-methodology-in-research-paper">https://www.indeed.com/career-advice/career-development/example-of-methodology-in-research-paper</a> <a href="https://psychology.ucsd.edu/undergraduate-program/undergraduate-resources/academic-writing-resources/writing-research-papers/research-paper-structure.html">https://psychology.ucsd.edu/undergraduate-program/undergraduate-resources/academic-writing-resources/writing-research-papers/research-paper-structure.html</a> <a href="https://academic.oup.com/intqhc/article/16/3/191/1814554">https://academic.oup.com/intqhc/article/16/3/191/1814554</a> <a href="https://www.enago.com/academy/tips-effectively-structure-research-paper/">https://www.enago.com/academy/tips-effectively-structure-research-paper/</a>		

	<a href="https://www.easybib.com/guides/citation-guides/apa-format/#paper-categories">https://www.easybib.com/guides/citation-guides/apa-format/#paper-categories</a> <a href="https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm">https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm</a> <a href="https://libguides.mit.edu/c.php?g=175961&amp;p=1160010">https://libguides.mit.edu/c.php?g=175961&amp;p=1160010</a> <a href="https://www.pulsarplatform.com/what-is-social-media-research-top-tools-and-techniques/">https://www.pulsarplatform.com/what-is-social-media-research-top-tools-and-techniques/</a>										
課程目標 Course objectives	As a result of this course, students will demonstrate knowledge of research processes; perform literature reviews and prepare a research proposal; comprehend and practice how to cite references properly; describe, compare, and contrast descriptive and inferential statistics; improve writing proficiency and presentation skills in English.										
評量方式 Evaluation	<table border="1"> <tr> <td>Writing Assignments</td> <td>30%</td> </tr> <tr> <td>Research Proposal and Presentation</td> <td>30%</td> </tr> <tr> <td>Class Participation</td> <td>20%</td> </tr> <tr> <td>Final Exam</td> <td>20%</td> </tr> <tr> <td>Total</td> <td>100%</td> </tr> </table> <p><b>Writing Assignments (30%) (Course Objectives 2, 3, 5)</b> Four individual writing assignments summarize newspaper articles and academic research papers. The instructor will eliminate the lowest score assignment at the end of the semester to count 30% toward the semester average. Students will be reminded about the format of assignments in the class.</p> <p><b>Research Proposal and Presentation (30%) (Course Objectives 1, 2, 3, 4, 5)</b> Each student will initiate one research proposal and present its outline and possible findings. The instructor will give the proposal's requirements and the presentation's grading rubric in the class. The presentation will be scheduled on 12/26/2022. <b>Class Participation (20%) (Course Objective 1, 5)</b> Students will be randomly called on in class to answer questions. Each student should be called on the same number of times and earn the credits in proportion to the completed number of questions. For instance, if a student were called on four times in the semester but only answered 3 of them, then the student would receive <math>(20\%) * (3/4) = 15</math> toward the semester average score. Therefore, class attendance is critical. Absences will result in losing points in class discussion and putting you very far behind in a short time. Students who must leave early for the emergence or acceptable reasons are expected to notify at the earliest time possible.</p> <p><b>Final Exam (20%) (Course Objectives 1, 3, 4)</b> The final exam will be given in the last class with a 3-hour test duration. It will consist of short-essay questions to cover the whole semester. You will be reminded about the format in detail before the exam.</p>	Writing Assignments	30%	Research Proposal and Presentation	30%	Class Participation	20%	Final Exam	20%	Total	100%
Writing Assignments	30%										
Research Proposal and Presentation	30%										
Class Participation	20%										
Final Exam	20%										
Total	100%										
內容綱要 Course Outline	Methodology and Types of Research Research Paper Structure Ethics in Research Topic Selection Citations and Formats Editing Tools Social Media and Research Proposal Presentation										
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input type="checkbox"/> 是 Yes <input checked="" type="checkbox"/> 否 No, 原因 Reason(s): There are many online open access resources. The instructor will show or cite the reference information. All the assignment articles or papers are either public resources or the instructor's publications.										
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No, 原因 Reason(s):										

備註 Note	
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教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Course Introduction	
2	Methodology and Types of Research	
3	Major Sections of a Research Paper (1)	
4	Major Sections of a Research Paper (2)	
5	<i>Double-Ten Memorial Holiday</i>	Due Assignment
6	Ethics in Research	
7	How to Select a Research Topic (1)	
8	How to Select a Research Topic (2)	
9	Discussion (1) – Research Proposal	Due Assignment
10	Citations and (APA) Format	
11	How to Apply Editing Tools	
12	Tips to Improve your Manuscript	
13	Social Media and Research	Due Assignment
14	Presentation Skills	
15	Discussion (2) – Research Proposal	
16	Due Research Proposal and Presentation	
17	<i>2023 New Year Holiday</i>	Due Assignment
18	Final Exam	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111學年度第1學期課程大綱  
Year of 2022 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree
	<input type="checkbox"/> 進修部 Division of Continuing Education		<input checked="" type="checkbox"/> 碩士 Master's Degree
授課教師 Instructor(s)	Chien-Ping Chen 陳建賓	開課代碼 Course Code	<input type="checkbox"/> 四技 Bachelor's Degree (4-year College)
			<input type="checkbox"/> 二技 Bachelor's Degree (2-year College)
			<input type="checkbox"/> 二專 Associate Degree (2-year program)
			LT35 G807

科目名稱 Course Name	Economics for Healthcare 醫療保健經濟	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective												
開課年級 Grade	碩一 Master of first grade	開課學期 Semester	<input checked="" type="checkbox"/> 上 Fall <input type="checkbox"/> 下 Spring												
開課單位 Course Department	資訊工程系 Department of Computer Science and Information Engineering	學分/學時數 Credit/Hours	3/3												
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English												
先修課程 Prerequisite course(s)	Microeconomics or Macroeconomics														
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.														
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill														
教科書 Textbook	Health Economics: Theory, Insights, and Industry Studies, 6th Edition, Santerre and Neun, SOUTH-WESTERN. ISBN 1-111-82272-7 (Not required)														
參考書目 Other References	My lecture notes														
課程目標 Course objectives	As a result of this course, students will be able to <ol style="list-style-type: none"> <li>1. identify the important economic issues in the healthcare industry,</li> <li>2. comprehend the economic concepts and tools that can be used to better understand health care related issues,</li> <li>3. comprehend the relationship between healthcare production and its cost structure,</li> <li>4. understand the likely consequences of government regulation/reform on the healthcare industry,</li> <li>5. evaluate market competition on the operation and performance of the healthcare industry, and</li> <li>6. develop a teamwork to analyze opportunity and weakness for the current healthcare industry.</li> </ol>														
評量方式 Evaluation	<table border="1"> <tr> <td>Midterm Exam</td> <td>20%</td> </tr> <tr> <td>Final Exam</td> <td>20%</td> </tr> <tr> <td>Quizzes</td> <td>20%</td> </tr> <tr> <td>Class Participation</td> <td>10%</td> </tr> <tr> <td>Industry Term Paper &amp; Presentation (Group)</td> <td>30%</td> </tr> <tr> <td style="text-align: right;">Total</td> <td>100%</td> </tr> </table> <p><b>Midterm Exam (20%) (Course Objectives 1, 2, 3)</b>            The midterm exam will be given in class. The exam duration will be 3 hours. It will consist multiple-choice questions and short-easy questions to cover Chapters 1~3 and 5~8. You will be reminded about</p>			Midterm Exam	20%	Final Exam	20%	Quizzes	20%	Class Participation	10%	Industry Term Paper & Presentation (Group)	30%	Total	100%
Midterm Exam	20%														
Final Exam	20%														
Quizzes	20%														
Class Participation	10%														
Industry Term Paper & Presentation (Group)	30%														
Total	100%														

	<p>the format in detail before the exam.</p> <p><b>Final Exam (20%) (Course Objectives 1, 4, 5)</b> The final exam will be given in class. The exam duration will be 3 hours. It will consist of multiple-choice questions and short-essay questions to cover Chapters 9~15. You will be reminded about the format in detail before the exam.</p> <p><b>Quizzes (20%) (Course Objectives 1, 2, 3, 4)</b> One quiz after each chapter lecture in class in a week. If you missed a quiz, there would be NO MAKE-UP for you.</p> <p><b>Class Participation (10%) (Course Objective 1, 2, 3, 4, 5)</b> Students will be randomly called on in class to answer questions. Each student is supposed to be called on at the same number of times. Credit will be given in proportion to the completed number of questions. For instance, if a student was called on 4 times in the semester but only answered 3 of them, then the student would receive <math>(10\%) \times (3/4) = 7.5</math> toward the semester average score. Therefore, class attendance is very important. Absences will result in not only the loss of points in class discussion but putting you very far behind in a very short time. Students who must leave early because of emergence or acceptable reasons are expected to notify at the earliest time possible.</p> <p><b>Industry Term Paper &amp; Presentation (Group) (30%) (Course Objectives 4, 5, 6)</b> The purpose of the term paper is to provide students with the opportunity to apply economic analysis to a healthcare-related industry and to learn how to deal with real-world business problems from an economic perspective in teamwork. The class will be divided into several groups. Group size is limited to 3 or 4 members. Each member will receive the same group grade. Each group will choose one of the five healthcare industries for choices: healthcare insurance, physician services, hospital services, pharmaceutical, and long-term care. The detailed paper instruction will be available later in class. Each group will present the paper with PPT slides in class. The total 30% counts by paper 15% and presentation 15%.</p>
<p>內容綱要 Course Outline</p>	<p><b>Module I: Fundamental Economic Analysis for Healthcare</b> CH 1 Introduction CH 2~3 Healthcare: An Economic Perspective and Cost/Benefit Analysis CH 5 Demand for Medical Care CH 6 Demand for Medical Insurance CH 7 Medical Care Production and Costs CH 8 Market Structure and Analysis</p> <p><b>Module II: The Role of Government</b> CH 9 Government and Medical Care CH 10 Government as Health Insurer</p> <p><b>Module III: Industry Studies</b> CH 11 Private Health Insurance CH 12 Physician Services CH 13 Hospital Services CH 14 Pharmaceutical Industry CH 15 Long-Term Care</p>
<p>自編教材 Self-compiled textbook (非自編教材 請填寫原因)</p>	<p><input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):</p>
<p>符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)</p>	<p><input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):</p>
<p>備註 Note</p>	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note

1	Course Introduction and CH 1 Introduction	
2	CH 2~3 Healthcare: An Economic Perspective and Cost/Benefit Analysis and CH 1 Quiz	
3	CH 5 Demand for Medical Care and CH 2~3 Quiz	
4	CH 6 Demand for Medical Insurance and CH 5 Quiz	
5	CH 7 Medical Care Production and Costs and CH 6 Quiz	
6	CH 8 Market Structure and Analysis and CH 7 Quiz	
7	Discussion for Taiwan's universal health care and CH 8 Quiz	
8	Discussion for Taiwan's universal health care	
9	期中考 Midterm Exam	Due Group
10	Discussion for Taiwan's universal health care CH 9 Government and Medical Care	
11	CH 10 Government as Health Insurer and CH 9 Quiz	Due Industry
12	CH 11 Private Health Insurance and CH 10 Quiz	
13	CH 12 Physician Services and CH 11 Quiz	
14	CH 13 Hospital Services and CH 12 Quiz	
15	CH 14 Pharmaceutical Industry and CH 13 Quiz	
16	CH 15 Long-Term Care and CH 14 Quiz	
17	Industry Term Paper & Presentation and CH 15 Quiz	Due Term Paper
18	期末考 Final Exam	

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National Chin-Yi University of Technology

111學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	黃聖維 Sheng Wei Huang	開課代碼 Course Code	
科目名稱 Course Name	C#程式設計 (C# Programming)	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	四訊二選 Second grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	資訊工程系 Department of Computer Science and Information Engineering	學分/學時數 Credit/Hours	3 / 3



全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	Object oriented programming		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	Mark J. Price, C# 11 and .NET 7 - Modern Cross-Platform Development Fundamentals: Start building websites and services with ASP.NET Core 7, Blazor, and EF Core 7, 7th Edition.		
參考書目 Other References	RB Whitaker, The C# Player's Guide (5th Edition)		
課程目標 Course objectives	Students will get an understanding and the ability to program a Windows Form app by using C#.		
評量方式 Evaluation	出席 Attendance ( 10%) 作業 Assignments ( 30%) 平時考 Quizzes/Tests ( 0%) 期中考 Midterm Exam ( 30%) 期末考 Final Exam ( 30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):		
內容綱要 Course Outline	C# is a simple and powerful object-oriented programming language developed by Microsoft. In this course, C# and its related knowledge is introduced, including object oriented programming concepts, Windows Form app programming, ADO.NET and Microsoft Azure Services.		
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		
備註 Note			

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note

1	Introduction	
2	Visual Studio: Introduction and Installation. Projects and Namespaces.	
3	Data type and flow control	
4	String and array	
5	Object oriented programming concepts	
6	Object oriented programming concepts	
7	Windows Form app: Using C#	
8	Windows Form app: Using C#	
9	Midterm Exam	
10	Windows Form app: Using C#	
11	Windows Form app: Using C#	
12	I/O and Data processing	
13	ADO.NET	
14	ADO.NET	
15	LINQ	
16	Azure Cloud Services	
17	Azure AI	
18	Final Exam	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	林家禎 Chia-Chen Lin	開課代碼 Course Code	
科目名稱 Course Name	多媒體安全技術 Multimedia Security Technology	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	碩士一、二 Grade one, Master Program Grade two, Master Program	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	資訊工程系 Computer Science and Information Engineering	學分/學時數 Credit/Hours	3 / 3
全程外語授課	<input checked="" type="checkbox"/> 是 Yes	主要授課語言	英語 English

Foreign language Teaching entirely	<input type="checkbox"/> 否 No	Main language	
先修課程 Prerequisite course(s)	修課同學以有修習資訊相關課程為佳。 Students taking the course preferably have experience in other IT courses.		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	Self-edited teaching materials		
參考書目 Other References	Frank Y. Shih, "Digital Watermarking and Steganography," Fundamentals and Techniques, Second Edition, 2017, CRC Press		
課程目標 Course objectives	This course introduces various digital multimedia security technologies, including methods for hiding important secrets, trademarks, copyright certificates, and other information into digital data to achieve the purpose of effectively protecting multimedia information. 本課程介紹數位多媒體安全技術，包含將重要的機密、商標、著作權證明等資訊嵌入數位資料中的方法，進而達到有效保護多媒體資訊的目的。		
評量方式 Evaluation	出席 Attendance ( 20% ) 作業 Assignments ( 20% ) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam ( ) 期末考 Final Exam ( ) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams): <u>期中報告 Midterm presentation 30%, 期末報告 Final presentation 30%</u>		
內容綱要 Course Outline	This course covers the following topics: Introduction of Data Hiding Scenario Introduction of Data Hiding Technologies Introduction of Lossless Data Hiding Technologies Introduction of Compression code-based Data Hiding Technologies Introduction of Watermarking Introduction of Video-based Data Hiding Technologies Introduction of Audio-based data hiding 本課程主要介紹以下主題: 1.資訊隱藏簡介。2.資訊隱藏相關技術。3.無失真資訊隱藏技術。4.壓縮碼資訊隱藏技術。5.浮水印相關技術介紹。6.音頻資訊隱藏技術。7.視頻資訊隱藏技術。		
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		

符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	介紹資訊隱藏的特性、資訊隱藏的應用情境 Introduction of Features and Scenarios of Data Hiding	
2	介紹取代式系統、像素值差異擴張技術 Introduction of Substitution System and Pixel Expansion Technologies	
3	介紹無失真廣義最低位元藏入法、差異擴張法 Introduction of LSB substitution and Difference Expansion Technologies	
4	介紹可逆式資料隱藏方法、可逆式整數轉換函式隱藏法 Introduction of Reversible Data Hiding Technologies	
5	介紹預測函數資訊隱藏方法、直方圖資訊隱藏方法 Introduction of Prediction-based Data Hiding Technologies、Histogram Shifting Data Hiding Technologies	
6	介紹區塊截斷壓縮碼資訊隱藏方法 Introduction of BTC-based Data Hiding Technologies	
7	介紹資訊隱藏方法實作要件、影像品質評估要件 Introduction of Development Tools and Measure Tools for Data Hiding Methods	
8	介紹向量量化壓縮碼資訊隱藏方法 Introduction of VQ -based Data Hiding Technologies	
9	期中報告 Midterm Presentation	
10	介紹循序編碼法向量量化壓縮碼資訊隱藏方法 Introduction of SOC-based Data Hiding Technologies	
11	介紹字碼資訊隱藏方法 Introduction of Characters-based Data Hiding Technologies	
12	介紹語意資訊隱藏方法 Introduction of Linguistics-based Data Hiding Technologies	
13	介紹浮水印技術 Introduction of Watermarking Technologies	
14	介紹離散餘弦轉換域資訊隱藏技術 Introduction of DCT-based Data Hiding Technologies	
15	介紹離散小波變換轉換域資訊隱藏技術 Introduction of DWT-based Data Hiding Technologies	
16	介紹音頻資訊隱藏技術 Introduction of Video-based Data Hiding Technologies	
17	介紹視頻資訊隱藏技術 Introduction of Audio-based Data Hiding Technologies	
18	期末報告 Final Presentation	

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決議：照案通過。

提案三十四：文化創意事業系 111 學年度第一學期教師開授 EMI 全英語課程追認案及 111 學年度第二學期教師開授 EMI 全英語課程開設案，提請審議。(提案單位：文化創意事業系)

說明：

一、依據本校教師全英語 EMI 授課課程開授要點辦理。

二、111 學年度第一學期：

(一)科目如下：

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩士選	傳統與時尚文化比較研究	3	3	選修	顏加松	P29-P31
日四技二選	國際文創產業概況(一)	2	2	選修	陳湘湘	P31-P34

(二)本案業經 111.09.02.系課程委員會議審議通過。

三、111 學年度第二學期：

(一)科目如下：

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩士班	文創事業電子商務研究	3	3	選修	顏加松	P34-P36
日四技	國際文創產業概況(二)	2	2	選修	陳湘湘	P36-P39

(二)本案業經 111.11.09.系課程委員會議審議通過。

四、教學大綱詳如下各表：

國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度第 1 學期課程大綱  
Year of 2022 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	盛業信 Sebastien SHEN	開課代碼 Course Code	GC03
科目名稱 Course Name	傳統與時尚文化研究 Tradition and Fashion Culture Studies	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	碩一 Master of first grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	文化創意事業系 Department of Cultural & Creative Industries	學分/學時數 Credit/Hours	3/3

全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	NO		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創 新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	NO		
參考書目 Other References	The Essence of Style: How the French Invented High Fashion, Fine Food, Chic Cafes, Style, Sophistication, and Glamour 2006, Joan DeJean (Author) How Paris Became Paris: The Invention of the Modern City 2015, Joan DeJean (Author)		
課程目標 Course objectives	藉由資料研讀與分析，導引研究生們理解昔日的流行，如何成為今日的傳統與經典文化？ Through data reading and analysis, guide graduate students understand the popularity of the pass, how to become today's tradition and classic culture?		
評量方式 Evaluation	出席 Attendance ( 20% ) 作業 Assignments ( 20% ) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam ( 30% ) 期末考 Final Exam ( 30% ) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):		
內容綱要 Course Outline	How the French Invented High Fashion, Fine Food, Chic Cafes, Style, Sophistication, and Glamour How Paris became the World's Fashion and Culture Center?		
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		
備註 Note			

教學進度 Course schedule

週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
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1	The French Salon	
2	The King of Sun : Louis X IV	
3	How Much is Too Much ?	
4	Fashion Queens & Fashion Slaves	
5	From the French Cook to Crème Brûlée	
6	The Night They Invented Champagne	
7	King of Diamonds	
8	Power Mirrors	
9	期中考 Midterm Exam	
10	Bright Lights Big City	
11	A New Kind of Shopping	
12	The Most Sweetly Flowered King	
13	The Bridge Where Paris Became Modern : The Pont Neuf	
14	Light of the City of Light : The Place des Vosges	
15	Enchanted Island : The Ile Saint- Louis	
16	The Open City : The Boulevards, Parks, and Streets of Paris	
17	Capitale de la Mode	
18	期末考 Final Exam	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度第 1 學期課程大綱  
Year of 2022 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	陳湘湘 Shiang Shiang Chen	開課代碼 Course Code	5206
科目名稱 Course Name	國際文創產業概況(一) Overview of International Cultural and Creative Industries (I)	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	四文二甲 Sophomore	開課學期 Semester	<input checked="" type="checkbox"/> 上 Fall <input type="checkbox"/> 下 Spring
開課單位 Course Department	文化創意事業系 Department of Cultural & Creative Industries	學分/學時數 Credit/Hours	2 / 2

全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	無 none		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創 新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	無 none		
參考書目 Other References	*文化創意產業（作者： <u>廖世璋</u> ，出版社： <u>巨流圖書公司</u> ） Cultural and Creative Industries (Author: Shih-Chang Liao, Publisher: Julius Books Co.) *文化創意產業概論（作者： <u>夏學理</u> ； <u>秦嘉嫻</u> ； <u>洪琬喻</u> ； <u>陳國政</u> ； <u>施沛琳</u> ； <u>謝知達</u> ； <u>陳怡君</u> ， 出版社： <u>五南</u> ） Introduction to Cultural and Creative Industries (by Xue-Li Xia; Jia-Lu Qin; Wan-Yu Hong; Guo- Zheng Chen; Pei-Lin Shi; Zhi-Da Xie; Yi-Jun Chen, Publisher: Wunan) *其他文創相關英文書籍或網路資料 Other cultural and creative related books in English or online materials		
課程目標 Course objectives	知識：提升學生對文創產業類型的多元化了解與英文知識的增進。 Knowledge: To enhance students' diverse understanding of cultural and creative industry types and knowledge of English. 技能：增加學生在文創產業中的英文能力，包括聽說讀寫。並藉由了解各國文創產業，養成 跨文化溝通能力，並強化國際觀。 Skill: Increase students' English skills in the cultural and creative industries, including listening, speaking, reading and writing. By learning about the cultural and creative industries of different countries, the students will develop cross-cultural communication skills and strengthen their international perspective. 態度：學習在文創產業中應具備的基本態度，並建立創意性與批判性思考的能力。 Attitude: To learn the basic attitudes that should be possessed in the cultural and creative industries, and build the ability to think creatively and critically. 創意：增加學生對文創產業的創意能力與跨領域整合能力。 Creation: To increase students' creativity and cross-disciplinary integration skills in cultural and creative industries.		
評量方式 Evaluation	出席 Attendance (10%) 作業 Assignments (30%) 期中考 Midterm Exam (30%) 期末考 Final Exam (30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams): 小組討論&報告 Group Discussions & Reports		



<p>內容綱要 Course Outline</p>	<p>本課程為達到國際化文創產業視野，透過課堂討論、寫作、與口頭報告，從基礎概念入門，瞭解文創產業之定義與類別，探討各國文創產業之特色與政策面問題。本學期將內容聚焦在：視覺藝術產業、音樂及表演藝術產業、文化資產應用及展演設施產業、工藝產業、電影產業、廣播電視產業、以及出版產業。(廣告產業、產品設計產業、視覺傳達設計產業、設計品牌時尚產業、建築設計產業、數位內容產業、創意生活產業、流行音樂及文化內容產業、和其他經中央主管機關指定之產業將於第二學期課程討論)</p> <p>This course is designed to provide an international perspective on the cultural and creative industries. Through class discussions, writing, and oral presentations, the course will begin with basic concepts, understand the definitions and categories of cultural and creative industries, and explore the characteristics and policy aspects of cultural and creative industries in various countries. This semester will focus on the visual arts industry, the music and performing arts industry, the cultural assets application and exhibition facilities industry, the art and crafts industry, the film industry, the radio and television industry, and the publishing industry. (The advertising industry, the product design industry, visual communication design industry, design brand fashion industry, architectural design industry, digital content industry, creative life industry, popular music and cultural content industry, and other industries designated by the Central Authorities will be discussed in the second semester.)</p>
<p>自編教材 Self-compiled textbook (非自編教材請填寫原因)</p>	<p><input checked="" type="checkbox"/>是 Yes <input type="checkbox"/>否 No,原因 Reason(s):</p>
<p>符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)</p>	<p><input checked="" type="checkbox"/>是 Yes <input type="checkbox"/>否 No,原因 Reason(s):</p>
<p>備註 Note</p>	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	文化創意產業指南與介紹 Orientation & Introduction to International Cultural and Creative Industries	Understanding the Category, Definitions, and Regulations
2	視覺藝術產業 Visual Arts Industry	Group discussions-review week 1 and preparation for reports
3	他國之視覺藝術產業種類與特色討論 Discussion on the types and characteristics of the visual arts industry in other countries	*Group discussions and oral presentations * Assignment: Writing individual commentary essay
4	音樂及表演藝術產業 Music and Performing Arts Industry	Discussions and preparation for reports *Hand in individual commentary essay
5	他國之音樂及表演藝術產業種類與特色討論 Discussion on the types and characteristics of the music and performing arts industry in other countries	*Group reports * Assignment: Writing individual commentary essay
6	文化資產應用及展演設施產業 The Cultural Assets Application and Exhibition Facilities Industry	Discussions and preparation for reports *Hand in individual commentary essay
7	他國之文化資產應用及展演設施產業種類與特色討論 Discussion on the types and characteristics of the cultural assets application and exhibition facilities industry in other countries	Group reports * Assignment: Writing individual commentary essay
8	複習與期中報告討論 Review and Midterm Report Discussion	Discussions and preparation for reports

9	期中報告 Midterm Report	* Midterm individual oral report
10	工藝產業 Arts and Crafts Industry	Discussions and preparation for reports *Hand in individual commentary essay
11	他國之工藝產業種類與特色討論 Discussion on the types and characteristics of the arts and crafts industry in other countries	Group reports * Assignment: Writing individual commentary essay
12	電影產業 Film Industry	Discussions and preparation for reports *Hand in individual commentary essay
13	他國之電影產業種類與特色討論 Discussion on the types and characteristics of the film industry in other countries	Group reports * Assignment: Writing individual commentary essay
14	廣播電視產業 Radio and Television Industry	Discussions and preparation for reports *Hand in individual commentary essay
15	他國之廣播電視產業種類與特色討論 Discussion on the types and characteristics of the radio and television industry in other countries	Group reports * Assignment: Writing individual commentary essay
16	出版產業 Publishing Industry	Discussions and preparation for reports *Hand in individual commentary essay
17	他國之出版產業種類與特色討論 Discussion on the types and characteristics of the publishing industry in other countries	Discussions and preparation for final oral reports
18	期末報告 Final Report	* Final individual oral report

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國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度第 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	顏加松 Assistant Prof. Jason C.S. YEN	開課代碼 Course Code	
科目名稱 Course Name	文創事業電子商務研究 Research of E-Commerce to Cultural & Creative Industries	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	碩一 Master Program	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	文化創意事業系 Institute of Cultural & Creative Industries	學分/學時數 Credit/Hours	3/3

3 全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	N/A		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創 新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	自編講義 Self-edited lecture notes		
參考書目 Other References	N/A		
課程目標 Course objectives	以新科技之金流與網路行銷方式促進文化創意事業推展 To improve cultural and creative industries growth with E-commerce and ICT		
評量方式 Evaluation	出席 Attendance (30%) 作業 Assignments (30%) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam ( ) 期末考 Final Exam (40%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):		
內容綱要 Course Outline	本課程內容首先介紹電子商務定義與運用之理論，隨後以當代文化創意事業與電子商務跨界 應用之研究論文作為課程討論之主要素材，包括質性與量化研究之國外期刊論文，期以「最 最新」、「最貼近文創」、「最應用端」的三最研究論文帶領研究者了解當代文創事業電子商 務。 This class aims at three points to E-commerce applications as follows: The latest studies in journals. The closest subjects about cultural and creative industries. The most applicable theories and cases in E-commerce studies.		
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		
備註 Note			

教學進度 Course schedule

週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction to E-commerce	
2	Theories of E-commerce	
3	The racialization of the cultural commodity	
4	Exploring key successful factors of B2B brand Management from the Perspective of Brand Equity	
5	Creative small cities: Rethinking the creative economy in place Creative nomy in Place	
6	The creative economy and great future of employment	
7	Studies for promoting the cultural creative industry policy	
8	Case study of cultural industries in Sweden	
9	Mid-term presentation	
10	Ecommerce of B2C	
11	The creative class and economy development	
12	The relations between service quality and consumer behaviors	
13	The digital transformation of business models in the creative industries: A holistic framework and emerging trends	
14	Management of cultural assets	
15	Understanding the effects of technology of Ecommerce	
16	Ecommerce in new media	
17	E-Commerce from 1990 to 2017: A Literature Review	
18	Final presentation	

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國立勤益科技大學  
National Chin-Yi University of Technology

111 學年度第 2 學期課程大綱

Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Countinuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree` <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	陳湘湘 Shiang Shiang Chen	開課代碼 Course Code	
科目名稱 Course Name	國際文創產業概況(二) Overview of International Cultural and Creative Industries (II)	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	四文二甲 Sophomore	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring

開課單位 Course Department	文化創意事業系 Department of Cultural & Creative Industries	學分/學時數 Credit/Hours	2 / 2
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	無 none		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創 新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	無 none		
參考書目 Other References	*文化創意產業（作者： <u>廖世璋</u> ，出版社： <u>巨流圖書公司</u> ） Cultural and Creative Industries (Author: Shih-Chang Liao, Publisher: Julius Books Co.) *文化創意產業概論（作者： <u>夏學理</u> ； <u>秦嘉嫻</u> ； <u>洪琬喻</u> ； <u>陳國政</u> ； <u>施沛琳</u> ； <u>謝知達</u> ； <u>陳怡君</u> ， 出版社： <u>五南</u> ） Introduction to Cultural and Creative Industries (by Xue-Li Xia; Jia-Lu Qin; Wan-Yu Hong; Guo- Zheng Chen; Pei-Lin Shi; Zhi-Da Xie; Yi-Jun Chen, Publisher: Wunan) *其他文創相關英文書籍或網路資料 Other cultural and creative related books in English or online materials		
課程目標 Course objectives	知識：提升學生對文創產業類型的多元化了解與英文知識的增進。 Knowledge: To enhance students' diverse understanding of cultural and creative industry types and knowledge of English. 技能：增加學生在文創產業中的英文能力，包括聽說讀寫。並藉由了解各國文創產業，養成 跨文化溝通能力，並強化國際觀。 Skill: Increase students' English skills in the cultural and creative industries, including listening, speaking, reading and writing. By learning about the cultural and creative industries of different countries, the students will develop cross-cultural communication skills and strengthen their international perspective. 態度：學習在文創產業中應具備的基本態度，並建立創意性與批判性思考的能力。 Attitude: To learn the basic attitudes that should be possessed in the cultural and creative industries, and build the ability to think creatively and critically. 創意：增加學生對文創產業的創意能力與跨領域整合能力。 Creation: To increase students' creativity and cross-disciplinary integration skills in cultural and creative industries.		
評量方式 Evaluation	出席 Attendance (10%) 作業 Assignments (30%) 期中考 Midterm Exam (30%) 期末考 Final Exam (30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no		

	written exams): 小組討論&報告 Group Discussions & Reports
內容綱要 Course Outline	<p>本課程為達到國際化文創產業視野，透過課堂討論、寫作、與口頭報告，從基礎概念入門，瞭解文創產業之定義與類別，探討各國文創產業之特色與政策面問題。本學期將內容聚焦在：視覺藝術產業、音樂及表演藝術產業、文化資產應用及展演設施產業、工藝產業、電影產業、廣播電視產業、以及出版產業。(廣告產業、產品設計產業、視覺傳達設計產業、設計品牌時尚產業、建築設計產業、數位內容產業、創意生活產業、流行音樂及文化內容產業、和其他經中央主管機關指定之產業將於第二學期課程討論)</p> <p>This course is designed to provide an international perspective on the cultural and creative industries. Through class discussions, writing, and oral presentations, the course will begin with basic concepts, understand the definitions and categories of cultural and creative industries, and explore the characteristics and policy aspects of cultural and creative industries in various countries. This semester will focus on the visual arts industry, the music and performing arts industry, the cultural assets application and exhibition facilities industry, the art and crafts industry, the film industry, the radio and television industry, and the publishing industry. (The advertising industry, the product design industry, visual communication design industry, design brand fashion industry, architectural design industry, digital content industry, creative life industry, popular music and cultural content industry, and other industries designated by the Central Authorities will be discussed in the second semester.)</p>
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

### 教學進度 Course schedule

週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	文化創意產業指南與課程介紹 Orientation & Introduction to International Cultural and Creative Industries	Understanding the Category, Definitions, and Regulations
2	廣告產業 Advertising Industry	Group discussions-review week 1 and preparation for reports
3	他國之廣告產業種類與特色討論 Discussion on the types and characteristics of the advertising industry in other countries	*Group discussions and oral presentations * Assignment: Writing individual commentary essay
4	產品設計產業 Product Design Industry	Discussions and preparation for reports *Hand in individual commentary essay
5	他國之產品設計產業種類與特色討論 Discussion on the types and characteristics of the product design industry in other countries	*Group reports * Assignment: Writing individual commentary essay
6	視覺傳達設計產業 Visual Communication Design Industry	Discussions and preparation for reports *Hand in individual commentary essay

7	他國之視覺傳達設計產業種類與特色討論 Discussion on the types and characteristics of the visual communication design industry in other countries	Group reports * Assignment: Writing individual commentary essay
8	複習與期中報告討論 Review and Midterm Report Discussion	Discussions and preparation for reports
9	期中報告 Midterm Report	* Midterm individual oral report
10	設計品牌時尚產業 Design Brand Fashion Industry	Discussions and preparation for reports *Hand in individual commentary essay
11	他國之設計品牌時尚產業種類與特色討論 Discussion on the types and characteristics of the design brand fashion industry in other countries	Group reports * Assignment: Writing individual commentary essay
12	數位內容產業 Digital Content Industry	Discussions and preparation for reports *Hand in individual commentary essay
13	他國之數位內容產業種類與特色討論 Discussion on the types and characteristics of the digital content industry in other countries	Group reports * Assignment: Writing individual commentary essay
14	創意生活產業 Creative Life Industry	Discussions and preparation for reports *Hand in individual commentary essay
15	他國之創意生活產業種類與特色討論 Discussion on the types and characteristics of the creative life industry in other countries	Group reports * Assignment: Writing individual commentary essay
16	流行音樂及文化內容產業 Pop Music and Cultural Content Industry	Discussions and preparation for reports *Hand in individual commentary essay
17	他國之出版產業種類與特色討論 Discussion on the types and characteristics of the pop music and cultural content industry in other countries	Discussions and preparation for final oral reports
18	期末報告 Final Report	* Final individual oral report

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決議：

**提案三十五：工業工程與管理系 111 學年度第一學期教師開授 EMI 全英語課程追認案及 111 學年度第二學期教師開授 EMI 全英語課程開設案，提請審議。（提案單位：工業工程與管理系）**

說明：

- 一、依據本校教師全英語 EMI 授課課程開授要點辦理。
- 二、111 學年度第一學期：
  - (一)申請科目如下：

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩士選	管理經濟	3	3	選修	陳建賓	P40-P42

- (二)本案業經 111.09.07. 系課程委員會議審議通過。

- 三、111 學年度第二學期：

(一) 申請科目如下：

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩士班	系統模擬	3	3	選修	邱俊智	P43-P44
日四技	資料庫與網頁設計	3	3	選修	蔡志明	P44-P47

(二) 本案業經 111.11.02. 系課程委員會議審議通過。

四、教學大綱詳如下各表：

國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度第1學期課程大綱  
Year of 2022 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)	
授課教師 Instructor(s)	陳建賓 Chien-Ping Chen	開課代碼 Course Code	G013	
科目名稱 Course Name	管理經濟 Managerial Economics	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective	
開課年級 Grade	碩士班一年級 1-year Master Student	開課學期 Semester	<input checked="" type="checkbox"/> 上 Fall <input type="checkbox"/> 下 Spring	
開課單位 Course Department	工業工程與管理系 Department of Industrial and Management	學分/學時數 Credit/Hours	3 / 3	
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English	
先修課程 Prerequisite course(s)	Microeconomics or Business Statistics			
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作(職場)倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.			
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill			



教科書 Textbook	Thomas and Maurice, <u>Managerial Economics: Foundations of Business Analysis and Strategy</u> , 12th edition, McGraw-Hill. ISBN 978007802909													
參考書目 Other References	My lecture notes													
課程目標 Course objectives	As a result of this course, students will understand consumers' decision-making process in the product market. develop the ability to solve managerial decision problems on the cost of production and the level of production of goods. identify different market structures in the product market. comprehend the importance of regression analysis in the demand, production, and cost estimations 5. increase awareness of and experience with group dynamics and problem solving.													
評量方式 Evaluation	<table border="1"> <tr> <td>Midterm Exam</td> <td>25%</td> </tr> <tr> <td>Final Exam</td> <td>25%</td> </tr> <tr> <td>Quizzes</td> <td>20%</td> </tr> <tr> <td>Class Participation</td> <td>10%</td> </tr> <tr> <td>Cases (Group)</td> <td>20%</td> </tr> <tr> <td style="text-align: right;">Total</td> <td>100%</td> </tr> </table>	Midterm Exam	25%	Final Exam	25%	Quizzes	20%	Class Participation	10%	Cases (Group)	20%	Total	100%	<p><b>Midterm Exam (25%) (Course Objectives 1, 2, 4)</b> The midterm exam will be given in class. The exam duration will be 3 hours. It will consist multiple-choice questions and short-essay questions to cover Chapters 1~7. You will be reminded about the format in detail before the exam.</p> <p><b>Final Exam (25%) (Course Objectives 2, 3, 4)</b> The final exam will be given in class. The exam duration will be 3 hours. It will consist of multiple-choice questions and short-essay questions to cover the lectures for Chapters 8~13. You will be reminded about the format in detail before the exam.</p> <p><b>Quizzes (20%) (Course Objectives 1, 2, 3, 4)</b> One quiz after each chapter lecture will be given in class in a week. All the 13 quizzes will contribute 20% toward your semester average. If you missed, there would be NO MAKE-UP for any quiz.</p> <p><b>Class Participation (10%) (Course Objective 1, 2, 3, 4, 5)</b> Students will be randomly called on in class to answer questions. Each student is supposed to be called on at the same number of times. Credit will be given in proportion to the completed number of questions. For instance, if a student was called on 4 times in the semester but only answered 3 of them, then the student would receive <math>(10\%) * (3/4) = 7.5</math> toward the semester average score. Therefore, class attendance is very important. Absences will result in not only the loss of points in class discussion but putting you very far behind in a very short time. Students who must leave early because of emergence or acceptable reasons are expected to notify at the earliest time possible.</p> <p><b>Cases (Group) (20%) (Course Objectives 4, 5)</b> There are two cases (demand estimation and cost analysis) counting 20% toward the semester average. The instruction and data for each case are available on the Blackboard. Each group should submit the solution file and present the work in class. Only MS Excel files are acceptable. Coordinating the members' contributions, the group leader will be rewarded by one additional semester average point in the end of semester. The due for each case is on the course schedule.</p>
Midterm Exam	25%													
Final Exam	25%													
Quizzes	20%													
Class Participation	10%													
Cases (Group)	20%													
Total	100%													
內容綱要 Course Outline	<p><b>Module 1: Preliminaries</b> Chapter 1– Managers, Profits, and Markets Chapter 2 – Demand, Supply, and Market Equilibrium Chapter 3 – Marginal Analysis for Optimal Decisions</p> <p><b>Module 2: Demand Analysis</b> Chapter 4: Basic Estimation Techniques Chapter 5: Theory of Consumer Behavior Chapter 6: Elasticity and Demand Chapter 7: Demand Estimation and Forecasting</p> <p><b>Module 3: Production and Cost</b> Chapter 8: Production and Cost in Short Run Chapter 9: Production and Cost in Long Run Chapter 10: Production and Cost Estimation</p> <p><b>Module 4: Market Structures</b> Chapter 11: Managerial Decisions in Competitive Markets</p>													

	Chapter 12: Managerial Decisions for Firms with Market Power Chapter 13: Strategic Decision Making in Oligopoly Markets
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Course Introduction and Chapter 1– Managers, Profits, and Markets	
2	Chapter 2 – Demand, Supply, and Market Equilibrium and CH 1 Quiz	
3	Chapter 3 – Marginal Analysis for Optimal Decisions and CH 2 Quiz	
4	Chapter 4 – Basic Estimation Techniques and CH 3 Quiz	
5	Chapter 4 – Basic Estimation Techniques and CH 4 Quiz	
6	Chapter 5 – Theory of Consumer Behavior	
7	Chapter 6 – Elasticity and Demand and CH 5 Quiz	
8	Chapter 7 – Demand Estimation and Forecasting and CH 6 Quiz	
9	Case 1 Presentation and CH 7 Quiz	
10	期中考 Midterm Exam	
11	Case 1 Presentation Chapter 8 – Production and Cost in SR	
12	Chapter 9 – Production and Cost in LR and CH 8 Quiz	
13	Chapter 10 – Production and Cost Estimation and CH 9 Quiz	
14	Chapter 11 – Managerial Decisions in Competitive Mkts and CH 10 Quiz	
15	Chapter 12–Managerial Decisions for Firms w/Mkt Power And CH 11 Quiz	
16	Chapter 13 –Strategic Decision Making in Oligopoly Mkts And CH 12 Quiz	
17	Case 2 Presentation and CH 13 Quiz	
18	期末考 Final Exam	

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111 學年度第 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	邱俊智 Chun-Chih Chiu	開課代碼 Course Code	
科目名稱 Course Name	系統模擬 System Simulation	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	碩士班一年級 1-year Master Student	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	工業工程與管理系 Department of Industrial and Management	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	English
先修課程 Prerequisite course(s)	Basic Programming Language in C/C++ or Python		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input checked="" type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	Fishman, G.S. Discrete-event simulation: modeling, programming, and analysis. Springer, Heidelberg (2013).		
參考書目 Other References	Charles Harrell, Biman K. Ghosh, and Royce O. Bowden, Jr., Simulation Using ProModel, McGraw Hill International Editions, 2012. Jerry Banks, John S. Carson II, Barry L. Nelson, and David M. Nicol, <i>Discrete Event System Simulation</i> , 5th edition, Prentice Hall International Editions, 2009. key conference papers( <a href="http://www.informs-sim.org/wscpapers.html">http://www.informs-sim.org/wscpapers.html</a> )		
課程目標 Course objectives	This course is intended to provide an up-to-date treatment of all the important aspects of simulation modeling and analysis, including discrete event simulation methodology, object-oriented simulation modeling, statistical aspects of simulation, and experimental design for simulation.		
評量方式 Evaluation	出席 attend ( 5 %) 作業 operation ( 20 %) 文獻報告 reference presentation ( 20 %) 期中考 Midterm Exam ( 25 %) 期末報告 term project( 30 %) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams): 小組討論&報告 Group Discussions & Reports		

內容綱要 Course Outline	The course content includes Simulation and System Dynamics, Discrete Event Simulation, Object-oriented Simulation, Data Collection and Analysis, Output Analysis of Single System(Estimation), and so on.
自編教材 Self-compiled textbook (非自編教材請填寫原因)	■是 Yes    □否 No,原因 cause:
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	■是 Yes    □否 No,原因 cause:
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction to Simulation and System Dynamics	
2	Deterministic Simulation with example	
3	Random Behavior & Variability: Simulating Random Behavior(Random Number and Variate Generation)	
4	Stochastic Simulation with example	
5	Discrete Event Simulation	
6	Object-oriented Simulation Plant-Sim or FlexSim (I) / Assignment 1	
7	Object-oriented Simulation Plant-Sim or FlexSim (II) / Assignment 2	
8	Object-oriented Simulation Plant-Sim or FlexSim (III) / Assignment 3	
9	期中考 Midterm Exam	
10	Model Building, Model verification and validation	
11	Probability for simulation, Data Collection and Analysis	
12	Output Analysis of Single System(Estimation)	
13	Reference presentation	
14	Comparison of two or more system designs	
15	Experimental Design for simulation	
16	Simulation optimization	
17	Term project presentation	
18	期末考 Final Exam	

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111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	Chih Ming Tsai / 蔡志明	開課代碼 Course Code	
科目名稱 Course Name	WEB Database Design / 資料庫與網頁設計	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	2 Second grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	Dept. of Industrial Engineering & Management	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	English
先修課程 Prerequisite course(s)	No		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新 模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多選 4項 Multiple choice, up to 4 choices)	<input type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	Tom Butler, PHP & MySQL: Novice to Ninja, 7th Edition, 2022, SitePoint.		
參考書目 Other References	Mike McGrath, PHP and MySQL in easy steps, 2nd edition, 2018, In Easy Steps Limited.		
課程目標 Course objectives	This course provides fundamental concepts of database and information systems. Topics covered include HTML language, PHP scripting language and MySQL database language. Practical examples are demonstrated to help students learn how to write HTML language, PHP server-side scripts and how to make MySQL database queries.		
評量方式 Evaluation	出席 attend (20%) 作業 operation (20%) 平時考( ) 期中考 Midterm Exam (30%) 期末考 Final Exam (30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams): 小組討論&報告 Group Discussions & Reports		
內容綱要 Course Outline	Gain a thorough understanding of HTML syntax Gain a thorough understanding of PHP syntax Effectively master database design principles and MySQL To be able to build a working content management system		
自編教材	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 cause:		

Self-compiled textbook (非自編教材 請填寫原因)	
符合智財規範 Compliance with Intellectual property (不符合智財規範 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 cause:
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Course Introduction / 課程介紹	
2	Web Programming Concept and Execution Environment Setup / 網頁程式設計概念與執行環境架設	
3	HTML syntax- Structure and Tag / HTML 語法- 結構與標籤	
4	HTML syntax- Form Design / HTML 語法-表單設計	
5	PHP syntax- Basic Output, Data Type and Variables / PHP 語法-基本輸出、資料型態與變數	
6	PHP syntax- Operation and Flow Control / PHP 語法-運算與流程控制	
7	PHP syntax- Loop and Array / PHP 語法-迴圈與陣列	
8	PHP syntax- Function / PHP 語法-函數	
9	期中考 Midterm Exam	
10	Management in web pages using Cookie and Session / 網頁管理：Cookie 與 Session	
11	Introduction to Basic Database Concepts / 資料庫基本概念介紹	
12	MySQL syntax / MySQL 語法	
13	MySQL function / MySQL 函數	
14	How to connect PHP to MySQL database / PHP 存取 MySQL 資料庫	
15	Practical drills- Membership Management System / 實例演練：會員管理系統	
16	Practical drills- Photo Management System /實例演練：相片管理系統	

17	Comprehensive drills of PHP and MySQL / PHP 與 MySQL 綜合演練	
18	期末考 Final Exam	

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決議：照案通過。

**提案三十六：機械工程系 111 學年度第 2 學期 EMI 全英語課程開設案，提請審議。(提案單位：機械工程系)**

說明：

- 一、依據本校教師全英語 EMI 授課課程開授要點規定，課程須經系、校課程委員會審議通過，以及碩士班每學期開設一門，當學年外籍博士生、碩士生新生人數合計 6 至 10 人之系所，全英語授課獎勵(授課鐘點以 1.5 倍核計)以每學期補助 3 門為上限。
- 二、本系碩士班於 111-1 已開設 2 門 EMI 全英語課程(機器視覺、動態系統分析與模擬)，故 111-2 無申請 EMI 課程額度；另 111 學年度合計有 7 名外籍碩士新生入學，全英語授課有鐘點 1.5 倍獎勵。
- 三、申請科目：

(一)大學部

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
四技	科技論文導讀	3	3	選修	陳凱榮	P47-P49

(二)碩士班開設課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩班	自動化光學檢測	3	3	選修	陳正和	P49-P52

- 四、本案業經 111.10.19. 系課程及所課程委員會議審議通過。
- 五、教學大綱詳如下各表：

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部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	陳凱榮 KAI-JUNG CHEN	開課代碼 Course Code	
科目名稱 Course Name	科技論文導讀 Guidance of Scientific Article Reading	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	二年級 Second grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	機械工程系 Department of Mechanical Engineering	學分/學時數 Credit/Hours	3/3
全程外語授課	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言	英語 English

Foreign language Teaching entirely	Main language
先修課程 Prerequisite course(s)	無, None
優質課程類別 Course attributes (可複選)	<p><input checked="" type="checkbox"/> 一般課程 General Courses、<input type="checkbox"/> 智慧財產權 Intellectual Property、  <input type="checkbox"/> 內涵式服務學習課程 Service Learning、<input type="checkbox"/> 性別平等 Gender Equality、  <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、<input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、  <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development</p> <p>創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。」</p> <p>Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.</p>
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<p><input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill  <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill  <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill</p>
教科書 Textbook	無, None
參考書目 Other References	無, None
課程目標 Course objectives	<p>本課程主要目的在與同學討論最新機械工程相關領域之論文，藉以啟發學生科學性之邏輯思考與獲得最新之訊息，另外也使學生獲得廣泛且紮實的專題討論訓練。過程中還利用口頭報告來加強學生的表達、組織及綜合批判能力，同時學習切題回答、討論以及時間控制。並且藉由分組專題討論及實作，訓練分工領導及實作之能力。</p> <p>The primary purpose of this course is to discuss the latest papers in mechanical engineering-related fields with students to inspire scientific and logical thinking and obtain the newest information. In addition, it also enables students to receive extensive and solid seminar training. In the process, the class is based on oral reports to strengthen students' expression, organization, and comprehensive critical skills, while learning to answer the questions, discuss, and time control. And through group topic discussion and implementation, a training division of leadership and practical ability.</p>
評量方式 Evaluation	<p>出席 Attendance (30%) 作業 Assignments (30%) 平時考 Quizzes/Tests (0%) 期中考 Midterm Exam (20%) 期末考 Final Exam (20%)</p> <p>其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):</p>
內容綱要 Course Outline	<p>學習不同領域的工程概念或想法，並提供學生英語能力之培訓。本課程將針對工程用語及工程人員專業對話為主，以提高學員國際觀，且提高溝通能力，使學員於工程應用上無基礎語言障礙。</p> <p>The primary purpose of the course is to learn engineering concepts or ideas in different fields and to provide students with training in English proficiency. This course will focus on engineering terminology and professional dialogue between engineering personnel to improve students' international outlook and improve communication skills so that students have no fundamental language barriers in engineering applications.</p>
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No, 原因 Reason(s):
符合智財規範 Compliance with Intellectual property	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No, 原因 Reason(s):



(不符合智財規範請填寫原因)	
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	課程介紹、學習資料準備說明 Introduction	
2	文章閱讀 (一) 加工類主題期刊 Article Reading	
3	文章閱讀 (一) 加工類主題期刊 Article Reading	
4	文章閱讀 (二) AI 演算法主題期刊 Article Reading	
5	文章閱讀 (二) AI 演算法主題期刊 Article Reading	
6	課堂電影 (一) 天文物理科技簡介 Classroom Film	
7	課堂電影 (二) 機器人設計應用 Classroom Film	
8	小組項目分配說明 Group Project Preparation	
9	期中考 Midterm Exam	
10	回顧/小組項目準備 Review/ Group Project Preparation	
11	小組項目 (一) Group Project (I)	
12	小組項目 (二) Group Project (II)	
13	口試準備 (一) Oral exam preparation (I)	
14	口試準備 (二) Oral exam preparation (II)	
15	項目報告 (一) Oral exam (I)	
16	項目報告 (二) Oral exam (II)	
17	項目報告 (三) Oral exam (III)	
18	期末考 Final Exam	

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111 學年度 2 學期課程大綱

Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree
	<input type="checkbox"/> 進修部 Division of Continuing Education		<input checked="" type="checkbox"/> 碩士 Master's Degree
授課教師	陳正和	開課代碼	

Instructor(s)	Cheng-Ho Chen	Course Code	
科目名稱 Course Name	自動化光學檢測 Automated Optical Inspection	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	碩一、二 Master's first and second choice	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	機械工程系 Department of Mechanical Engineering	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	無 None		
優質課程類別 Course attributes (可複選)	<input type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作(職場)倫理課程 Career Ethics <input checked="" type="checkbox"/> 工具機技術研發 Tool Machine Technology Development  創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	自編講義與蒐集資料 Lecture notes and collected material		
參考書目 Other References	自動化光學檢測、精密量測 Automated Optical Inspection, Precision Measurement		
課程目標 Course objectives	介紹自動化光學檢測技術原理與應用，培養學生相關理論基礎與應用能力。內容包含影像處理技術、二維檢測及三維形貌檢測，在檢測原理與應用實例的搭配下，教導學生得以運用所學於自動化光學檢測的實務上，達成學以致用的目標。 Introduce principles and applications of automated optical inspection technology. Develop theory basics and application abilities for the students. The content includes image processing technology, 2D and 3D inspection. With the combination of theories and examples, teach students how to apply what they learn in automated optical inspection.		
評量方式 Evaluation	出席 Attendance ( 5% ) 作業 Assignments (10% ) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam ( 40% ) 期末考 Final Exam ( 40% ) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams): 5% Online teaching evaluation		
內容綱要 Course Outline	自動光學檢測 (Automated Optical Inspection, AOI)，是高速度、高精確度的光學影像檢測系統，運用「機器視覺」做為檢測技術，代替人類的眼睛、大腦、手部的動作，再配有視覺感		

	<p>測設備中，檢測出產品的缺陷、判斷並挑選出產品，或用於量測尺寸等，廣泛應用在自動化生產中，作為改良傳統以人力使用光學儀器來進行檢測的缺點。</p> <p>AOI 技術是製程中利用光學儀器取得成品的表面狀態，再以電腦影像處理技術來檢出異物或圖案異常等瑕疵，屬於非接觸式檢查，亦可在製程中檢查半成品。AOI 技術包含「量測鏡頭技術、光學照明技術、定位量測技術、電子電路測試技術、影像處理技術及自動化技術」等領域。</p> <p>Automatic optical inspection (AOI) is a high speed, high-precision optical image detection system, using "machine vision" as a detection technology, instead of human eyes, brain, and hand movements. It is equipped with visual sensing equipment, to detect product defects, judge and select products, or measure dimensions, widely used in automated production as an improvement of the traditional use of human and instruments. AOI technology is the process of using optical instruments to obtain the finished product surface state, and then using computer image processing technology to detect foreign bodies or pattern anomalies. It is a non-contact inspection method, also used in the inspection semi-finished products. AOI is an integrated technology includes optical lens, lighting, positioning, measurement, electronic circuit testing, image processing and automation technology, etc.</p>
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	課程介紹 AOI Introduction	
2	自動化光學檢測技術發展與現況 AOI Development and State of the Art	
3	自動化光學檢測技術發展與現況 AOI Development and State of the Art	
4	光學檢測系統元件 Selection of Machine Vision Components	
5	光學檢測系統元件 Selection of Machine Vision Components	
6	光學檢測系統元件 Selection of Machine Vision Components	
7	光學檢測系統元件 Selection of Machine Vision Components	
8	光學檢測系統元件 Selection of Machine Vision Components	
9	期中考 Midterm Exam	

10	視覺定位技術與應用 Visual Positioning Technology and Application	
11	視覺定位技術與應用 Visual Positioning Technology and Application	
12	影像處理原理 Image Processing Principles	
13	影像處理原理 Image Processing Principles	
14	自動化光學檢測系統軟體 AOI Software	
15	自動化光學檢測系統軟體 AOI Software	
16	自動化光學檢測應用實例 Examples of AOI Application	
17	自動化光學檢測應用實例 Examples of AOI Application	
18	期末考 Final Exam	

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決議：照案通過。

**提案三十七：電機工程系 111 學年度第 2 學期 EMI 全英語課程開設案，提請審議。（提案單位：電機工程系）**

說明：

- 一、依據本校教師全英語 EMI 授課課程開授要點第四條第 7 項第 3 及 4 款規定辦理。本學年院外籍學生人數 7 人，全英語授課獎勵以每學期補助 3 門為上限。
- 二、大學部開設課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
四技	電腦模擬與計算	3	3	選修	巫建興	P52-P55

三、碩士班開設課程

(一)EMI 全英語課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩班	進階電腦網路	3	3	選修	葉明宗	P55-P57

(二)全英語課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩班	高等數位影像處理	3	3	選修	簡伯霖	P57-P60

四、本案業經 111.11.07 系課程委員會議審議通過。

五、教學大綱詳如下各表：

國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree
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	<input type="checkbox"/> 進修部 Division of Continuing Education		<input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	巫建興 Jian-Xing Wu	開課代碼 Course Code	
科目名稱 中文/英文 Course Name	電腦模擬與計算 Computer Simulations and Computational Models	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	二年級 Sophomore year of college	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	電機工程系 Department of Electrical Engineering	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英文 English
先修課程 Prerequisite course(s)	None		
課程類別 (單選必填，填 報校基庫表 3-5 使用)	<input checked="" type="checkbox"/> 創新教學課程 <input type="checkbox"/> 創新創業課程 <input type="checkbox"/> 程式設計課程 <input type="checkbox"/> STEM 領域課程 <input type="checkbox"/> 其他 創新教學課程：係指為改善學生學習動機低落及學習成效不佳之情形，有賴學校翻轉傳統教學模式，透過問題解決等創新教學方法，以學習者為重心，引發學學習動機及熱情，提升學習成效。本課程注重引導學校重視教師為學生學習成效之關鍵，形塑教師教學支持系統，包括制度、社群、評鑑及追蹤輔導等，以支持及促進教師發展創新教學模式。並關注學生學習內容，以多元方式評估學習成效機制，並追蹤輔導及回饋教學。 創新創業課程：係指學校得依據不同系科屬性及其學生學習需求，開設具適當之設計思考、創新實踐課程或其他創新自造學習活動之創新創業課程，開設以啟發學生創意思維及創新想法為主軸之創業課程，增進校園創意及創業精神，且授課教師應具創業實務經驗，或具設計思考教學能力。 STEM 領域課程：屬科學(Science)、科技(Technology)、工程(Engineering)或數學(Math)專業領域之課程(符合上開一種與一種以上領域課程請填寫)。		
若符合請勾選 (可複選) 進修部課程可 免填	<input checked="" type="checkbox"/> 「邏輯思考程式設計」相關課程 <input type="checkbox"/> 職能專業課程 <input type="checkbox"/> 人工智慧相關課程 有關職能專業課程參考如下： 教育部「大專校院就業職能平臺(UCAN)」所公布之專業職能。 <a href="https://ucan.moe.edu.tw/introduce/introduce.aspx">https://ucan.moe.edu.tw/introduce/introduce.aspx</a> 勞動部「職能發展與應用平臺」(iCAP)所公布之職能資源(包括職能基準及職能單元)。 <a href="https://icap.wda.gov.tw/Resources/resources_Datum.aspx">https://icap.wda.gov.tw/Resources/resources_Datum.aspx</a> 經濟部「產業人才能力鑑定學培訓產業推動網(iPAS)」所公布之能力鑑定項目(包括民間能力鑑定採認通過項目)。 <a href="https://www.ipas.org.tw/">https://www.ipas.org.tw/</a>		
優質課程類別 Course attributes (可複選)	<input type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input checked="" type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作(職場)倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input type="checkbox"/> 思考推理能力 Thinking and Reasoning		

Core competence (可複選，至多選4項)	Skill <input type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill
教科書 Textbook	自編教材 self-made textbook
參考書目 Other References	Virtual Machines, Versatile Platforms for Systems and Processes. James E. Smith and Ravi Nair, 2005. ISBN: 9781558609105
課程目標 Course objectives	智慧感測技術被廣泛應用在各種計算機系統，並用來解決各式硬體系統的問題。本課程課程內容包含程序虛擬機，高階語言虛擬機(High-level Language Virtual Machines)，及系統虛擬機(System Virtual Machines)，以及虛擬化技術的各種應用，為支持行動計算的核心技術。 Intelligent sensing technology is widely used in various computer systems and used to solve multiple hardware system problems. The course content of this course includes program virtual machines, high-level language virtual machines (High-level Language Virtual Machines), and virtual system machines (System Virtual Machines), as well as various applications of virtualization technology, which are the core technologies that support mobile computing.
評量方式 Evaluation	出席 Attendance (40%) 作業 Assignments ( ) 平時考 Quizzes/Tests (30%) 期中考 Midterm Exam ( ) 期末考 Final Exam (30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):
內容綱要 Course Outline	了解用於智慧感測與行動計算的編程必要技能，對模擬和實際臨床生物醫學信號進行醫學計算經驗定義，將實際案例應用於各種移動處理器，進行計算技術與分析研究。 Understand the programming skills necessary for intelligent sensing and action calculation, define the medical calculation experience of simulated and actual clinical biomedical signals, apply real cases to various mobile processors, and conduct calculation techniques and analysis research.
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	None

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction 行動計算技術與研究現況	
2	System virtualization 行動系統虛擬化	
3	CPU, Memory, I/O 核心處理器、記憶體、輸出入連接點	
4	System virtualization-2 行動系統虛擬化-2	
5	Hardware support virtualization 行動硬件支持虛擬化	
6	Paper presentation 論文介紹- 智慧行動感測	

7	Hardware support virtualization 行動硬件支持虛擬化	
8	GPU virtualization GPU 行動虛擬化	
9	期中考 Midterm Exam	
10	Virtual Desktop Infrastructure 虛擬行動桌面基礎架構	
11	Project Proposal 專案討論	
12	Process virtual machine 進程行動虛擬機	
13	System virtual machine 系統行動虛擬機	
14	Paper presentation 論文介紹 2- 智慧行動感測	
15	Virtual machines for performance profiling 行動用性能分析虛擬機	
16	Network virtualization 行動網絡虛擬化	
17	Storage virtualization 行動存儲虛擬化	
18	期末考 Final Exam	

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國立勤益科技大學  
National Chin-Yi University of Technology

111 學年度 2 學期課程大綱

Year of 2023\_Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	葉明宗 Ming-Tsung Yeh	開課代碼 Course Code	
科目名稱 中文/英文 Course Name	進階電腦網路 Advanced Computer Network	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	碩士班一、二年級 Master's first and second year	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	電機工程系 Department of Electrical Engineering	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英文 English
先修課程 Prerequisite course(s)	none		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。		

	Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill
教科書 Textbook	自編教材 self-made teaching materials
參考書目 Other References	"Computer Networking: A Top Down Approach", James Kurose and Keith Ross, Pearson "Computer Networks: A Systems Approach", Larry Peterson and Bruce Davie, Elsevier "Computer Networks", Andrew S. Tanenbaum, and David J. Wetherall, Pearson "Data Communications and Networking", 5e, Forouzan, 9789814577519
課程目標 Course objectives	This course is designed for the postgraduate students who have foundation of the computer network and focus on the network hardware implementation. It will teach students the knowledge of network architecture and concept who can clarify the network layers and related protocols. The students will have the ability to capture and analyze the packets on network routes, and train up them internetworking design capacity. They can design and implement an internetwork, also have well troubleshooting to the network issues.
評量方式 Evaluation	出席 Attendance (20%) 作業 Assignments (20%) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam (30%) 期末考 Final Exam (30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):
內容綱要 Course Outline	This course is designed for the postgraduate students who have foundation of the computer network, and focus on the network hardware implementation and troubleshooting. Network architecture and concept. OSI 7 layers and TCP/IP models Physical and data link layers Network layer, IPV4 and IPV6, Internetworking IP planning and assignment Transport and application layer, port assignment and virtual server Packets capture and analyze Network design and implement Router and switch setup, and internetwork implement Network troubleshooting 本課程設計針對有網路基礎的研究生，將以網路硬體設備裝機實作與除錯為主。課程綱要為： 網路架構 OSI 7層協定與 TCP/IP 模型 實體層與資料連結層 網路層、IPV4 與 IPV6、IP 規劃與實作 傳輸與應用層，通信 TCP Port 指定規劃 封包擷取與分析 網路設計與實作 交換器、路由器設定與網際網路連結實作 網路除錯
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):



Compliance with Intellectual property (不符合智財規範請填寫原因)	
備註 Note	none

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction	
2	Network architecture and concept	
3	OSI 7 layers and TCP/IP models	
4	Physical and data link layers	
5	Network layer, IPV4 and IPV6	
6	Internetworking IP planning and assignment	
7	Transport and application layers, port assignment and virtual server	
8	Packets capture and analyze	
9	期中考 Midterm Exam	
10	Network design and implement	
11	Network design case study	
12	Router and switch setup, and internetwork implement	
13	Network design case study	
14	Network troubleshooting	
15	Network design practice	
16	Internetwork implementation	
17	Internetwork implementation	
18	期末考 Final Exam	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	簡伯霖 Bo-Lin Jian	開課代碼 Course Code	
科目名稱	高等數位影像處理	必/選修	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective

中文/英文 Course Name	Advanced Digital Image Processing	Required/Elective	
開課年級 Grade	碩士班一、二年級 Master's first and second year	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	電機工程系 Department of Electrical Engineering	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英文 English
先修課程 Prerequisite course(s)	none		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	自編教材 self-made teaching materials		
參考書目 Other References	Digital Image Processing by Rafael C. Gonzalez		
課程目標 Course objectives	課程目標 知識：培養學生對高等數位影像處理的理論 技能：加強學生對數學及應用於數位影像處理設計及分析的能力 態度：培養學生面對實際問題時，可以自己思考解決方法的態度 其他：實作與課程互相搭配印證 Course Objectives Knowledge: To develop students' knowledge of advanced digital image processing theory Skills: To strengthen students' skills in mathematics and its application to digital image processing design and analysis Attitudes: To develop students' attitudes to think of their own solutions to practical problems. Other: Practical work and the course will be matched with each other.		
評量方式 Evaluation	出席 Attendance (30%) 作業 Assignments (10%) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam (30%) 期末考 Final Exam (30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):		
內容綱要 Course Outline	教學進度 1. 回顧影像處理概念 2. 視覺與電腦		

	<p>3. 程式語言概念與實作 (Matlab and C++)  4. 色彩空間應用方法  5. 影像空間濾波  6. 影像強化  7. 影像模板比對  8. 頻率域處理方法  9. 影像中直線搜尋的數學推導  10. 影像熵值理論  11. 影像之 SVD 分解  12. 影像之 PCA 分解  13. 影像處理之最佳化方法應用  14. 嵌入式系統的影像處理撰寫 (Beaglebone Black; Linux)</p> <p>以上為教學進度項目  各進度會彈性配合兩種程式語言進行實作與教學</p> <p>備註  這門課程不算是輕鬆的課程  修習課程的過程中  將會需要擁有影像處理的專業能力  以及程式語言的撰寫能力</p> <p>Teaching Progress  1. Review of image processing concepts  2. Visual and Computer  3. Programming Language Concepts and Practice (Matlab and C++)  4. color space application methods  5. image space filtering  6. image enhancement  7. image template comparison  8. frequency domain processing methods  9. mathematical derivation of straight line search in images  10. image entropy theory  11. SVD decomposition of images  12. PCA decomposition of images  13. Application of Optimization Methods for Image Processing  14. Writing Image Processing for Embedded Systems (Beaglebone Black; Linux)</p> <p>The above are the teaching progress items.  Each progress will be matched with two programming languages for practical work and teaching.</p> <p>Remarks  This course is not an easy course. You will need to have professional skills in image processing and programming language to take the course.</p>
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規 範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	none

教學進度 Course schedule

週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	回顧影像處理概念 Review of image processing concepts	
2	視覺與電腦 Visual and computer	
3	程式語言概念與實作 (Matlab and C++) Programming language concepts and practice (Matlab and C++)	
4	色彩空間應用方法 Color space application methods	
5	影像空間濾波 Image space filtering	
6	影像強化 Image enhancement	
7	影像模板比對 Image template comparison	
8	頻率域處理方法 Frequency domain processing methods	
9	期中考 Midterm Exam	
10	影像中直線搜尋的數學推導 Mathematical derivation of straight line search in images	
11	影像熵值理論 Image entropy theory	
12	影像之 SVD 分解 SVD decomposition of images	
13	影像之 PCA 分解 PCA decomposition of images	
14	影像處理之最佳化方法應用 Application of optimization methods for image processing	
15	嵌入式系統的影像處理撰寫 (Beaglebone black; Linux) Writing image processing for embedded systems (Beaglebone black; Linux)	
16	嵌入式系統的影像處理撰寫 (Beaglebone black; Linux) Writing Image Processing for Embedded Systems (Beaglebone black; Linux)	
17	嵌入式系統的影像處理撰寫 (Beaglebone Black; Linux) Writing Image Processing for Embedded Systems (Beaglebone Black; Linux)	
18	期末考 Final Exam	

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決議：照案通過。

提案三十八：化工與材料工程系 111 學年度第 2 學期 EMI 全英語課程開設案，提請審議。  
(提案單位：化工與材料工程系)

說明：

- 一、依本校教師全英語 EMI 授課課程開授要點辦理。
- 二、碩士班開設 EMI 課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩班	高分子動態與流變	3	3	選修	楊鎮遠	P61-P63

- 三、本案業經 111.10.26 系課程委員會會議審議通過。

四、教學大綱詳如下各表：

國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	楊鎮遠 Chane-Yuan Yang	開課代碼 Course Code	
科目名稱 Course Name	高分子動態與流變 Dynamics and Rheology of Polymer	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	1 First-year graduate school	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	化工與材料工程學所 Institute of Chemical and Materials Engineering	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	工程數學 Engineering Mathematics		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
課程與系核心能力關聯 Core competence (可複選)	<input checked="" type="checkbox"/> 具有執行化工與材料工程實務所需專業知識與技術的能力。Competency in specialized knowledge and technology needed to conduct chemical and material engineering practices. <input type="checkbox"/> 具有設計與執行專業實驗及分析、詮釋數據之能力。Competency in designing and conducting specialized experiments as well as analyzing and interpreting data. <input type="checkbox"/> 具有設計專業工程系統、製程及工程規劃、整合及創新之能力。Competency in designing specialized engineering systems and processes as well as innovating, planning, and integrating engineering projects.		

	<p>■具有表達、溝通、領導與管理及團隊合作之能力。Competency in expression, communication, leadership, management, and teamwork.</p> <p>■認識當前工程相關知識並具有發掘、構思、分析及解決問題之能力。Competency in understanding the information related to the current engineering project as well as discovering, formulating, analyzing, and solving problems.</p> <p>■了解產業未來發展趨勢並具有持續學習之能力。Competency in understanding future industrial development trends and continuous learning.</p> <p>□健全人格、服務社會並能善盡社會責任之能力。Competency in strengthening the personality, serving the society, and fulfilling social responsibilities.</p>
教科書 Textbook	NO
參考書目 Other References	<p>1. R. B. Bird, R. C. Armstrong and O. Hassager, <i>Dynamics of Polymeric Liquids. Vol I: Fluid Mechanics</i>, 2<sup>nd</sup> edition, Wiley-Interscience (1987).</p> <p>2. M. Doi and S. F. Edwards, <i>The Theory of Polymer Dynamics</i>, Oxford Science: New York (1986).</p>
課程目標 Course objectives	<p>1.本課程提供有關物理世界的分子觀點，側重於一般概念、現象學、分析工具和相關領域的研究人員和工程師覺得至關重要的應用。</p> <p>2.基本分子理論的引入幫助學生深入了解高分子物理。</p> <p>3.流變學牽涉到複雜流體的處理過程中所產生的應力，以及對應外部流場而形成的微觀結構。</p> <p>4.本課程將講授各種流體的物理學，使學生了解複雜流體。</p> <p>This course, providing a molecular view of point for physical world, focuses on the phenomenology, general concepts, analytical tools, and applications that are central to the interest of researchers and engineers in related fields..</p> <p>The introduction of basic molecular theory should be of large help to gain in-depth insight of polymer physics.</p> <p>Rheology concerns the mechanical stresses arising during processing of complex fluids, as well as the microstructures that develop in responses to the external flow.</p> <p>In this course, the physics of a broad diversity of fluids will be delivered for students' understanding of complex fluids.</p>
評量方式 Evaluation	<p>出席 attendance ( 30% ) 作業 Assignment( ) 平時考 Quizzes/Tests( ) 期中考 Midterm Exam ( 30% ) 期末考 Final Exam ( 40% )</p> <p>其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):</p>
內容綱要 Course Outline	<ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Coarse-Graining modeling</li> <li>3. Statistical Properties of Polymer Chains</li> <li>4. Non-Ideality of polymer Chains</li> <li>5. Dynamics of Polymer chains in Dilute Solution</li> <li>6. Dynamics of Polymer chains in Concentrated Solution</li> <li>7. Reptation model</li> <li>8. Non-Newtonian Flows: Phenomenology</li> <li>9. Mechanical Characterizations: Measurements and Material Functions</li> <li>10. General Analyses for polymer</li> <li>11. Constitutive Equations and Modeling of Complex Fluid Processing</li> <li>12. Rheology of Colloidal Suspensions</li> </ol>
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<p>■是 Yes</p> <p>□否 No,原因 Reason(s):</p>
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<p>■是 Yes</p> <p>□否 No,原因 Reason(s):</p>

備註 Note	
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教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction	
2	Concept of Coarse Graining	
3	Statistical Properties of Polymer Chains I	
4	Statistical Properties of Polymer Chains II	
5	Non-Ideality of polymer Chains	
6	Dynamics of Polymer chains in Dilute Solution	
7	Dynamics of Polymer chains in Concentrated Solution	
8	Reptation Theory	
9	期中考 Midterm Exam	
10	Non-Newtonian Flows: Phenomenology	
11	Mechanical Characterizations: Measurements and Material Functions I	
12	Mechanical Characterizations: Measurements and Material Functions II	
13	General Analyses I	
14	General Analyses II	
15	Constitutive Equations and Modeling of Complex Fluid Processing I	
16	Constitutive Equations and Modeling of Complex Fluid Processing II	
17	Rheology of Colloidal Suspensions	
18	期末考 Final Exam	

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決議：照案通過。

**提案三十九：冷凍空調與能源系 111 學年度第 2 學期 EMI 全英語課程開設案，提請審議。**  
(提案單位：冷凍空調與能源系)

說明：

- 一、依本校教師全英語 EMI 授課課程開授要點辦理。
- 二、大學部開設課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
四技	PC-Base PLC 應用及實習	3	4	選修	孔考儒	P64-P66

- 三、碩士班開設課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩班	流場問題解析方法	3	3	選修	白登成	P66-P68

- 四、本案業經 111.11.15 系課程委員會議審議通過。
- 五、教學大綱詳如下各表：

國立勤益科技大學

## National Chin-Yi University of Technology

111 學年度 2 學期課程大綱

Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	孔考儒 C. Bambang Dwi Kuncoro	開課代碼 Course Code	
科目名稱 Course Name	PC-Base PLC 應用及實習 Application and Practices of PC- Based PLC	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	二年級 Sophomore year of college	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	Refrigeration, Air Conditioning, and Energy Engineering	學分/學時數 Credit/Hours	3 / 4
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	Control engineering, digital electronics and programming		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input type="checkbox"/> 綠色課程 Green Technology <input checked="" type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作(職場)倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development  創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	1. Frank D. Petruzella, Programmable logic Controllers 5th ed., McGraw-Hill Education, 2 Penn Plaza, New York, NY 10121. 2017. ISBN: 978-0-07-337384-3. 2. W. Bolton. Programmable Logic Controllers 5th ed., Elsevier Newnes Linacre House, Jordan Hill, Oxford OX2 8DP 30 Corporate Drive, Suite 400, Burlington, MA 01803. 2009. ISBN-13: 978-1-8561-7751-1. 3. Christopher T. Kilian. Modern Control Technology: Components and System. 2nd ed., Delmar Thomson Learning. 2001. ISBN-13: 9780766823587		



	<ol style="list-style-type: none"> <li>1. Richard C. Dorf, Robert H. Bishop. Modern Control Systems-13thed., Prentice Hall, Pearson Education, Inc., Upper Saddle River, New Jersey. 2016. ISBN-13: 978-0-13-440762-3.</li> <li>2. Clarence W. de Silva, Mechatronic Systems: Device, Design, Control, Operation and Monitoring, CRC Press, Taylor &amp; Francis Group, New York, 2008. ISBN 978-0-8493-0775-1.</li> <li>3. www.schneider-electric.com: Smart relays zelio logic: catalog September 2018.</li> <li>4. www.schneider-electric.com: Zelio logic programming guide@10/2017</li> </ol>
課程目標 Course objectives	This course provides student knowledge with the basic concept, methods of analysis, I/O module, internal features and design of programmable logic controllers (PLC). The student doesn't only learn theory but also practical aspect to provide more deep understanding the automation system design based on PLC.
評量方式 Evaluation	出席 <b>Attendance</b> (10%) 作業 Assignments ( ) 平時考 Quizzes/Tests ( ) <b>Homework</b> (10%) 期中考 <b>Midterm Exam</b> (25%) 期末考 <b>Final Exam</b> (25%) <b>Group mini project</b> (30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):
內容綱要 Course Outline	This course will teach the student the control system and automation in a general overview, comprehensive understanding of programmable logic controller including with input/output device, digital system and I/O processing. The student also learns how to program the PLC especially using ladder and block diagram language. The PLC program will be applied to smart relay Zelio logic with several practices to solve the automation and control problems.
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Course Overview Introduction to control system and automation	
2	Modern control system and Applications	
3	Fundamental of relay logic & Programmable Logic Controller	
4	Input/output device	
5	Digital system	
6	I/O processing	
7	Ladder and function block diagram	
8	Introduction to Smart relay Zelio logic	
9	期中考 <b>Midterm Exam</b>	
10	ZelioSoft2 overview Getting started with the programming software practice	

11	Working with Smart relay Zelio logic Hardware configuration practice	
12	Programming in Ladder diagram using ZelioSoft2_part1 Programming practice	
13	Programming in Ladder diagram using ZelioSoft2_part2 Programming practice	
14	Programming in Function Block Diagram using ZelioSoft2_part1 Programming practice	
15	Programming in Function Block Diagram using ZelioSoft2_part2 Programming practice	
16	Smart relay and programming software integration Practice	
17	Case study Practice	
18	期末考 <b>Final Exam + project presentation</b>	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input checked="" type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	白登成 Bivas Panigrahi	開課代碼 Course Code	
科目名稱 Course Name	流場問題解析方法 Problem solving approaches in fluid mechanics	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	一、二年級 Master's first and second year	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	冷凍空調與能源系 Refrigeration, Air Conditioning and Energy Engineering	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	Fluid Mechanics		
優質課程類別 (可複選) Course attributes	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input type="checkbox"/> 綠色課程 Green Technology		

	<p>■創新創意課程 Innovation</p> <p>□工作（職場）倫理課程 Career Ethics</p> <p>□工具機技術研發 Tool Machine Technology Development</p> <p>創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。」</p> <p>Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.</p>
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<p>■表達溝通能力 Communication and Presentation Skill</p> <p>■創意創新能力 Innovation Skill</p> <p>□關懷服務能力 Community Care and Service Skill</p> <p>■思考推理能力 Thinking and Reasoning Skill</p> <p>■專業實務能力 Professional Practice Skill</p> <p>□宏觀視野能力 Macro Skill</p>
教科書 Textbook	<p>White, F. M. (2003). Fluid mechanics/Frank M. White.</p> <p>Nguyen, N. T., Wereley, S. T., &amp; Shaegh, S. A. M. (2019). Fundamentals and applications of microfluidics. Artech house.</p> <p>Raffel, M., Willert, C. E., &amp; Kompenhans, J. (1998). Particle image velocimetry: a practical guide (Vol. 2). Berlin: springer.</p>
參考書目 Other References	<p>1. Koutsiaris, A. G. (2012). Digital micro PIV (<math>\mu</math>PIV) and velocity profiles in vitro and in vivo. The particle image velocimetry-characteristics, limits and possible applications.</p> <p>2. Lindken, R., Rossi, M., Große, S., &amp; Westerweel, J. (2009). Micro-particle image velocimetry (<math>\mu</math>PIV): recent developments, applications, and guidelines. Lab on a Chip, 9(17), 2551-2567.</p> <p>3. Panigrahi, B., &amp; Chen, C. Y. (2019). Microfluidic retention of progressively motile zebrafish sperms. Lab on a Chip, 19(24), 4033-4042.</p> <p>4. Chen, C. Y., Panigrahi, B., Chong, K. S., Li, W. H., Liu, Y. L., &amp; Lu, T. Y. (2018). Hydrodynamic investigation of a wafer rinse process through numerical modeling and flow visualization methods. Journal of Fluids Engineering, 140(8).</p>
課程目標 Course objectives	<p>This course is designed to introduce various methods such as theoretical, numerical (CFD), and experimental approach of fluid mechanics problem solving. Fundamental aspects of all the three major approaches will be taught through a real-world flow engineering problem. Several updates regarding various ongoing researches around the world will be further highlighted to provide valuable insights.</p>
評量方式 Evaluation	<p>出席 Attendance (20%) 作業 Assignments (20%) 平時考 Quizzes/Tests (0%) 期中考 Midterm Exam (30%) 期末考 Final Exam (30%)</p> <p>其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):</p>
內容綱要 Course Outline	<p>Introduction to course curriculum, Review of fluid mechanics fundamentals, Numerical analysis, Computational Fluid Dynamics, Experimental Fluid Dynamics, Flow in rectangular microchannel, Droplet Microfluidics, Bio fluid mechanics.</p>
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<p>■是 Yes</p> <p>□否 No,原因 Reason(s):</p>
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<p>■是 Yes</p> <p>□否 No,原因 Reason(s):</p>
備註 Note	

教學進度 Course schedule

週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction to course curriculum	
2	Review of fluid mechanics fundamentals	
3	Review of fluid mechanics fundamentals	
4	Numerical analysis	
5	Computational Fluid Dynamics-I	
6	Computational Fluid Dynamics-I	
7	Experimental Fluid Dynamics-I (Flow visualization)	
8	Experimental Fluid Dynamics-II (PIV)	
9	期中考 Midterm Exam	
10	Example-I: Flow in rectangular microchannel (Numerical Analysis )	Class
11	Example-I: Flow in rectangular microchannel (CFD demonstration)	Class
12	Example-I: Flow in rectangular microchannel ( $\mu$ PIV)	Lab
13	Example-II: Droplet Microfluidics (Numerical Analysis)	Class
14	Example-II: Droplet Microfluidics (CFD demonstration)	Class
15	Example-II: Droplet Microfluidics (Experiment demonstrations)	Lab
16	Example-III: Hemodynamics (CFD)	Class
17	Example-III: Hemodynamics (PIV demonstrations)	Class
18	期末考 Final Exam	

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決議：照案通過。

提案四十：智慧製造與資訊應用碩士學位學程 111 學年度第 2 學期 EMI 全英語課程開設案，  
提請審議。(提案單位：智慧製造與資訊應用碩士學位學程)

說明：

- 一、依本校教師全英語 EMI 授課課程開授要點辦理。
- 二、碩士班開設課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩班	實驗設計	3	3	選修	劉時玟	P68-P71

- 三、本案業經 111.11.08 碩士學位學程委員會議審議通過。
- 四、教學大綱詳如下各表：

國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree
	<input type="checkbox"/> 進修部 Division of Continuing Education		<input checked="" type="checkbox"/> 碩士 Master's Degree
			<input type="checkbox"/> 四技 Bachelor's Degree (4-year College)
			<input type="checkbox"/> 二技 Bachelor's Degree (2-year College)

			<input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	劉時玟 Shih-Wen Liu	開課代碼 Course Code	
科目名稱 Course Name	實驗設計 Design of Experiments	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	一年級 First grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	智慧製造與資訊應用碩士學位學程 Master program in Smart Manufacturing and Applied Information Science	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	NO		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力 關聯 Core competence (可複選，至多選4 項)	<input type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	Montgomery, D.C. (2009). <i>Design and Analysis of Experiments</i> (7 <sup>th</sup> edition). John Wiley & Sons, Inc.		
參考書目 Other References	1. Montgomery, D.C. and Runger, G. C. (2003). <i>Applied statistics and probability for engineers</i> (3rd edition). John Wiley & Sons, Inc. 2. Montgomery, D.C. (2009). <i>Statistical Quality Control</i> (6 <sup>th</sup> edition). John Wiley & Sons, Inc.		
課程目標 Course objectives	This course will enable participants to be able to: (1) Decide whether to run a DOE to solve a problem or optimize a system, (2) Analyze and Interpret Full Factorial DOE Results using ANOVA, (when relevant) Regression, and Graphical methods, (3) Analyze and Interpret the results of a Fractional Factorial DOE, (4) Recognize the main principles and benefits of Robust Design DOE		
評量方式 Evaluation	作業 Assignments (30%) 期中考 Midterm Exam (30%) 期末考 Final Exam (40%)		
內容綱要 Course Outline	此課程以理論及實務應用的角度來介紹實驗設計。課程內容強調工程師如何運用實驗設計的技巧在產品研發設計、製程研發與改善、以及生產問題排除上，以有效降低產品與製程的研發時間與成本，同時提高產品品質與製程穩定度。主要授課主題包括變異數分析、完全及部分因子實驗、反應曲面技術、以及混合實驗設計等。 With both theoretical and practical approaches, this course emphasizes how engineers applying DOE to product design, process improvement, and problem solving, so as to effectively reduce time and cost in product and process development, as well as improve product quality and process stability. Main topics include ANOVA, complete and fractional factorial design, response surface technology,		

	and mixture design.
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填 寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule			
Week	教學與作業進度 Teaching Schedule/Assignments		備註 Note
1	Basic Statistical Method	1. Basic Statistical Concept 2. Sampling and sampling distribution	
2		Inferences about the differences in Means	
3	Analysis of Variance	1. Analysis of the fixed effect model 2. Model adequacy checking 3. Practical Interpretation of results	
4		Sample computer output Determining sample size	
5		The Regression approach to the ANOVA Nonparametric methods in the ANOVA	
6	Experiments with Blocking Factors	The randomized complete block design (RCBD)	
7		The Latin Square Design (LSD) The Graeco-Latin Square Design	
8		Balanced incomplete block designs Examples	
9	期中考 Midterm Exam		
10	Factorial Experiment	Basic definitions and principles	
11		The Two-Factor Factorial Design The general Factorial Design	
12		Fitting Response Curves and surfaces Blocking in a Factorial Design	
13	Two-Level Factorial Design	The $2^2$ and $2^3$ Design	
14		The general $2^k$ Design Replicate and unreplicated $2^k$ Design Center points to the $2^k$ Design	
15		Blocking and Confounding Systems for Two-Level Factorials	
16	Regression Modeling & Robust Design		
17	Response Surface methodology		
18	期末考 Final Exam (or report)		

決議：照案通過。

**提案四十一：精密製造科技研究所 111 學年度第一學期教師開授 EMI 全英語課程追認案及 111 學年度第二學期教師開授 EMI 全英語課程開設案，提請審議。(提案單位：精密製造科技研究所)**

說明：

- 一、依據本校教師全英語 EMI 授課課程開授要點第四條第 7 項第 4 款規定：本所 111 學年度外籍生 3 位與冷凍系碩士班外籍生 3 位，合計為 6 位辦理。
- 二、第一學期申請科目如下：

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
博一選修 碩博合開	高等熱流學	3	3	選修	駱文傑	P71-P73

- 三、第二學期申請科目如下：

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
博一選修 碩博合開	電腦輔助流場 分析	3	3	選修	管衍德	P73-P75
博一選修 碩博合開	空調節能技術	3	3	選修	駱文傑	P75-P77

- 四、本案業經 111. 11. 24. 系課程委員會議審議通過。

- 五、教學大綱詳如下各表：

國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 1 學期課程大綱  
Year of 2022 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input checked="" type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	駱文傑 Luo, Win-Jet	開課代碼 Course Code	LT03
科目名稱 Course Name	高等熱流學 Advance Heat Transfer and Flow Dynamics	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	碩士班/博士班 Master / Doctoral	開課學期 Semester	<input checked="" type="checkbox"/> 上 Fall <input type="checkbox"/> 下 Spring
開課單位 Course Department	精密製造科技研究所博士班 Ph.D. Program, Graduate Institute of Precision Manufacturing 冷凍空調與能源系 Department of Refrigeration, Air Conditioning and Energy Engineering	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	None		

優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill
教科書 Textbook	None
參考書目 Other References	1. CONVECTION HEAT TRANSFER 2. FLUID MECHANICS
課程目標 Course objectives	訓練學生具備熱流物理的理論概念，並能使用物理理論分析熱流問題的能力 To train students have theoretical concepts of heat flow physics and the ability to use physical theory to analyze heat flow problems
評量方式 Evaluation	出席 Attendance ((10%) 作業 Assignments (10%) 平時考 Quizzes/Tests (10%) 期中考 Midterm Exam (30%) 期末考 Final Exam (40%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):
內容綱要 Course Outline	1. 熱傳概論 Concept of heat transfer 2. 熱阻及其應用 Thermal Resistance and applications 3. 導熱分析 Analysis of heat conductive problem 4. 瞬態導熱問題 Transient heat conductive problem 5. 速度和熱邊界層 Velocity and thermal boundary layer 6. 邊界層理論 Boundary layer theory 7. 熱對流原理 Principle of heat convection 8. 強制對流傳熱 Heat transfer of forced convection 9. 強制對流經驗方程式及其應用 Empirical equations for forced convection and their applications 10. 自然對流 Nature convection
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule

週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
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1	傳熱的基本概念 Fundamental concepts of heat transfer	
2	熱阻的基本概念 Fundamental concepts of thermal resistance	
3	熱阻及其應用 Thermal Resistance and applications	
4	導熱分析 Analysis of heat conductive problem	
5	穩態及一維傳導 Steady-State, One-dimensional Conduction	
6	瞬態導熱問題 Transient heat conductive problem	
7	隨時間變化的傳導 Time-Dependent Conduction	
8	速度和熱邊界層 Velocity and thermal boundary layer	
9	期中考 Midterm Exam	
10	邊界層理論 Boundary layer theory	
11	熱對流原理 Principle of heat convection	
12	外部強制對流 External Forced Convection	
13	內部強制對流 Internal Forced Convection	
14	自然對流 Nature convection	
15	案例分析 Case Studies	
16	強制對流傳熱 Heat transfer of forced convection	
17	強制對流經驗方程式及其應用 Empirical equations for forced convection and their applications	
18	期末考 Final Exam	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111學年度\_2\_學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input checked="" type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	管衍德 Yean-Der Kuan	開課代碼 Course Code	
科目名稱 Course Name	電腦輔助流場分析 Computer-Aided Fluid Analysis	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	精密製造科技研究所博士班/冷凍空調 與能源系碩士班	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	精密製造科技研究所博士班 Ph.D. Program, Graduate Institute of Precision Manufacturing	學分/學時數 Credit/Hours	3 / 3
全程外語授課	<input checked="" type="checkbox"/> 是 Yes	主要授課語言	英語 English

Foreign language Teaching entirely	<input type="checkbox"/> 否 No	Main language	
先修課程 Prerequisite course(s)	None		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input checked="" type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	None		
參考書目 Other References	None		
課程目標 Course objectives	The main objective of this course is to let student learn how to apply the computational fluid dynamics (CFD) software to make the heat and flow field simulation analysis such that they could have the capability to resolve the practical engineering problems.		
評量方式 Evaluation	出席 Attendance ( 10% ) 作業 Assignments ( 20% ) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam ( 30% ) 期末考 Final Exam/Reports (40% ) 其他:		
內容綱要 Course Outline	The content of the course includes the CFD fundamentals, ANSYS FLUENT (Introduction to Ansys, Introduction to CFD, Boundary Conditions, Moving Zones, Post Processing, Solver Setting, Turbulence, Heat Transfer), example illustration and practice, class projects presentation and reports. The Solidworks Flow Simulation will be also introduced in the class.		
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		
備註 Note			

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note

1	Class Description	
2	Introduction to CFD	
3	CFD Fundamentals	
4	Introduction to ANSYS FLUENT	
5	Boundary Conditions	
6	Solver, Turbulence	
7	Moving Zone	
8	Heat Transfer, Transient	
9	期中考 Midterm Exam	
10	Solidworks Flow Simulation Basic	
11	Solidworks Flow Simulation Applications	
12	Example Practice (Valve)	
13	Example Practice (Electronics Cooling)	
14	Example Practice (Fan Rotation)	
15	Example Practice (Tank Flushing)	
16	Example Practice (Moving Mesh)	
17	Final Project Presentation/Reports	
18	Final Project Presentation/Reports	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input checked="" type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	駱文傑 Luo, Win-Jet	開課代碼 Course Code	
科目名稱 Course Name	空調節能技術 Energy Saving Technology of Air-Conditioning	必/選修 Required/Elective	<input type="checkbox"/> 必修 <input checked="" type="checkbox"/> 選修
開課年級 Grade	碩/博士班 First Year	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	精密製造科技研究所博士班 Ph.D. Program, Graduate Institute of Precision Manufacturing	學分/學時數 Credit/Hours	3 /3

全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 <input type="checkbox"/> 否	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	No		
優質課程類別 Course attributes (可複選)	<input type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input checked="" type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	制冷空調節能技術 Energy Saving of Air Conditioning System		
參考書目 Other References	冷凍與空調 Refrigeration and Air Conditioning		
課程目標 Course objectives	使學生對於冷凍空調的系統有更清楚認識，並學習診斷系統的耗能狀況，提出有效的節能策略，且完成系統的節能評估。 Enable students to have a clearer understanding of the refrigeration and air conditioning system, learn to diagnose the energy consumption of the system, propose effective energy-saving strategies, and complete the system's energy-saving evaluation.		
評量方式 Evaluation	出席(10%) 作業(20%) 平時考( ) 期中考(30%) 期末考(40%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):		
內容綱要 Course Outline	冷凍空調設備、熱負荷控制、空調系統節能、蓄冷空調、蒸發冷卻空調、溫濕度獨立控制空調、熱泵節能技術、可再生能源整合技術、系統裝置節能改造技術、系統運行中的節能、系統的維護與保養、能源管理系統。 Refrigeration and air conditioning equipment, heat load control, air conditioning system energy saving, cold storage air conditioning, evaporative cooling air conditioning, temperature and humidity independent control air conditioning, heat pump energy saving technology, renewable energy integration technology, system equipment energy saving technology, energy saving in system operation, system maintenance And maintenance, energy management system.		
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		
符合智財規範 Compliance with Intellectual property	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		

(不符合智財規範請填寫原因)	
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	冷凍空調設備 Refrigeration and air conditioning equipment	
2	冷凍空調設備 Refrigeration and air conditioning equipment	
3	熱負荷控制 heat load control	
4	熱負荷控制 heat load control	
5	空調系統節能 air conditioning system energy saving	
6	空調系統節能 air conditioning system energy saving	
7	空調系統節能 air conditioning system energy saving	
8	蒸發冷卻空調 evaporative cooling air conditioning	
9	期中考 Midterm Exam	
10	溫濕度獨立控制空調 temperature and humidity independent control air conditioning	
11	熱泵節能技術 heat pump energy saving technology	
12	熱泵節能技術 heat pump energy saving technology	
13	可再生能源整合技術 renewable energy integration technology	
14	系統裝置節能改造技術 equipment energy saving technology	
15	系統運行中的節能 energy saving in system operation	
16	系統的維護與保養 system maintenance	
17	能源管理系統 energy management	
18	期末考 Final Exam	

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決議：照案通過。

**提案四十二：前瞻電資科技研究所 111 學年度第二學期教師開授 EMI 全英語課程開設案，提請審議。(提案單位：前瞻電資科技研究所)**

說明：

一、依據本校教師全英語 EMI 授課課程開授要點第四條第 7 項第 3 及 4 款規定辦理。本學年院外籍學生人數 7 人，全英語授課獎勵以每學期補助 3 門為上限。

二、申請科目如下：

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
博一選	進階奈米科技應用	3	3	選修	江榮隆	P78-P80

博一選	數位控制	3	3	選修	李穎昌	P80-P82
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四、本案業經 111.11.10. 111 學年度第 1 學期第 1 次課程委員會議審議通過。

五、教學大綱詳如下各表：

國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input checked="" type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	江榮隆(JUNG-LUNG CHIANG)	開課代碼 Course Code	
科目名稱 中文/英文 Course Name	進階奈米科技應用 Advanced Nanotechnology Applications	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	一二年級 first and second grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	前瞻電資科技研究所 Ph.D. Program, Prospective Technology of Electrical Engineering and Computer Science	學分/學時數 Credit/Hours	3 / 3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	NO		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創 新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選 4 項)	<input type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	NO		
參考書目 Other References	1. 奈米科技導論(第四版)，2020，全華，羅吉宗，戴明鳳，林鴻明，鄭振宗，蘇程裕，吳育 民。 1. Introduction to Nanotechnology (Fourth Edition), 2020, Quan Hua, Luo Jizong, Dai Mingfeng, Lin Hongming, Zheng Zhenzong, Su Chengyu, Wu Yumin.		

	2. 奈米材料科技原理與應用 (第3版), 2017, 全華, 馬振基/主編。 2. Principles and Applications of Nanomaterials Technology (3rd Edition), 2017, Quan Hua, Ma Zhenji/Editor-in-Chief. 3. 奈米科技-基礎、應用與實作, 2015, 南區奈米科技 K-12 教育發展中心丁志明等編著, 高立。 3. Nanotechnology-Basic, Application and Practice, 2015, edited by Ding Zhiming and others from Nanotechnology K-12 Education Development Center in South District, Gao Li. 4. 奈米檢測技術, 2009, 全華, 國科會精密儀器中心。 4. Nano-detection technology, 2009, Quanhua, National Science Council Precision Instrument Center. 5. Introduction to Nanoscience, 2008, HORNYAK · DUTTA · TIBBALS · RAO, CRC, 高立圖書 (ISBN: 9781420048056) 6. 網路相關資料與文獻 Internet-related information and literature。
課程目標 Course objectives	培養學生具有奈米技術與應用的能力 Cultivating students with nanotechnology and application ability
評量方式 Evaluation	出席 Attendance (20%) 作業 Assignments (20%) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam ( ) 期末考 Final Exam ( ) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams): 期中報告 Midterm Report (30%)與期末報告 Final Report (30%)
內容綱要 Course Outline	1. 奈米科技概論 Introduction to nanotechnology 2. 奈米科技之現況與發展 Current Situation and Development of Nanotechnology 3. 奈米量測技術介紹 Introduction to Nanometer Measurement Technology 4. 奈米材料結構與特性分析 Analysis of the structure and properties of nanomaterials 5. 奈米材料製備方法 Preparation method of nanomaterials 6. 奈米科技於生活上之應用 Application of Nanotechnology in Life 7. 奈米材料於光電元件之應用 Application of Nanomaterials in Optoelectronic Components 8. 奈米生醫材料與生醫感測器之應用 Application of Nanobiomedical Materials and Biomedical Sensors 9. 奈米材料於氣體感測器之應用 Application of Nanomaterials in Gas Sensors 10. 奈米材料於功率元件之應用 Application of Nanomaterials in Power Devices
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	課程簡介 Course Introduction	
2	奈米科技概論 Introduction to nanotechnology	

3	奈米科技之現況與發展 Current Situation and Development of Nanotechnology	
4	奈米量測技術介紹 Introduction to Nanometer Measurement Technology	
5	奈米材料結構與特性分析 Analysis of the structure and properties of nanomaterials	
6	奈米材料製備方法 Preparation method of nanomaterials	作業 1 Homework1
7	分組討論(1) Discussion 1	
8	分組討論(2) Discussion 2	
9	期中報告 Midterm Report	
10	奈米科技於生活上之應用 Application of Nanotechnology in Life	
11	奈米材料於光電元件之應用 Application of Nanomaterials in Optoelectronic Components	
12	奈米生醫材料之應用 Application of Nanobiomedical Materials	作業 2 Homework2
13	奈米材料於生醫感測器之應用 Application of Nanomaterials in Biomedical Sensors	
14	奈米材料於氣體感測器之應用 Application of Nanomaterials in Gas Sensors	
15	奈米材料於功率元件之應用 Application of Nanomaterials in Power Devices	
16	分組討論(3) Discussion 3	
17	分組討論(4) Discussion 4	作業 3 Homework3
18	期末報告 Final Report	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input checked="" type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	李穎昌 Ying-Chang Li	開課代碼 Course Code	
科目名稱 中文/英文 Course Name	數位控制 DIGITAL CONTROL	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	不限 unlimited	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	前瞻電資科技研究所 Ph.D. Program, Prospective Technology of Electrical Engineering and Computer Science	學分/學時數 Credit/Hours	3/3



全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	NO		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	C. L. Phillips and H. T. Nagle, "Digital Control Systems Analysis & Design 4/e" Prentice Hall Inc, 2015, ISBN : 9781292061221		
參考書目 Other References	K. Ogata," Discrete-Time Control Systems, 2nd" Prentice Hall Inc, 1995, ISBN : 0133286428		
課程目標 Course objectives	本課程主要讓學生瞭解數位控制的基本原理及設計，並講授其相關應用 This course mainly allows students to understand the basic principles and design of digital control, and teaches its related applications		
評量方式 Evaluation	出席 Attendance ( 10% )   作業 Assignments (   )   平時考 Quizzes/Tests (30%)   期中考 Midterm Exam ( 30% )   期末考 Final Exam ( 30% ) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):		
內容綱要 Course Outline	主要介紹迴授控制系統、數位控制系統元件與控制器設計、z 轉換與狀態方程式、系統規格與效益評估、觀測器之設計、最佳化控制等。並以模擬驗證控制器之設計。 This course mainly introduces feedback control system, digital control system components and controller design, z-transformation and equation of state, system specification and benefit evaluation, observer design, optimal control, etc. We also verify the design of the controller by simulation.		
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		
符合智財規範 Compliance with Intellectual property (不符合智財規 範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):		
備註 Note			

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction	
2	Discrete-Time Systems and the z-Transform	
3	Discrete-Time Systems and the z-Transform	

4	Sampling and Reconstruction	
5	Sampling and Reconstruction	
6	Open-Loop Discrete-Time Systems/ Closed-Loop Systems	
7	Open-Loop Discrete-Time Systems/ Closed-Loop Systems	
8	System Time-Response Characteristics	
9	期中考 Midterm Exam	
10	Stability Analysis Techniques	
11	Stability Analysis Techniques	
12	Digital Controller Design	
13	Digital Controller Design	
14	Pole-Assignment Design and State Estimation	
15	Pole-Assignment Design and State Estimation	
16	Linear Quadratic Optimal Control	
17	Linear Quadratic Optimal Control	
18	期末考 Final Exam	

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決議：照案通過。

**提案四十三：電子工程系 111 學年度第二學期教師開授 EMI 全英語課程開設案，提請審議。  
(提案單位:電子工程系)**

說明：

- 一、依據本校教師全英語 EMI 授課課程開授要點第四條第 7 項第 3 及 4 款規定辦理。本學年院外籍學生人數 7 人，全英語授課獎勵以每學期補助 3 門為上限。
- 二、大學部開設課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
四技	數位影像處理實作	3	3	選修	王宏仁	P82-P85

三、碩士班開設課程

(一)EMI 全英語課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩班	自動化光電檢測	3	3	選修	林主恩	P85-P87

(二)全英語課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩班	巨量資料分析	3	3	選修	曹世昌	P87-P89

四、本案業經 111.11.23.，111 學年度第一學期第 2 次課程委員會議審議通過。

五、教學大綱詳如下各表：

國立勤益科技大學

National Chin-Yi University of Technology

## 111 學年度 第 2 學期課程大綱

## Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	王宏仁 Hung-Jen Wang	開課代碼 Course Code	1306
科目名稱 Course Name	數位影像處理實作 Digital Image Processing	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	二年級 second grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	電子工程系 Department of Electronic Engineering	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	None		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創 新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選 4 項)	<input type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	自編講義 Handout by Instructor		
參考書目 Other References	1. Introduction to Digital Image Processing with MATLAB, A. McAndrew, Cengage Learning 2. Digital Image Processing 4/e, Rafael C. Gonzalez, Richard E. Woods, Pearson FT Press		
課程目標 Course objectives	本課程因應現代發展趨勢，針對數位影像處理概念與技術，採取主題式介紹，介紹影像處理 之理論基礎、基本技巧與演算法，使學生能充分了解數位影像處理之各種技術與原理，並能 以 Python 高階程式語言實現之，培養做中學的學習理念，進而能對影像進行處理與分析，以 及建立深度學習基本技術能力。 The course adopts a themed introduction to the concept and skills of digital image processing including introducing the theoretical basis, basic skills and algorithms of image processing. Students can fully understand various technologies and principles of digital image processing, and be able to use Python programming language to implement it. Also, it cultivates the learning concept of learning by doing, process and analyze images, and establish the basic technical ability of deep learning.		

評量方式 Evaluation	出席 Attendance (20%) 作業 Assignments (30%) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam (20%) 期末考 Final Exam (30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):
內容綱要 Course Outline	『英語授課』 1. 數位影像基礎 2. 空間域的影像增強 3. 頻率域的影像增強 4. 影像復原 5. 影像分割 6. 彩色影像處理 7. 影像圖樣分類 1. Teaching in English 2. Introduction to Digital Image Processing 3. Intensity Transformations and Spatial Filtering 4. Filtering in the Frequency Domain 5. Image Restoration and Reconstruction 6. Image Segmentation 7. Color Image Processing 8. Image Pattern Classification
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	課程簡介 Brief Introduction to the Class	
2	數位影像基礎 Introduction to Digital Image Processing	
3	數位影像基礎 Introduction to Digital Image Processing	
4	空間域的影像增強 Intensity Transformations and Spatial Filtering	
5	空間域的影像增強 Intensity Transformations and Spatial Filtering	
6	空間域的影像增強 Intensity Transformations and Spatial Filtering	
7	頻率域的影像增強 Filtering in the Frequency Domain	
8	頻率域的影像增強 Filtering in the Frequency Domain	
9	期中考 Midterm Exam	
10	頻率域的影像增強 Filtering in the Frequency Domain	
11	影像復原 Image Restoration and Reconstruction	

12	影像復原 Image Restoration and Reconstruction	
13	影像分割 Image Segmentation	
14	影像分割 Image Segmentation	
15	彩色影像處理 Color Image Processing	
16	彩色影像處理 Color Image Processing	
17	影像圖樣分類 Image Pattern Classification	
18	期末考 Final Exam	

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國立勤益科技大學  
National Chin-Yi University of Technology

111 學年度 第 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	林主恩 Chu-En Lin	開課代碼 Course Code	
科目名稱 Course Name	自動化光電檢測 Automated Optical and Electrical Inspection	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	一年級 First grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	電子工程系 Department of Electronic Engineering	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	None		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill		

Core competence (可複選，至多 選4項)	■專業實務能力 Professional Practice Skill ■宏觀視野能力 Macro Skill
教科書 Textbook	自編講義 Handout by Instructor
參考書目 Other References	1. Optical radiation detectors, E. L. Dereniak and D. G. Crowe ,John Weily & Sons, Inc., Publication 2. Laser engineering, K. J. Kuhn, Pearson Education Limited 3. Polarized light, E. Collett, Marcel Dekker, Inc. 4. Related journal papers
課程目標 Course objectives	精密機械的運作，往往離不開量測，本課程的目的，是要讓學生瞭解光學檢測的原理及技術，並且進而可以將本課程習得的知識應用在精密產業之中。 Recently, optical inspection systems play a pivotal role on intelligent optical instrument. In this course, we aim to introduce the principles and techniques of basic optics, photonics and automation engineering. We hope the students can apply the comprehensive knowledge on precision manufacturing and inspection industries after this course.
評量方式 Evaluation	出席 Attendance (20%) 作業 Assignments (25%) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam (25%) 期末考 Final Reporet (30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):
內容綱要 Course Outline	光學原理 Basic principle of optics 光電元件 Electro-optical devices 光電量測系統 Electro-optical inspection system
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	■是 Yes □否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	■是 Yes □否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	課程簡介 Brief Introduction to the Class	
2	光學與控制簡介 Introduction to optics and control system	
3	幾何光學(I) Geometric optics (I)	
4	幾何光學(II) Geometric optics (II)	
5	波動光學(I) Wave optics(I)	
6	波動光學(II) Wave optics(II)	
7	輻射與照度(I) Radiometry and illuminance (I)	
8	輻射與照度(II) Radiometry and illuminance (II)	

9	期中考 Mid-term exam	
10	半導體概論 Introduction to semiconductor	
11	半導體光電元件(I) Electro-optical semiconductor devices(I)	
12	半導體光電元件(II) Electro-optical semiconductor devices(II)	
13	光學元件(I) Optical device(I)	
14	光學元件(II) Optical device(II)	
15	Automated electro-optical inspection system(I) 自動化光電檢測系統(I)	
16	Automated electro-optical inspection system(II) 自動化光電檢測系統(II)	
17	Intelligent electro-optical inspection system 智慧化光電檢測系統	
18	期末報告 Final report	

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國立勤益科技大學

National Chin-Yi University of Technology

111 學年度 2 學期課程大綱

Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	曹世昌 Tsaur Shyh-Chang	開課代碼 Course Code	G106
科目名稱 Course Name	巨量資料分析 Big Data Analysis	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	一年級 First grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	電子工程系 Department of Electronic Engineering	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	None		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作(職場)倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創 新模式解決實際問題。		

	Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill
教科書 Textbook	None
參考書目 Other References	Big Data: A Revolution That Will Transform How We Live, Work, and Think
課程目標 Course objectives	<p>Big Data analysis is the most recent hot industry, which contains numerous business opportunities and development, and many large enterprises and start-ups are trying to enter this new industry. The goal of the course is to reduce the learning curve for beginners and to reduce the time required for writing by professional users. The course content focuses on basic concept and data organization, emphasizes the establishment of basic concepts such as data understanding and statistics, and then constructs an order system in PaaS environment.</p> <p>Big Data 巨量資料分析是近期最火紅的產業，其中蘊含無數的商機與發展，是許多大型企業與新創公司正欲大舉進入這個新興產業。課程目的在於降低初學者的學習門檻，也期望能減少專業使用者的程式撰寫時間。課程內容從基本概念與資料整理，著重資料的理解與統計等基本觀念的建立，然後在 PaaS 的環境建構一個訂單系統。</p>
評量方式 Evaluation	上課及課堂討論報告 30% 期末報告 70% Class Attendance and Discussion Report 30%, Final Report 70%
內容綱要 Course Outline	Big data is that data sets are so large and complex that traditional data-processing applications are not enough to deal with them. Big data challenges include capture data, data storage, data analysis, search, sharing, transmission, visualization, querying, updating, and confidentiality of information. There are five dimensions called batch, multi variety, speed and recently added accuracy and value data. "Big data" often refers to the use of predictive analytics, where user behavioral analytics is the value that is extracted from the data, with little regard to the specific size of the data set, or some other advanced data analysis method. Data sets are rapidly growing - in part because they are increasingly being used by inexpensive and large amounts of sensing information to collect IoT devices such as mobile devices, aviation (remote sensing), software logs, cameras, microphones, RFID readings And wireless sensor networks.it can be applied to Relational database management systems and desktop statistics: And visualization, packaging is often difficult to handle big data. This work may require "dozens, hundreds, or even thousands of server runs of massively parallel software."
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note



1	資料分析概觀 Data Analysis Overview	
2	商業智慧 Business intelligence	
3	資料倉儲 Data Warehousing	
4	資料探勘 Data Mining	
5	資料視覺化 Data visualization	
6	資料庫導論 Introduction to the database	
7	ER Model 實體關係圖 ER Model entity diagram	
8	資料庫正規化 Database normalization	
9	期中考 Midterm test	
10	關聯式模式的資料運算 Relational data operation	
11	結構化查詢語言 SQL Structured Query Language	
12	SQL 的查詢語言 SQL query language	
13	MySQL Database	
14	PHP	
15	PHP and MySQL	
16	PaaS	
17	訂單輸入系統實作 Order Entry System Implementation	
18	期末實作報告 Term Report	

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決議：照案通過。

**提案四十四：企業管理系 111 學年度第二學期教師開授 EMI 全英語課程開設案，提請審議。  
(提案單位：企業管理系)**

說明：

- 一、依據本校教師全英語 EMI 授課課程開授要點第四條第 7 項第 3 及 4 款規定辦理。
- 二、大學部開設課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
四技	商業簡報理論與實務	3	3	選修	黃瑞鈴	P90-P92

三、碩士班開設課程

(一)EMI 全英語課程

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩班	電子商務	3	3	選修	鄭皓帆	P92-P94

(二)全英語課程：本系與工管系外籍學生人數 9 人，全英語授課獎勵以每學期補助 3 門為上限。

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩班	服務業行銷	3	3	選修	陳瑞龍	P94-P96

## (三) 專簽奉核開設必修全英語課程：

學制	科目名稱	學分	時數	修別	授課教師	課程大綱
碩班	研究方法	3	3	必修	鄭皓帆	P97-P98
碩班	組織行為	3	3	必修	李安悌	P99-P101

四、本案業經 111. 11. 30. 系課程委員會議審議通過。

五、教學大綱詳如下各表：

國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)			
授課教師 Instructor(s)	Jui-Ling Huang 黃瑞鈴	開課代碼 Course Code				
科目名稱 Course Name	商業簡報理論與實務	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective			
開課年級 Grade	二年級 sophomore	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring			
開課單位 Course Department	企業管理系 Department of Business Administration	學分/學時數 Credit/Hours	3/3			
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English			
先修課程 Prerequisite course(s)	MANAGEMENT					
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創 新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.					
課程與校核心 能力關聯 Core competence (可複選，至多 選 4 項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill					
教科書 Textbook	NO					
參考書目 Other References	ESSENTIAL ENGLISH FOR PRESENTATION, LIVE ABC Grussendorf, M. (2007). English for presentations. Oxford University Press.					

課程目標 Course objectives	In this course, students will have the following abilities 1. Clearly define their object 2. make the proper ppt for different situations 3. have professional presentation
評量方式 Evaluation	出席 Attendance ( 20% ) 作業 Assignments ( 20% ) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam ( 30% ) 期末考 Final Exam ( 30% ) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams): proposal for modern presentation, overall presentation as Final Exam
內容綱要 Course Outline	In this course, models of successful presentations will be introduced in class. Students will have plenty of opportunities to practice using effective language for presentation in class. Students are expected to participate in group discussions during this semester.
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignment's	備註 Note
1	Introduction and grouping	
2	Unit 1:Let's get started	
3	Unit2: define your Subject	
4	Unit3: make sure your purpose	
5	Unit4: how to organize your data	
6	Unit5:make the proper slides	
7	Unit6: practice	
8	期中考 Midterm presentation1	
9	期中考 Midterm presentation2	
10	Unit7: how to opening	
11	Unit8: how to elaborate	
12	Unit9: make a good experience at Q&A	
13	Random assignments1	
14	Random assignments2	
15	Random assignments3	
16	Random assignments4	

17	期末考 Final presentation1	
18	期末考 Final presentation2	

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國立勤益科技大學  
National Chin-Yi University of Technology

111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree` <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	鄭皓帆 Chung, Hao-Fan (Joshua)	開課代碼 Course Code	
科目名稱 Course Name	電子商務 Electronic Commerce	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	二年級 Second Grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	企業管理系 Department of Business Administration	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	無 None		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input checked="" type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input checked="" type="checkbox"/> 綠色課程 Green Technology <input checked="" type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input checked="" type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	MIS Quarterly, journal of Retailing and Consumer Services, Information and Management, Journal of Business Research, International Journal of Information Management (SSCI Journals) (2019-2023)		
參考書目 Other References	Cyberpsychology, Behavior, and Social Networking, Internet Research and so on (SSCI Journals) (2019-2023)		

課程目標 Course objectives	With the ever-accelerating development of information technology (IT), coupled with the ubiquity of the Internet, these effects have revolutionized our lives and economic activities. This course aims to introduce new business models and financial innovations driven by Information and Communication Technologies (ICTs) through the Internet. Through discussion of case studies, graduate students will gain insights into the latest commercial trends and learn how information technology can serve innovation and value creation in business and financial models.
評量方式 Evaluation	出席 Attendance (30%) 作業 Assignments (40%) 平時考 Quizzes/Tests (10%) 期中考 Midterm Exam (10%) 期末考 Final Exam (10%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):
內容綱要 Course Outline	1. Theoretical validation through practical case studies; 2. Developing the logical and systematical thinking ability of postgraduates through case discussions; 3. Helping graduate students understand comprehensively the latest business modes through case studies.
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	無

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction to the course	
2	Case study (Journal's paper discussion) (E-commerce)	
3	Case study (Journal's paper discussion) (E-commerce)	
4	Case study (Journal's paper discussion) (E-commerce)	
5	Case study (Journal's paper discussion) (Social commerce) (Facebook)	
6	Case study (Journal's paper discussion) (Social commerce) (Line)	
7	Case study (Journal's paper discussion) (Social commerce) (Taobao)	
8	Case study (Journal's paper discussion) (Social commerce) (WeChat)	
9	期中考 Midterm Exam	
10	Case study (Journal's paper discussion) (Mobile payment) (Alipay)	
11	Case study (Journal's paper discussion) (Mobile payment) (Line)	
12	Case study (Journal's paper discussion) (Mobile advertisement)	
13	Case study (Journal's paper discussion) (Mobile advertisement)	
14	Case study (Journal's paper discussion) (Mobile advertisement)	

15	Case study (Journal's paper discussion) (Group discussion)	
16	Case study (Journal's paper discussion) (Group discussion)	
17	Case study (Journal's paper discussion) (Group discussion)	
18	期末考 Final Exam	

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111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	陳瑞龍 Jui-Lung Chen	開課代碼 Course Code	
科目名稱 Course Name	服務業行銷 Services Marketing	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	一二年級 first and second grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	企業管理系 Department of Business Administration	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	Na		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input checked="" type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	Services Marketing: Integrating Customer Focus Across the Firm, 7E, 2017, by Valarie A. Zeithaml, Mary J. Bitner, Dwayne D. Gremler, McGraw-Hill Education ( ISBN : 9781260083521)		

參考書目 Other References	自編教材 Handout by Instructor
課程目標 Course objectives	瞭解服務業的行銷與管理理論與應用，培養同學分析與解決服務業行銷與管理問題的能力。 To understand the theories and applications of Service marketing and management systematically. The course intends to stimulate students' interests toward service marketing and cultivate students' ability to analyze and solve services marketing problems.
評量方式 Evaluation	出席 Attendance (20%) 作業 Assignments ( ) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam ( ) 期末考 Final Exam ( ) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams): 期中報告 Midterm report ( 40%); 期末報告 Final report (40%)
內容綱要 Course Outline	<p>第一篇 服務行銷的基礎</p> <p>第 1 章 服務概論</p> <p>第 2 章 本書的概念性架構：服務品質的缺口模型</p> <p>第二篇 以顧客為焦點</p> <p>第 3 章 服務業的消費者行為</p> <p>第 4 章 顧客的服務期望</p> <p>第 5 章 顧客的服務認知</p> <p>第三篇 了解顧客需要</p> <p>第 6 章 透過研究傾聽顧客</p> <p>第 7 章 建立顧客關係</p> <p>第 8 章 服務補救</p> <p>第四篇 整合服務設計與標準</p> <p>第 9 章 服務發展與設計</p> <p>第 10 章 顧客定義的服務標準</p> <p>第 11 章 實體表徵與服務設施</p> <p>第五篇 傳遞與執行服務</p> <p>第 12 章 員工在服務傳遞中的角色</p> <p>第 13 章 顧客在服務傳遞中的角色</p> <p>第 14 章 透過中間商與電子通路傳遞服務</p> <p>第 15 章 管理需求與產能</p> <p>第六篇 管理服務承諾</p> <p>第 16 章 整合性服務行銷溝通</p> <p>PART I : FOUNDATIONS FOR SERVICES MARKETING</p> <p>Ch 1 Introduction to Services</p> <p>Ch 2 Conceptual Framework of the Book: The Gaps Model of Service Quality</p> <p>PART II : FOCUS ON THE CUSTOMER</p> <p>Ch 3 Customer Expectations of Service</p> <p>Ch 4 Customer Perceptions of Service</p> <p>PART III : UNDERSTANDING CUSTOMER REQUIREMENTS</p> <p>Ch 5 Listening to Customers through Research</p> <p>Ch 6 Building Customer Relationships</p> <p>Ch 7 Service Recovery</p> <p>PART IV: ALIGNING SERVICE DESIGN AND STANDARDS</p> <p>Ch 8 Service Innovation and Design</p> <p>Ch 9 Customer-Defined Service Standards</p> <p>Ch10 Physical Evidence and the Servicescape</p> <p>PART V: DELIVERING AND PERFORMING SERVICE</p> <p>Ch11 Employees' Roles in Service Delivery</p> <p>Ch12 Customers' Roles in Service Delivery</p> <p>Ch13 Managing Demand and Capacity</p>

	PART VI: MANAGING SERVICE PROMISES Ch14 Integrated Services Marketing Communications Ch15 Pricing of Services  PART VII: SERVICE AND THE BOTTOM LINE Ch16 The Financial and Economic Impact of Service
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction of the course/ Ch 1 Introduction to Services	
2	Ch 1 Introduction to Services	
3	Ch 2 Conceptual Framework of the Book: The Gaps Model of Service Quality	
4	Ch 2 Conceptual Framework of the Book: The Gaps Model of Service Quality	
5	Ch 3 Customer Expectations of Service	
6	Ch 4 Customer Perceptions of Service	
7	Ch 4 Customer Perceptions of Service	
8	Speech	
9	Midterm report	
10	Ch 5 Listening to Customers through Research	
11	Ch 6 Building Customer Relationships	
12	Ch 7 Service Recovery	
13	Ch 8 Service Innovation and Design	
14	Ch 9 Customer-Defined Service Standards	
15	Ch10 Physical Evidence and the Servicescape	
16	Ch11 Employees' Roles in Service Delivery	
17	Final report	
18	Final report	

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## 111 學年度 2 學期課程大綱

## Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	鄭皓帆 Chung, Hao-Fan (Joshua)	開課代碼 Course Code	
科目名稱 Course Name	研究方法 Research Methods	必/選修 Required/Elective	<input checked="" type="checkbox"/> 必修 Required <input type="checkbox"/> 選修 Elective
開課年級 Grade	一 First Grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	企業管理系 Department of Business Administration	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	無 None		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input checked="" type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input checked="" type="checkbox"/> 創新創意課程 Innovation、 <input checked="" type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input checked="" type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	MIS Quarterly, Information and Management, International Journal of Information Management, Journal of Business Research (2017-2022)		
參考書目 Other References	Journal of Business Ethics, Journal of Knowledge Management (2017-2022)		
課程目標 Course objectives	The course aims to cultivate graduate students' abilities to explore the methodological issues in managerial research, define research topics and research questions, understand quantitative and qualitative research methods, and comprehend academic ethics, and to improve their thinking independently and academically English writing skills.		
評量方式 Evaluation	出席 Attendance (30%) 作業 Assignments (40%) 平時考 Quizzes/Tests (10%) 期中考 Midterm Exam (10%) 期末考 Final Exam (10%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):		

內容綱要 Course Outline	This course aims to cultivate students' capability of academic research that are in line with research ethics. The content covers the conception and development of the theme, theoretical framework, research design, data collection and research analysis methods. The scope covers cross-sectional research, longitudinal research, quantitative and qualitative research, case studies, etc. This course will also discuss the impact of academic ethics cases, and propose countermeasures to avoid violating academic ethics.
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction to the course	
2	Academic Ethics	
3	The fundamental conception of business research method	
4	Understanding various research philosophies	
5	Research topics	
6	Research questions and research objectives	
7	Quantitative research method (designing research framework)	
8	Quantitative research method (Hypotheses)	
9	期中考 Midterm Exam	
10	Quantitative research method (Research Design)	
11	Quantitative research method (Survey Research)	
12	Qualitative research method (designing research questions and research objectives)	
13	Qualitative research method (analytic method of qualitative data)	
14	Case study 1	
15	Case study 2	
16	Experimental research, Content analysis and action research method	
17	Structural equation modeling (SEM)	
18	期末考 Final Exam	

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## 111 學年度 2 學期課程大綱

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部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	李安悌 Anti Lee	開課代碼 Course Code	
科目名稱 Course Name	組織行為 Organizational Behavior	必/選修 Required/Elective	<input checked="" type="checkbox"/> 必修 Required <input type="checkbox"/> 選修 Elective
開課年級 Grade	一 First Grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	企業管理系 Department of Business Administration	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	無 None		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input type="checkbox"/> 綠色課程 Green Technology <input type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	無 None		
參考書目 Other References	Course Materials Daft, Richard L. Understanding the theory & design, 11th Edition, South-Western College Pub; ISBN: 9781111826628		
課程目標 Course objectives	Course Description The aim is to develop strategies, goals, and objectives to enhance performance and sustainability. Topics include ethics, social responsibility, globalization, and change and innovation		
評量方式 Evaluation	出席 Attendance ( ) 作業 Assignments ( ) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam ( ) 期末考 Final Exam ( ) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams): <b>Grading Information and Criteria</b> <b>Activity Percentage</b>		

	<p>Participation in Conferences 30 Written report 30 Oral report 10 Final Examination 30 <b>Total 100</b></p> <p>Be sure to keep track of your points after you receive your grade for each assignment. If you are unsure of your grade in any area, be sure to contact your faculty member immediately to ensure you have timely feedback on your performance.</p> <p>All students must present for the group oral report.</p> <p>Final letter grades will be determined based on your overall percentage points totals as follows:</p> <table border="1" data-bbox="300 416 1098 631"> <thead> <tr> <th><i>Total Percentage Points</i></th> <th></th> <th><i>Letter Grade</i></th> </tr> </thead> <tbody> <tr> <td><b>100-90%</b></td> <td>=</td> <td>A</td> </tr> <tr> <td><b>89-80%</b></td> <td>=</td> <td>B</td> </tr> <tr> <td><b>79-70%</b></td> <td>=</td> <td>C</td> </tr> <tr> <td><b>69-60%</b></td> <td>=</td> <td>D</td> </tr> <tr> <td><b>59 or less %</b></td> <td>=</td> <td>F</td> </tr> </tbody> </table> <p>All assignments should be upload to the online learning website by its deadline.</p>	<i>Total Percentage Points</i>		<i>Letter Grade</i>	<b>100-90%</b>	=	A	<b>89-80%</b>	=	B	<b>79-70%</b>	=	C	<b>69-60%</b>	=	D	<b>59 or less %</b>	=	F
<i>Total Percentage Points</i>		<i>Letter Grade</i>																	
<b>100-90%</b>	=	A																	
<b>89-80%</b>	=	B																	
<b>79-70%</b>	=	C																	
<b>69-60%</b>	=	D																	
<b>59 or less %</b>	=	F																	
<p>內容綱要 Course Outline</p>	<p>Course Introduction</p> <p>This course focuses on the functions of planning, organizing, leading, and controlling. In brief, planning entails establishing goals and objectives and developing the strategies to achieve them. Students will learn the importance of these functions, how they interrelate, and how to apply them in real-world management situations.</p> <p>Statement of Time Commitment</p> <p>As a general rule, you should plan to schedule 2 - 3 hours outside of the classroom for every hour you spend in the classroom. For a typical 3-credit online course, you should be prepared to commit a total of approximately 9 - 12 hours per class per week.</p> <p>Course Outcomes</p> <p>After completing this course, you should be able to:</p> <ul style="list-style-type: none"> <li>· employ effective planning processes to develop strategies, goals, and objectives in order to enhance performance and sustainability</li> <li>· organize human, physical, and financial resources for the effective and efficient attainment of organizational goals</li> <li>· demonstrate leadership skills by communicating a shared vision, motivating and empowering others, and creating a culture of ethical decision-making and innovation</li> <li>· develop measures and assess outcomes against plans and standards to improve organizational effectiveness</li> </ul>																		
<p>自編教材 Self-compiled textbook (非自編教材請填寫原因)</p>	<p><input type="checkbox"/>是 Yes    <input checked="" type="checkbox"/>否 No,原因 Reason(s): no need</p>																		
<p>符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)</p>	<p><input checked="" type="checkbox"/>是 Yes    <input type="checkbox"/>否 No,原因 Reason(s):</p>																		
<p>備註 Note</p>																			

教學進度 Course schedule

週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1-2	Introduction to Organization Theory READ: Chapter 1	Week1-2
3-4	Organizational design Issue report READ: Chapter 2	Week3-4(Issue Group1)
5-6	Strategy READ: Chapter3	Week5-6(Issue Group2)
7-8	Relationships between organizations READ: Chapter 4	Week 7-8(Issue Group3)
9-10	Global organization READ: Chapter 5	Week 9-10(case Group1)
11-12	Conflict and Politics READ: Chapter7	Week 11-12( case Group2)
13-14	Decision Making READ: Chapter 8	Week 13-14(caseGroup3)
15-16	Culture and Value READ: Chapter9	Week 15-16( case Group4)
17-18	Innovation Read: Chapter 10	Week 17-18(case Group5)

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決議：照案通過。

提案四十五：休閒產業管理系 111 學年度第二學期 EMI 全英語課程開設案，提請審議。(提案單位：休閒產業管理系)

說明：

一、111 學年度第二學期 EMI 全英語課程開設：

(一) 碩士班：

序號	科目名稱	學分	時數	修別	授課教師	課程大綱
1	休閒運動健康管理研究	3	3	選修	洪群翔	P101-P104

二、本案業 111 年 11 月 25 日休管系第 3 次系課程委員會議審議通過。

國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	洪群翔 Hung, Chun-Hsiang	開課代碼 Course Code	
科目名稱	休閒運動健康管理研究	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective

Course Name	Sports and Health Management Research		
開課年級 Grade	碩一 Master's Degree	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> Spring
開課單位 Course Department	休閒產業管理系 Department of leisure industry management	學分/學時數 Credit/Hours	3/3
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	NO		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses、 <input type="checkbox"/> 智慧財產權 Intellectual Property、 <input type="checkbox"/> 內涵式服務學習課程 Service Learning、 <input type="checkbox"/> 性別平等 Gender Equality、 <input checked="" type="checkbox"/> 綠色課程 Green Technology <input checked="" type="checkbox"/> 創新創意課程 Innovation、 <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics、 <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development 創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心 能力關聯 Core competence (可複選，至多 選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input checked="" type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	NO		
參考書目 Other References	NO		
課程目標 Course objectives	本課程將提供關於運動與健康相關的學術研究文章，並透過文章的討論，學生彼此可以交流如何促進人類健康與生活品質的方法，他們將會知道運動愛好者與沙發馬鈴薯之間的差別。學生將獲得運動相關的專業，包括如何將行銷、法律及財務等專業運用到運動市場的研究及分析。 The program offer some research papers about sports and health. Students can discuss how to improve human's health and their quality of life. They will know the difference between sports lover and couch potato. Students will gain expertise in sport-related disciplines ranging from marketing, law, and finance, to applied sport market research and analytics.		
評量方式 Evaluation	出席 Attendance ( 50% ) 作業 Assignments ( ) 平時考 Quizzes/Tests ( ) 期中考 Midterm Exam ( 25% ) 期末考 Final Exam ( 25% ) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):		
內容綱要 Course Outline	1.了解運動與健康相關的理論 2.培養學生運動與健康管理相關能力 3.培養學生運動與健康規畫能力 4.培養學生資料蒐集、組織及分析能力 5.討論運動與健康管理相關學術文章 本課程包括運動健康照護、健康促進、特殊族群的運動、身體教育、運動與健康照護科技，幫助學生了解運動健康照護的概念。 1. Understand the related theory of sports and health.		

	2. To cultivate students' ability of sports and health management 3. To cultivate students' ability of sports and health planning. 4. To cultivate students' ability of data collection, organization, and analysis. 5. Discussion about the papers of sports and health management. This class includes sports health care, health-promoting, sports of special population, physical education, sports and health care technology. Help students to understand the concept of sports health care, and cultivate students' ability of self-learning.
自編教材 Self-compiled textbook (非自編教材請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	何謂運動與健康 What are sports and health?	
2	運動、健身房與健康 Sports, fitness, and health	
3	力量及耐力訓練 Strength and endurance training	
4	柔軟度訓練 Flexibility training	
5	健身房的評估 Assessment of the physical fitness	
6	運動與營養：糖類、水與脂肪 Sports and nutrition: carbohydrate, water, and fat	
7	運動與營養：蛋白質與礦物質 Sports and nutrition: protein and mineral	
8	運動傷害與治療 Sports injury and treatment	
9	期中考 Midterm Exam	
10	評估運動的安全性與緊急治療 Evaluation about the safety of sports, and the emergency treatment	
11	特殊族群的運動 Sports of the special population	
12	量身定制的運動 Customized the sports	
13	健康、運動和行為改變 Health, sports, and behavior change	
14	慢性病患的運動 Sports of chronic disease population	

15	評估身體活動(1) Assessment of the physical activity (1)	
16	評估身體活動(2) Assessment of the physical activity (2)	
17	運動、健身房和健康及評估心肺適能 Sports, fitness and health, and assessment of cardiorespiratory fitness.	
18	期末考 Final Exam	

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決議：照案通過。

提案四十六：景觀系 111 學年度第二學期開授 EMI 全英語課程乙案，提請審議。(提案單位：景觀系)

說明：

- 一、依據本校教師全英語 EMI 授課課程開授要點辦理。
- 二、111 學年度第 2 學期申請 EMI 授課科目如下：

學制	科目名稱	修課班別	學分	時數	修別	授課教師	課程大綱
碩班	景觀創意與設計理論	碩一選	3	3	選修	廖明誠 陳廷育 鄒佩蘅	P104-P106
大學	國際景觀案例解析	四景二選	1	1	選修	鄒佩蘅	P106-P109

- 三、本案業經 111.11.29. 系課程會議通過。

國立勤益科技大學

National Chin-Yi University of Technology

111 學年度 2 學期課程大綱

Year of 2023 Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input checked="" type="checkbox"/> 碩士 Master's Degree <input type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College) <input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	廖明誠 Liao, Ming Cheng、 陳廷育 Ting-Yu, Chen、 鄒佩蘅 Pai-Heng Tsou	開課代碼 Course Code	GB01
科目名稱 Course Name	景觀創意與設計理論 Creativity and theory of landscape design	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	碩士 1 年級 Master Year 1	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	景觀系	學分/學時數 Credit/Hours	3/3



	Department of Landscape Architecture		
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	無 NONE		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input checked="" type="checkbox"/> 綠色課程 Green Technology <input checked="" type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作（職場）倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development  創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	無 NONE		
參考書目 Other References	1. Marcus, C. C., & Sachs, N. A. (2013). Therapeutic landscapes: An evidence-based approach to designing healing gardens and restorative outdoor spaces. John Wiley & Sons. 2. Booth, N. (2011). Foundations of landscape architecture: integrating form and space using the language of site design. John Wiley & Sons. 3. Erell, E., Pearlmutter, D., & Williamson, T. (2012). Urban microclimate: designing the spaces between buildings. Routledge. 4. Novotny, V., Ahern, J., & Brown, P. (2010). Water centric sustainable communities: planning, retrofitting, and building the next urban environment. John Wiley & Sons.		
課程目標 Course objectives	To provide a platform of discussion and viewpoint exchange, this course will be conducted by way of reporting reference and methodology by graduate students. Furthermore, the instructor will give appropriate comments to improve their thesis.		
評量方式 Evaluation	出席 Attendance (20%) 作業 Assignments (80%) 平時考 Quizzes/Tests (%) 期中考 Midterm Exam (%) 期末考 Final Exam (%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):		
內容綱要 Course Outline	1. Sustainable design and future challenges 2. Green building evaluation systems 3. Urban environment and microclimate 4. Eco-city 5. Ecological restoration 6. Evidence-based landscape 7. Reconstruction of historic area 8. Smart landscape		

自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Sustainable design and future challenges I	
2	Sustainable design and future challenges II	
3	Sustainable design and future challenges III	
4	Green building evaluation systems I	
5	Green building evaluation systems II	
6	Urban environment and microclimate I	
7	Urban environment and microclimate II	
8	Urban environment and microclimate III	
9	Eco-city I	
10	Eco-city II	
11	Ecological restoration I	
12	Ecological restoration II	
13	Evidence-based landscape I	
14	Evidence-based landscape II	
15	Reconstruction of historic area I	
16	Reconstruction of historic area II	
17	Smart landscape I	
18	Smart landscape II	

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國立勤益科技大學  
National Chin-Yi University of Technology  
111 學年度 2 學期課程大綱  
Year of 2023\_Syllabus

部別 Department	<input checked="" type="checkbox"/> 日間部 Regular Day School <input type="checkbox"/> 進修部 Division of Continuing Education	學制 School System	<input type="checkbox"/> 博士 Doctoral Degree <input type="checkbox"/> 碩士 Master's Degree <input checked="" type="checkbox"/> 四技 Bachelor's Degree (4-year College) <input type="checkbox"/> 二技 Bachelor's Degree (2-year College)
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			<input type="checkbox"/> 二專 Associate Degree (2-year program)
授課教師 Instructor(s)	鄒佩蘅 Pai-Heng Tsou	開課代碼 Course Code	3409
科目名稱 Course Name	國際景觀案例解析 International Landscape Design Case Studies	必/選修 Required/Elective	<input type="checkbox"/> 必修 Required <input checked="" type="checkbox"/> 選修 Elective
開課年級 Grade	二年級 second grade	開課學期 Semester	<input type="checkbox"/> 上 Fall <input checked="" type="checkbox"/> 下 Spring
開課單位 Course Department	景觀系 Department of Landscape Architecture	學分/學時數 Credit/Hours	1/1
全程外語授課 Foreign language Teaching entirely	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No	主要授課語言 Main language	英語 English
先修課程 Prerequisite course(s)	無 NONE		
優質課程類別 Course attributes (可複選)	<input checked="" type="checkbox"/> 一般課程 General Courses <input type="checkbox"/> 智慧財產權 Intellectual Property <input type="checkbox"/> 內涵式服務學習課程 Service Learning <input type="checkbox"/> 性別平等 Gender Equality <input checked="" type="checkbox"/> 綠色課程 Green Technology <input checked="" type="checkbox"/> 創新創意課程 Innovation <input type="checkbox"/> 工作(職場)倫理課程 Career Ethics <input type="checkbox"/> 工具機技術研發 Tool Machine Technology Development  創新、創意課程定義：課程目標為「激發學生獨特的想像與創意思考，透過企劃與執行以創新模式解決實際問題。 Definition of Innovation and Creative courses: the objectives of the course aim to stimulate students' imagination and creative thinking skills, and to solve practical problems with innovative modes through planning and implementing different tasks.		
課程與校核心能力關聯 Core competence (可複選，至多選4項)	<input checked="" type="checkbox"/> 表達溝通能力 Communication and Presentation Skill <input checked="" type="checkbox"/> 創意創新能力 Innovation Skill <input type="checkbox"/> 關懷服務能力 Community Care and Service Skill <input type="checkbox"/> 思考推理能力 Thinking and Reasoning Skill <input checked="" type="checkbox"/> 專業實務能力 Professional Practice Skill <input checked="" type="checkbox"/> 宏觀視野能力 Macro Skill		
教科書 Textbook	無 NONE		
參考書目 Other References	1. Geoffrey Jellicoe, The Landscape of Man: Shaping the Environment from Prehistory to the Present Day (1970 / 1995) 2. Caroline Constant, The Modern Architectural Landscape (2012) 3. Christophe Girot, The Course of Landscape Architecture (Thames & Hudson, 2016)		
課程目標 Course objectives	Through the sharing and analysis of landscape architectire cases in different countries and cultural backgrounds, students will be familiar with and understand the particularities of landscape design in various countries, and speculate on future trends from past evolution and current development, as reference in future landscape design.		
評量方式 Evaluation	出席 Attendance (20%) 作業 Assignments (20%) 平時考 Quizzes/Tests (%) 期中考 Midterm Exam (30%) 期末考 Final Exam (30%) 其他:(請敘述非筆試之評量方式) Other (please explain the evaluation methods if there are no written exams):		
內容綱要 Course Outline	1. European landscape introduction and case studies 2. American landscape introduction and case studies 3. Japanese landscape introduction and case studies		

	4. Chinese landscape introduction and case studies 5. Other international landscape case studies
自編教材 Self-compiled textbook (非自編教材 請填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
符合智財規範 Compliance with Intellectual property (不符合智財規範請 填寫原因)	<input checked="" type="checkbox"/> 是 Yes <input type="checkbox"/> 否 No,原因 Reason(s):
備註 Note	

教學進度 Course schedule		
週次 Week	教學與作業進度 Teaching Schedule/Assignments	備註 Note
1	Introduction of European landscape architecture	
2	European landscape case study I	
3	European landscape case study II	
4	European landscape case study III	
5	Introduction of American landscape architecture	
6	American landscape case study I	
7	American landscape case study II	
8	American landscape case study III	
9	Midterm exam	
10	Introduction of Japanese landscape architecture	
11	Japanese landscape case study I	
12	Japanese landscape case study II	
13	Introduction of Chinese landscape architecture	
14	Chinese landscape case study I	
15	Chinese landscape case study II	
16	Landscape case studies of other countries	
17	Landscape case studies of other countries	
18	Final exam	

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決議：照案通過。

肆、臨時動議：

何昆年委員：以產業界與學校的關聯，建議強化新南向產業合作國際專班學生之華語能力，培育台灣產業所需之人才；有關 ERP 與廠商合作產業連結；目前學校培育的學生專業項目表現不錯，思考學生所欠缺之處。

謝錫煌委員：配合學校新南向產業合作國際專班推廣，建議企管系加開 AI 智慧基本課程。因氣候變遷應對能源轉型，建議於通識課程開設相關課程。

教務長結語：

- 一、已開設或未來開設新南向產業合作國際專班之各系可於會後多與兩位委員諮詢。
- 二、建請通識學院開設永續發展與 SDGs 相關課程。

謝淑枝組長：

- 一、進修部 112 學年度學分計畫修訂新格式，尚未修改之系助理，敬請於教務會議前提供正確版本。
- 二、產攜 2.0 專班表頭，授權本組統一修改。

企管系主任：感謝委員建議，有關科技、網路、數位、人工智慧管理、人工智慧數位行銷及電子商務等與網路資訊相關科目，於 111 學年度已有調整部份。配合當前科技及時代潮流發展與時俱進，112 學年度學分計畫表也有調整，請謝理事長再不吝指教。

伍、散會：15:20