

## 113 學年度第 1 學期第 1 次 校課程委員會議

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傳閱附件 1-1--本校各學院所屬各系(所)課程中英文摘要-語言中心

## 各系(所)中心新增課程中英文摘要

### 一、 語言中心

#### 英語檢定訓練 0 選

本課程旨在加強並提升尚未通過英文畢業門檻之應屆畢業及研修生之英語文能力，以利通過英語檢定考試順利畢業。藉由 36 小時共計 3 週的模擬試題解題來提高學生的學習動機、生活用語並期待通過英語能力測驗。。

#### English Proficiency Training 0 E

This course aims to enhance and improve the English language skills of current and graduating students who have not yet met the English graduation requirements. The goal is to help them pass the English proficiency test and graduate successfully. The course includes 36 hours of simulated test-solving over 3 weeks to boost students' motivation and everyday language usage, ultimately aiming for them to pass the English proficiency test.

傳閱附件 1-2--本校各學院所屬各系(所)課程中英文摘要-農學院

## 二、 農學院

### (一) 農學院：

#### 高齡科技應用於農業之 PBL 創新創業實務 2 選 徐睿良、鍾興穎，下

臺灣即將邁入超高齡社會，邀請業界專家分享他們的經驗，以幫助學生深入了解高齡相關產業，透過這樣的交流希望能培養學生在農業專業領域的創新思維，並逐步學習創業所需的技能，最後將針對高齡相關議題提出創業構想，再以小組合作的方式進行產品發想、討論與交流。

#### Application of Geroscience Technology in Agriculture—Project-Based Learning and Innovation/Entrepreneurship Practice 2 E

Taiwan will soon become an over-age society. We will invite industry experts to share their experiences. To help students gain an in-depth understanding of age-related industries. Through this exchange, we hope to cultivate student's innovative thinking in the field of agriculture. And learn the skills you need to start your own business step-by-step. At the end of the course, students will propose an entrepreneurial idea on an age-related topic. Then work in groups for product ideas, discussions and exchanges.

### (二) 木材科學與設計系：

#### 室內設計(1) 2 選 林芳銘

本課程是室內設計基礎課程，教學目標為瞭解室內設計基本原理，建立空間設計概念與方法並實際應用於室內設計，包含室內設計製圖及表現技法訓練，並進行室內設計實作。

#### Interior Design(1) 2 E

This course is the interior design foundation courses, teaching objectives to understand the basic principles of interior design, space design concepts and methods established and applied to interior design, interior design graphics and performance training techniques and implementations for interior design.

#### 室內設計實習(1) 1 選 林芳銘

本課程是室內設計基礎課程，教學目標為瞭解室內設計基本原理，建立空間設計概念與方法並實際應用於室內設計，包含室內設計製圖及表現技法訓練，並進行室內設計實作。

#### Interior Design Practice(1) 1 E

This course is the interior design foundation courses, teaching objectives to understand the basic principles of interior design, space design concepts and methods established and applied to interior design, interior design graphics and performance training techniques and implementations for interior design.

#### 室內設計(2) 2 選 馮俊豪

本課程主要課題是「住宅及商業之空間」設計，本課程目標是建立住宅空間設計概念與方法並應用於室內設計實例操作，課程內容包含空間規劃設計概論、設計方法、不同類

型案例解析，並探討室內設計的造形、色彩、質感、機能、裝修材料、施工方法之實例操作等。本課程的訓練有助於建立學生正確的住宅空間設計概念，激發創意思考能力並熟練表現技巧，是學生未來從事空間規劃、室內設計與室內裝修等工作的基礎。

## **Interior Design(2)**

**2 E**

The major subject of this course is “space of shop residence”. The objective is to establish concept of space design method and to apply to the interior design. The course content includes introduction to space planning and design, design method, the different cases study, as well as discussions on themes such as the style, color, texture ,functions, material and working procedures of space design. Through the training in this course, students will acquire and develop in the concept of space design, creativity and presentation skills. This course is the foundation to all students pursuing a career in space planning, interior design and interior decoration.

## **室內設計實習(2)**

**1 選**

**馮俊豪**

本課程主要課題是「住宅及商業之空間」設計，本課程目標是建立住宅空間設計概念與方法並應用於室內設計實例操作，課程內容包含空間規劃設計概論、設計方法、不同類型案例解析，並探討室內設計的造形、色彩、質感、機能、裝修材料、施工方法之實例操作等。本課程的訓練有助於建立學生正確的住宅空間設計概念，激發創意思考能力並熟練表現技巧，是學生未來從事空間規劃、室內設計與室內裝修等工作的基礎。

## **Interior Design Practice(2)**

**1 E**

**T. S. Tsai , S**

The major subject of this course is “space of shop residence”. The objective is to establish concept of space design method and to apply to the interior design. The course content includes introduction to space planning and design, design method, the different cases study, as well as discussions on themes such as the style, color, texture ,functions, material and working procedures of space design. Through the training in this course, students will acquire and develop in the concept of space design, creativity and presentation skills. This course is the foundation to all students pursuing a career in space planning, interior design and interior decoration.

## **室內裝修施工實務**

**1 選**

**馮俊豪**

本課程目的在教導學生認識室內裝修工程常用材料與加工性質，並能依照裝修施工圖運用木工機器與手工具，完成施作及組裝簡易木製成品，諸如櫥櫃、地板、天花板、隔間…等相關工程。講授的內容包括室內裝修工程之基本知識、室內裝修工程常用材料、裝修施工圖的讀圖、施工材料的核算、室內裝修結構施工技術、室內裝修飾面施工以及室內裝修的景觀布置等。習作內容則包括天花板結構施工、牆面裝飾結構施工、柱體裝飾結構施工、木質地板結構施工、連接收口技術、玻璃裝飾施工、門窗施工、窗簾安裝、室內電器安裝以及各種材料之室內裝飾面施工等。

## **Interior Decorating Practice**

**1 E**

This course purpose is training the students who could realize the material of interior decoration project and working property, and to use the woodwork machine and hand tool according to fitting up the construction drawing, Finish the operation and assemble on the simple wooden products. Such as the cabinet, floor, ceiling, and compartment etc.. The course includes the interior decoration project, material of interior decoration project, fitting up construction drawing, constructed checking and calculating of

material, fit up interior decoration technology, constructed surfacing of interior decoration, constructed the views of interior decoration etc..The exercise includes: constructed the ceiling structure, constructed the wall structure, constructed cylinder body structure, constructed the wooden floor structure, receiving vocal imitation skill, constructing glass decorate, constructing doors and windows, curtain install, indoor electric apparatus install and constructed the material of interior decoration on surfaces etc..

### (三) 動物科學與畜產系：

#### 精準畜禽營養

2 選

陳栢元，上

本課程希望藉由精準估計營養需求及營養分析，使用飼料添加物，制定最佳配方比例，改進飼料加工技術。配合適當的餵飼管理方法，達到改善營養效率、降低或減少營養過量與養分排泄和積累。其課程內容包括最佳化生產指標建立、營養與消化道生理、微生物及畜產之應用、飼料原料學、在地化原料與剩食利用、飼料製造學、飼料配方設計、商用飼料配方軟體應用 畜產減碳飼養、禽畜廢棄物處理、溫室氣體排放及環境有害氣體監測等。

#### Animal Precision Nutrition

2 E

B. Y. Chen, F

This course aims to improve nutrition efficiency, reduce or minimize nutrient excess, and enhance nutrient analysis through precise estimation of nutritional requirements and analysis, utilization of feed additives, formulation of optimal feed ratios, and advancement in feed processing techniques. It also focuses on implementing appropriate feeding management methods to achieve these objectives. The course curriculum includes establishing optimization production indicators, understanding nutrition and digestive physiology, applications of microbiology and animal production, feedstuff science, utilization of local resources and food waste, feed manufacturing, feed formulation design, application of commercial feed formulation software, carbon reduction in animal husbandry, disposal of poultry and livestock waste, greenhouse gas emissions, and monitoring of environmental pollutants.

#### 智慧畜舍數據化管理

1 選

李妍樺，上

本課程旨在介紹畜舍內溫溼度控制、能源循環調控及智慧化通風系統、電子餵飼系統與動物福利相關等設施。

#### Data Management for Smart Livestock Housing

1 E Lee, Yen-Hua, F

This course aims to analyze the planning and automation of animal houses, introduce the temperature and humidity control in the barn, the energy cycle control of the closed bench house and the intelligent ventilation system. Animal welfare system such as sow polyculture system, welfare delivery column and electronic feeding system are included.

#### 豬隻精實飼養管理

1 選

姜中鳳，上

本課程目的在介紹台灣高溫多濕的環境下，養豬事業之成就與豐富之經驗以及國內外養豬業之先進技術與科學知識。其內容包括豬場生物安全與疾病防治、豬舍設計與大數據分析應用、種豬生殖管理實務、Pigchamp 數據分析實例、母豬精實管理、肉豬精實管理等。

#### Pig Precision Feeding and Management

1 E

C. F. Chiang, F

The purpose of this course is to introduce the achievements and rich experiences in the swine industry in Taiwan's hot and humid environment, as well as advanced technologies and scientific

knowledge in the domestic and international swine industry. Its content includes biosecurity and disease prevention in pig farms, the application of big data analysis, practical aspects of breeder reproduction management, examples of data analysis using Pigchamp, sow management practices, and lean management in pig production.

### 雞隻精實飼養管理

1 選

余祺，上

本課程目的在介紹台灣高溫多濕的環境下，蛋雞事業之現況以及國內外家禽業之先進技術與科學知識。其內容包括禽場生物安全與疾病防治、雞蛋生產與碳足跡計算、禽舍設計與大數據分析應用、種雞精實管理、蛋雞精實管理、有機堆肥製作等。

### Poultry Precision Feeding and Management

1 E

C. Yu, F

The purpose of this course is to introduce the current situation of the layer industry in Taiwan's hot and humid environment, as well as advanced technologies and scientific knowledge in domestic and international poultry industries. Its content includes biosecurity and disease prevention in poultry farms, egg production and carbon footprint calculation, poultry house design and the application of big data analysis, efficient management of breeding hens, efficient management of egg-laying hens, and organic compost production.

### 乳牛精實飼養管理

1 選

吳錫勳，上

本課程目的在介紹台灣高溫多濕的環境下，乳牛事業之現況以及國內外乳牛業之先進技術與科學知識。其內容包括牛場生物安全與疾病防治、牛舍設計及大數據分析應用、牛場衛生安全管理、牛隻健康監測應用、牛乳生產管理實作、智慧化機具於乳牛飼養之應用等。

### Dairy Livestock Precision Feeding and Management

1 E H. H. Wu, F

The aim of this course is to introduce the current state of the dairy cow industry in Taiwan's hot and humid environment, as well as advanced technologies and scientific knowledge in domestic and international dairy industries. Its content includes biosecurity and disease prevention on dairy farms, dairy barn design and the application of big data analysis, hygiene and safety management on dairy farms, applications of health monitoring for dairy cattle, practical dairy production management, and the application of smart machinery in dairy cattle farming.

### 瘤胃微生物特論

2 選

陳栢元，下

本課程以介紹反芻動物瘤胃中之微生物類別，分別討論各類微生物的特性及交互作用，並講解瘤胃微生物生態體系內，微生物的功能性分工、營養需求及彼此間交互作用之整體運作架構與細部的連繫。並且進一步推及反芻動物與微生物的互動，充分了解整個瘤胃微生物發酵系統與變動的反應動物採食食物組成之動態反應與變化關連，探討瘤胃微生物對於各種養分消化的貢獻方式。同時解說瘤胃微生物應用於現在與未來微生物製劑或發酵工業之發展方向，使學生了解瘤胃環境及微生物的作用方式，並思考將其資源化的應用方式。

### Special Topics on Rumen Microbiology

2 E

B. Y. Chen, S

This course introduces the types of microorganisms in the rumen of ruminants, discusses the



characteristics and interactions of various microorganisms, and explains the overall operational structure and details of the functional division of labor, nutritional requirements, and interactions between microorganisms in the rumen microbial ecosystem. connection. And further promote the interaction between ruminants and microorganisms, fully understand the dynamic response and change relationship between the entire ruminant microbial fermentation system and the changing food composition of ruminants, and explore the contribution of rumen microorganisms to the digestion of various nutrients. At the same time, the development direction of the application of rumen microorganisms in the current and future microbial preparations or fermentation industry is explained, so that students can understand the rumen environment and the mode of action of microorganisms, and think about how to use them as resources.

### 芻料作物及其調製

2 選

吳錫勳，上

本課程主要在介紹熱帶芻料的生產利用，就土壤、作物和動物生產之相關問題進行探討，包括芻料的生長環境、芻料種類的選擇、性狀、栽培管理（如施肥、雜草防治）、芻料的收穫利用（如青割、乾草、半乾青儲料、青儲料）及草地的維護（如放牧頭數、放牧方式）並就台灣現有芻料的生產利用加以討論，以達學以致用之效果。

### Forage Production and utilization

2 E

H. H. Wu , F

This course is designed to discuss the production and utilization of forages. The objectives of this course are to offer the relationships among soil, forages and animal production, including: climatic factors in forage production; characters, culture, management (e.g. fertilization, weed control) and utilization of forages (e.g. silage, hay, haylage, silage); management of improved pastures (e.g. stocking rate, systems of grazing management). In addition, topics of forages in Taiwan will also be discussed so that the students will become aware of forage, application for further of livestock production.

### 飼料分析與品管

2 選

余祺，上

本課程之設計主要在介紹正確的分析方法，儀器的正確使用，以減少分析結果之誤差，配合飼料所需單位原料之品質檢查方法及配合飼料製造流程之品管現代技術，內容包括：飼料分析的基本操作、飼料分析的方法、原理和應用、單位原料之品質管理、配合飼料之品質管理、添加物之品質管理、飼料製造之品質管理。

### Feed Analysis and Quality Control

2 E

C. Yu , F

This practice course is in associate with the course of feed analysis and quality control to provide the training to students on this technique. The contents include the safety of laboratory, sampling and basic operation of analysis, the methods that may be employed for the detection and determination of feeds, quality control of feedstuffs, and quality control of feeds plants in manufactured processing.

### 飼料分析與品管實習

1 選

余祺，上

本實習內容主要是配合「飼料分析與品管技術」課程，使學生實際進行所需要之操作訓練；其內容包括：實驗室的安全認識、採樣及分析基本訓練、飼料各項分析的分析方法及操作、各種飼料原料之品質鑑定、飼料原料摻雜物之檢出。

### Practice of Feed Analysis and Quality Control 1 E

C. Yu , F



This practice course is in associate with the course of feed analysis and quality control to provide the training to students on this technique. The contents include the safety of laboratory, sampling and basic operation of analysis, the methods that may be employed for the detection and determination of feeds, quality control of feedstuffs, and quality control of feeds plants in manufactured processing.

#### (四) 植物醫學系：

##### 菇類產業實務

2 選

本課程旨在透過介紹金針菇、洋菇、木耳、杏鮑菇及一些常見菇類，講解不同菇類的形態、生活史、生態地位以及栽培發展歷史。並告訴學生如何透過利用不同主要介質(如段木、木屑、堆肥等)以及合適的機器和設施，營造不同生產模式以工業化量產菇類。除此之外，本課程也介紹菇類栽培常見病蟲害，以及如何防治這些病蟲害。課程還會介紹一些新穎食藥用菇類及其製品。如果時間允許，我們可能會邀請業界經營者來分享他們的經驗。

##### Industrial Practice in Mushrooms

2 E

This course wants to explain the morphology, life cycle, ecological position and the cultivation developing history of different mushrooms by introducing golden mushroom, bottom mushroom, wood ear, king oyster mushroom, and some common mushrooms. It also tells students that how to industrial scale-produce mushrooms by different production models, which cultivate different mushrooms with different major substrates, such as logs, sawdust, compost, etc. and suitable machines and facilities. In addition to these, it also introduces common pests and diseases of mushroom cultivation and how to manage these pests and diseases. The course also can present some new edible and medicinal mushrooms and products of them. And then if time allows, we may invite industry operators to share their experiences.

#### (五) 食品科學系：

##### 智慧食品供應鏈與永續管理

2 選

劉展岡

本課程邀請台灣食品產業之產學界專家，深入探討當前食品供應鏈智慧化管理之技術、應用與發展趨勢。以及因應 2025 碳費徵收與 2050 淨零碳排議題，食品產業碳排優化的規劃與做法，提供學界研究開發與媒合，以及產業界諮詢、規劃與應用的借鏡與參考。

##### Smart Food Supply Chain and Sustainable Management

2 E

This course invites experts from the academia and industry of Taiwan's food industry to delve into the current trends, applications, and development of intelligent management in the food supply chain. It will also address strategies for optimizing carbon emissions in the food industry in response to the carbon tax collection by 2025 and the net-zero carbon emissions target by 2050. The course aims to provide insights and references for research and development, matchmaking in academia, as well as consulting, planning, and application in the industry regarding carbon emissions reduction and management.

##### 高齡營養與健康照護產業

2 選

邱秋霞

本課程將講解高齡族群常見的生理與心理病徵，並介紹數位科技應用於高齡照護產業的現況。課程前半將講解老化過程對於高齡族群身心健康的威脅，並解說營養、醫學、藥學、園藝等領域專業人員之介入重點，課程後半將介紹數位科技與營養保健連結之實例，

並描述數位科技運用於高齡食品產業開發之核心願景，以協助學員洞悉食品科技應用於高齡健康照護之缺口、進而構思高齡科技與食品創新主題、創造新穎利基市場。

## **Geriatric Nutrition and Health Care Industry 2 E**

This course will cover common physiological and psychological symptoms in the elderly population, as well as introduce the current status of digital technology applications in the elderly care industry. The first half of the course will discuss the threats of the aging process to the physical and mental health of the elderly population, and explain the key interventions of professionals in fields such as nutrition, medicine, pharmacy, and horticulture. The second half of the course will introduce examples of the connection between digital technology and nutritional health, and describe the core vision of using digital technology in the development of the elderly food industry, to assist students in understanding the gap in food technology applications in elderly health care, and to envision themes of elderly technology and food innovation, creating new niche markets.

## **ISO22000:2018 主導稽核員證照條文解析 1 選 羅之綱**

由外部專家詳細解讀條文知識，提供學生和教師進修，讓對於未來考取 ISO22000:2018 食品安全管理系統主導稽核員證照具有高度的價值和效益。

## **ISO 22000:2018 Lead Auditor Certification Clause Analysis 1 E**

Having external experts provide detailed interpretations of the clauses will offer significant value and benefits to students and teachers seeking further education, especially in preparation for obtaining the ISO 22000:2018 Food Safety Management System Lead Auditor certification in the future..

## **人工智慧化食品安全管理 2 選 詹國靖**

本課程創新將食品安全與時下最流行的人工智慧銜接，提供學生一個未來更安全的食品藍圖，在現有的科技技術支持下學習本課程擴展視野，構思出未來食品安全之方向。課程前半將介紹如何利用感測器在食品製造各階段與後市場端執行偵測，而取得數據，這數據以電腦計算加以分類，搭配人工智慧的方式可以執行預測、預警、自動化等應用，如：結合物聯網應用於食品產銷履歷、供應鏈自動管理、與食品安全預警等，訓練學生應用於食品產業中會遇到的各種狀況。而食品安全管理是建立在風險評估的基礎上，因此在課程後半會導入風險評估於食品安全管理之應用，針對風險評估、膳食調查等龐大數據，利用大數據與人工智慧運算分析，可以更快速地得到許多重要的參數如：食品殘留容許量、建議每日攝取量、毒性當量等，用以建立食品安全管理基礎。

## **Artificial Intelligence and Food Safety 2 E**

This course innovatively connects food safety with the most popular artificial intelligence nowadays, providing students with a blueprint for safer food in the future. With the support of existing science and technology, students can learn this course to expand their horizons and conceive the direction of future food safety. The first half of the course will introduce how to use sensors to perform detection at various stages of food manufacturing and the after-market to obtain data. This data is classified by computer calculations and can be used with artificial intelligence to perform prediction, early warning, automation and other applications, such as : Combined with the application of the Internet of Things in food production and sales history, automatic supply chain management, and food safety early warning, students are trained to apply it to various situations encountered in the food industry. Food safety

management is based on risk assessment, so the application of risk assessment in food safety management will be introduced in the second half of the course. For huge data such as risk assessment and dietary surveys, big data and artificial intelligence calculation and analysis can be used to more accurately Quickly obtain many important parameters such as: food residue tolerance, recommended daily intake, toxic equivalent, etc., to establish the basis for food safety management.

## 農食生技產品創新研發與推廣實作 2 選 廖遠東

本課程聘請產、官、學、研界之專家，講授農食生技產品創新研發與推廣的方法與技巧，其中包括食品創新設計與創業、創新事業商業模式、創業團隊養成、群眾募資、新產品推廣與行銷等，並依照授課內容，提供學生實作實習或業界參訪之活動，讓學生能將課堂所習之產品創新與推廣之知識與技術，實際動手應用於創業或行銷的運作。

## Practices of Innovation and Promotion of Agriculture, Food and Biotechnology Products

### 2 E

In this course, experts from industry, government, university or institute will be invited to teach methods and techniques for innovation, R&D and promotion of agriculture, food and biotechnology products. The topics may include, but not limit to, innovative design and entrepreneurship of food business, business models, entrepreneurial team, crowdfunding, promotion and marketing of new products, etc. In addition to lecture in the classroom, the lecturer will also provide students with hand-on practice in the lab or field trip to visit agriculture, food or biotechnology industry. This course will allow students to utilize the knowledge and techniques learned in classroom for actually hand-on application of innovation and promotion of products in lab.

## 食品安全風險分析特論 3 選 羅之綱

本課程的目的是介紹經營管理者進行食品安全風險分析所涉及的工作流程，並向學生提供有關進行風險評估、風險管理和風險溝通的方法及過程，以及了解影響決策考量和結果效益的因素，該課程旨在讓學生熟悉風險管理和溝通風險的主要方法，並以實際的案例進行說明。

## Special Topics in Food Safety Risk Analysis 3 E

The objective of this course is to acquaint business managers with the workflow involved in conducting food safety risk analysis. It aims to provide students with methods and processes related to risk assessment, risk management, and risk communication. Additionally, it aims to help students understand factors that influence decision-making considerations and outcome benefits. The course is designed to familiarize students with key approaches to risk management and risk communication, using practical case studies for illustration.

## 食品安全管制系統特論 3 選 羅之綱

本課程適合對食品安全管制系統已有基本觀念的同學修讀，以成為 PCQI 預防性控制人員、ISO22000 主導稽核員為目標，進一步深入了解食品安全管制系統之應用和實務。課程將先簡單回顧國際食品法規和食品安全管理體系、GHP、HACCP、製程管制、線上監測、品質控制等技術，以及計畫書建立、程序書撰寫、施行步驟、內部稽核、矯正措施及實務演練。再進一步從外部驗證機構的稽核人員角度出發，如 ISO2200/FSSC22000/SQF 等驗證

體系，讓學生充分認識及熟練食品危害分析與重點管制系統之實務應用，透過案例講解和討論，強化學生進入職場擔任食品品質保證和食品安全管理人員的能力。

### Special Topics in Food Safety Control Systems 3 E

This course is designed for students who already have a basic understanding of food safety management systems and aim to become Preventive Controls Qualified Individuals (PCQI) or lead auditors. The course offers a deeper insight into the application and practical aspects of food safety management systems. It will begin with a brief review of international food regulations and food safety management systems, covering topics such as GHP, HACCP, process controls, online monitoring technologies, as well as aspects like developing plans, writing procedures, implementing steps, conducting internal audits, applying corrective actions, and practical exercises.

Subsequently, the course will explore the subject from the perspective of audit personnel from external verification bodies, such as ISO 22000, FSSC 22000, SQF, and other verification systems. This approach aims to provide students with a comprehensive understanding and proficiency in practical applications of food hazard analysis and key control systems. Through case explanations and discussions, the course seeks to enhance students' capabilities to enter the workforce as personnel responsible for food quality assurance and food safety management.

### 食安成本管理及個案研究 2 選 羅之綱

食品生產的品質問題是管理問題，又是經濟問題，品質經濟分析和品質管理是一個企業品質經營追求成功的重要因素。有效實施品質成本和食安成本管理，將推進企業提高品質和管理效能，降低潛在的食安風險。在當前市場競爭異常激烈的今天，對企業減少浪費，降低成本，增加食安保障，提升企業的競爭力，贏得企業和顧客共同利益都具有重要意義。

品質成本是指取得和保證滿意的品質所需的費用，也關聯到是否能夠確保可容忍的食安風險。在目前大部分的企業中占到總成本的 20-30%。這對企業效益和社會效益的增長造成嚴重的威脅，也是當前企業品質管理中的關鍵。

本課程著重于建立食品生產、服務和管理流程，構建食安成本的框架等內容、收集數據、核算品質成本、形成品質成本測量分析報告等環節的案例分析，將使學生對品質經濟性管理和食安成本的基本概念中，有關品質成本的分類、模型、分析指標以及構成要素有全面的理解。通過實施食安與品質成本體系，在品質改進規劃中應用和減少品質成本，並發揮品質成本的作用。同時，可將其作為品質改善的切入點，組建團隊、確立項目、組織實施、取得績效，創造顧客和企業的共同價值。

### Food Safety Cost Management and Case Studies 2 E

Quality issues in food production are not only management problems but also economic ones. Quality economic analysis and management are crucial factors for successful quality operation in a business. Effectively implementing quality cost and food safety cost management will drive businesses to enhance quality and management efficiency while reducing potential food safety risks. In today's highly competitive market, reducing waste, lowering costs, enhancing food safety assurance, and increasing business competitiveness hold significant importance for both the company and its customers.

Quality cost refers to the expenses required to achieve and ensure satisfactory quality, and it's also related to the ability to ensure acceptable food safety risks. In most businesses, it accounts for 20-30% of total costs, posing a serious threat to both business and societal benefits, and it's a key aspect of current quality management in enterprises.

This course focuses on establishing food production, service, and management processes,



constructing the framework for food safety costs, collecting data, calculating quality costs, and forming analysis reports. Through case studies, students will gain a comprehensive understanding of fundamental concepts in quality economics management and food safety costs. This includes the classification, models, analysis indicators, and components of quality costs. By implementing a food safety and quality cost system, this course applies and reduces quality costs in quality improvement planning, leveraging the role of quality costs. Simultaneously, it serves as a point of entry for quality improvement, assembling teams, defining projects, organizing implementation, achieving results, and creating shared value for both customers and businesses.

### 高階工廠管理特論

3 選

羅之綱

本課程由食品安全管理的觀點和角度，來探討如何進行食品工廠經營管理，建立觀念並貫穿整個課程，介紹食品工業之結構及控管流程，使學生瞭解食品工廠之硬體要求、以及軟體之基本管理原理、管理單元及各種作業流程。課程內將簡介國內各種食品認證制度，並介紹食品 GHP、CAS 等制度及如何應用 5S 運動於工廠管理上，使學生對於生產衛生安全食品之良好作業規範有更進一步認知，瞭解食品工廠之軟硬體之要求、管理與運作及如何建立自主管理體系，避免人為疏忽及確保產品之衛生安全及品質之穩定，提升工廠之水準及信譽。

### Special Topics in Advanced Factory Management

3 E

This course approaches the management of food factories from the perspective of food safety management. Throughout the entire curriculum, it aims to establish concepts and principles that are integral to food safety. It introduces the structure and control processes within the food industry, enabling students to understand the hardware requirements of food factories as well as the fundamental principles of software-based management, management units, and various operational processes. The course will provide an overview of various domestic food certification systems and introduce systems such as Food GHP and CAS, along with how to apply the 5S methodology to factory management. This allows students to gain a deeper understanding of proper operational standards for producing hygienic and safe food, comprehending the hardware and software requirements of food factories, management and operations, and how to establish autonomous management systems. This, in turn, helps prevent human negligence, ensures product hygiene, safety, and stable quality, and elevates the level and reputation of the factory.

### (六) 科技農業進修學士學位學程：

#### 創新創意工具演練

2 選

顏嘉宏，下

引導學生演練各式創意創新工具，例如「檢核表(check list)」、「AB 強迫聯想法」、「PMI 法」、「2×2 聯表」、「5Why 分析法」、「六頂思考帽」、「七何分析法(5W2H)」、「八管魔法水」、「曼陀羅九宮格」及「奔馳法(S.C.A.M.P.E.R.)」，找出屬於自己的創業項目，並銜接大二的《農企業營運計畫書撰寫》課程。

### Practice of Creative and Innovative Training Tools

2 E

This course will teach students to practice various creative and innovative tools, such as "check list", "A cross B method", "PMI method", "2×2 joint table", "5 Why analysis method", "Six Thinking Hats", "Seven Elements Analysis Method (5W2H)", "Eight Tubes of Magic Water", "Mandala chart" and "S.C.A.M.P.E.R." to find their own entrepreneurial project. This project will be used in the second year's course called "Agricultural Enterprise Operation Plan Writing Course..

## **植物組織培養種苗繁殖技術**

**2 選**

**陳威臣，下**

本課程內容主要包括植物組織培養種苗繁殖原理、技術及介紹其相關應用。植物組培技術涵蓋培養基之主要成分與配製方法，種苗微體繁殖途徑與其適當方法，以及植物組培常見問題與解決方法。應用的部分包括商業量產模式與健康種苗生產技術之介紹。

## **In Vitro Plantlets Propagation Technology 2 E**

This course mainly includes the principles and techniques of in vitro plantlets propagation and an introduction to its related applications. Plant tissue culture technology covers the main chemical components and preparation methods of culture media, plantlet micropropagation processes and their appropriate methods, as well as common problems and solutions in plant tissue culture. The application section includes an introduction to commercial mass production models and healthy plantlets production technology.

## **植物組織培養種苗繁殖技術實習**

**1 選**

**陳威臣，下**

本實習著重於利用研究室場域與設備，由學生進行實際操作，並且配合正課教學進度熟悉高溫高壓滅菌釜、無菌操作台、組培操作工具等應用，以及了解植物組培技術基本操作方法。實習內容由清洗器皿、調配培養基開始，並以花卉、果樹、藥用植物等為培養材料，除繼代培養操作外，並進行無菌播種或誘導側芽等器官形成芽體、增殖、發根及出瓶馴化等技術。

## **In Vitro Plantlets Propagation Technology Internship 1 E**

This internship focuses on using the laboratory and equipment, and students will conduct practical operations. They will also be familiar with the applications of facilities and utensils in autoclave, laminar flow, operating tools, etc. in accordance with the progress of the main course teaching, as well as understand the basic operation methods of plant tissue culture. The internship content starts with cleaning the culture containers and preparing the culture medium. Flowers, fruit trees, medicinal plants are used as culture materials. In addition to subculture operations, aseptically sowing and induced lateral buds or other organs to form shoot-buds, following mass-propagation, rooting and ex vitro acclimatizing technologies.



傳閱附件 1-3--本校各學院所屬各系(所)課程中英文摘要-工學院

### 三、工學院

#### (一)機械工程系：

##### 淨零碳規劃管理概論

3 選

蔣銘源，下

本課程將協助培養學生具備淨零碳規劃管理師所需之關鍵能力。課程內容針對 iPAS 淨零碳規劃管理師關鍵能力、鑑定重點、輔助教材說明外，增進學員有關零碳規劃管理相關之國際公約與倡議、關貿政策及氣候變遷下全球因應與做法，並熟悉淨零領域專有名詞，具備進入該專業人員之入門水準，提升學員進入從事淨零碳規劃管理相關職務，能初步掌握企業內溫室氣體排放情形。

#### Introduction to Net Zero Carbon Planning and Management 3 E Ming-Yuan, Chiang, S

This course will help cultivate the key competencies required for a Net-Zero Carbon Planner. The course content, in addition to focusing on the key competencies for the iPAS Net-Zero Carbon Planner, key points of assessment, and explanations of supplementary materials, will enhance students' knowledge of international agreements and initiatives related to net-zero carbon planning and management, trade policies, and global responses and practices under climate change. Students will also become familiar with specialized terminology in the net-zero field, achieving a foundational level for entering the profession. This will improve students' ability to handle net-zero carbon planning and management roles and to initially understand greenhouse gas emissions within enterprises

#### (二)土木工程系：

##### 氣象學

2 選

劉力維，下

本課程介紹氣象學的基礎原理、天氣現象及天氣系統，涵蓋了氣象學原理和氣候變遷的概念，天氣圖的分析。課程從農業生產環境中各種氣象要素（如日射、日照、溫度、氣壓、風、雲、霧、降水、蒸發等）的測定方法開始，討論大氣主要和次要環流，局部環流（海風、陸風、山風、谷風）、劇烈天氣、颱風、農業氣象災害，以及農地微氣候的形成過程。

##### Meteorology

2 E

Li-Wei Liu, S

Introduction to the fundamental principles of meteorology, weather phenomena, and weather systems. The course covers the principles of meteorology and climate change, weather map analysis. It begins with the measurement methods for various meteorological elements (such as solar radiation, sunshine, temperature, air pressure, wind, clouds, fog, precipitation, evaporation, etc.) used in the agricultural production environment. It also discusses atmospheric circulation (major and minor), local circulations (sea breezes, land breezes, mountain winds, valley winds), severe weather, typhoons, meteorological disasters in agriculture, and the formation processes of microclimates in farmland.

##### 消防法規

2 選

許美雪，下

現行消防法規應包含消防法規及災害防救法規，「消防與災害防救法規」即包含各種災害事件預防、搶救、調查、鑑定、罰則及消防法與各類場所消防安全設備設置標準。

法條眾多，皆屬於實務性的法律條文。本課程以消防法規為基礎，勾勒整體消防與建築防火安全體系及法規體系之關係架構，以建立往後深入探討各類消防安全設備之參考。

## **Laws of Fire Services**

**2 E**

**MEI-SHIUE SHIU, S**

The current fire protection regulations should include fire protection regulations and disaster prevention regulations. "Fire and Disaster Prevention Regulations" contain various disaster prevention, rescue, investigation, identification, penalty and fire protection laws and fire safety equipment setting standards for various places. There are many laws and regulations, and they are all practical legal provisions. This course is based on fire protection regulations and outlines the relationship between the overall fire and building fire safety system and the regulatory system to establish a reference for further investigation of various fire safety equipment.

### **(三)生物機電工程系：**

## **生物機電整合導論**

**2 選 李柏旻、洪芝青、尤仁宏、陳志堅，上**

本課程主要講授生物機電整合的跨學科性質及實際應用，概述包含生物產業、機械設計、自動控制、智慧機電等相關領域。透過課程，旨在提升學生的互動性、自主性和智能性，使其能夠將理論知識轉化為實際應用，培養解決實際問題的技能。

## **Introduction of Biomechatronics Integration**

**2 E**

The course is based on the knowledge of the interdisciplinary nature and practical applications of Biomechatronics. Integrating knowledge from various fields, including Bio-industrial, Mechanical design, Automatic control, Intelligent mechatronics, etc., enhances interactivity, autonomy and intelligence. This integration allows students to translate theoretical knowledge into practical applications, fostering skills in problem-solving.

## **工程圖學**

**2 選**

**洪芝青，上**

本課程目標在訓練學生以點、線、面精確描述物體的形狀，輔以 **AUTO CAD** 軟體教授學生繪製基準三視圖，內容包括：正投影圖、俯視圖、剖面圖、交線、展開圖、公差與配合、尺寸與註解、表面粗度、標準零件圖、焊接符號。

## **Engineering Drawing**

**2 E**

**C.C. Hung, F**

The purpose of this course is to train the students how to describe the shape with points, lines and planes. This course applied a soft of AUTO CAD to teach the student learn about how to draw the Three-view drawing. Course contents include: orthographic views, auxiliary views, sectional views, intersections, developments, tolerance and fits, dimension and notes, surface roughness, standard parts, and welding symbols.

## **電腦輔助印刷電路設計**

**3 選**

**黃屏瓚，上**

本課程主要教授印刷電路板的繪製方法，並教導學生透過繪製過程了解元件佈局和線路佈局的知識。課程內容將包括：元件基礎知識、電路圖設計、電氣圖件應用、非電氣圖件應用、電路板零件封裝和應用分析等。修習本課程後，學生將了解電路元件和線路佈局技術，並培養他們印刷電路板輔助工具的能力。

## **Computer Aided Printed Circuit Board Design                      3        E                      P.T. Hung , F**

The course explores drawing methods of printed circuit boards and teaches students to understand wiring and component layout. The main contents include the basics of components, circuit diagram design, electrical drawing application, non-electrical drawing applications, circuit board parts packaging, and application analysis. This course trains students to understand circuit concepts and techniques and develops their ability to print circuit board aids.

## **深度學習    3        選    蔡循恒，上**

深度學習課程將深入探討人工智慧領域中最具前景的技術之一。學生將學習人工神經網路的基礎知識，包括前饋神經網路和反向傳播演算法。課程還將介紹深度學習中的經典模型如卷積神經網路和迴圈神經網路，並探討它們在影像處理、自然語言處理等領域的應用。通過實踐專案，學生將掌握如何應用深度學習技術解決實際問題，並培養解決複雜問題的能力。這門課程旨在為學生提供深度學習領域的基礎知識，並啟發他們進一步探索人工智慧的研究和應用。

## **Deep Learning    3        E    H. H. Tsai , F**

The deep learning course delves into one of the most promising technologies in the field of artificial intelligence. Students will learn the basics of artificial neural networks, including feedforward neural networks and backpropagation algorithms. The course also introduces classic models in deep learning such as convolutional neural networks and recurrent neural networks, discussing their applications in image processing, natural language processing, and other fields. Through practical projects, students will master how to apply deep learning techniques to solve real-world problems and cultivate their ability to tackle complex issues. This course aims to provide students with fundamental knowledge in the field of deep learning and inspire them to further explore research and applications in artificial intelligence.

### **(四)材料工程系：**

## **專利檢索與分析    3        選    盧威華，下**

本課程介紹如何進行專利檢索以及專利資料的分析，如何利用專利檢索與分析，協助管理研發流程、規劃研發項目加強技術商品化、提升企業技術競爭力等。課程內容包含專利策略與專利分析、專利說明書之解析、專利檢索、專利侵害分析及實務應用、迴避設計與專利佈網、專利分析結合公司研發運用之策略、智慧財產權管理經驗分享、專利保護實務、管理/技術分析圖/表研析等。

## **Patent Survey and Analysis    3        E    Wei-Hua Lu , S**

The purpose of this course is to train the students to perform patent survey and patent materials analysis. Furthermore, the students will learn to make full use of the patent survey and analysis to improve their process of management, to plan their research and development aiming to technically improve their products, and thus to enhance their corporation competency. The contents of this course include the strategy and analysis of writing a patent, the diagnosis of patent specification, the survey of patented designs, patent invasion analysis, patent avoidance design and patent, the application of patent analysis in the management strategy of the company, the management and sharing of intellectual property rights, the case study of patent protection, the study of technical management

analysis charts, and so on..

### 永續能源材料與元件

3 選

陳彥友，下

永續能源為目前科技發展的重要領域之一，本課程針對能源材料相關的電化學原理基礎進行介紹，包含這些原理衍生出來的各類應用儲能、發電與節能裝置與應用進行介紹，包含各類一次電池與二次電池、燃料電池、太陽能電池、超級電容、發光二極體、儲氫材料與元件等等，使學生對於各類能源裝置的原理與應用，能有一定的認識，特別是針對永續能源的概念。

### Materials and Devices for Sustainable Energy

3 E Yen-Yu Chen, S

Sustainable energy is one of the important fields for current scientific and technological development. This course introduces the basic electrochemical principles related to energy materials, including various energy storage, power generation and energy-saving devices and applications derived from these principles. Primary and secondary batteries, fuel cells, solar cells, supercapacitors, light-emitting diodes, hydrogen storage materials and components, etc. enable students to have a certain understanding of the principles and applications of various energy devices, especially For the concept of sustainable energy.

### 奈米材料特論

3 選

陳威宇，上

本課程將教授化學與物理合成奈米材料、分析與鑑定，並說明形成機制與量子效應。本課程也將講授關於奈米材料於感測、生醫與催化等方面之應用。

### Special Topics in Nanomaterials

3 E

Wei-Yu Chen, F

This course teaches the synthesis, analysis, and identification of nanomaterials in chemistry and physics, and explains their formation mechanisms and quantum effects. It also covers the applications of nanomaterials in sensing, biomedicine, and catalysis..

### (五)先進材料學士學位學程：

### 專利檢索與分析

3 選

盧威華，下

本課程介紹如何進行專利檢索以及專利資料的分析，如何利用專利檢索與分析，協助管理研發流程、規劃研發項目加強技術商品化、提升企業技術競爭力等。課程內容包含專利策略與專利分析、專利說明書之解析、專利檢索、專利侵害分析及實務應用、迴避設計與專利佈網、專利分析結合公司研發運用之策略、智慧財產權管理經驗分享、專利保護實務、管理/技術分析圖/表研析等。

### Patent Survey and Analysis

3 E

Wei-Hua Lu, S

The purpose of this course is to train the students to perform patent survey and patent materials analysis. Furthermore, the students will learn to make full use of the patent survey and analysis to improve their process of management, to plan their research and development aiming to technically improve their products, and thus to enhance their corporation competency. The contents of this course include the strategy and analysis of writing a patent, the diagnosis of patent specification, the survey of patented designs, patent invasion analysis, patent avoidance design and patent, the application of patent analysis in the management strategy of the company, the management and sharing of

intellectual property rights, the case study of patent protection, the study of technical management analysis charts, and so on..



## 四、 管理學院

### (一)資訊管理系：

#### 管理資訊系統

3 選

張慈玲，上

本課程旨在從企業挑戰、企業解決方案、資訊系統、管理、科技等，整合組織、科技，以及管理的觀點，剖析資訊管理領域在實務上所面臨的問題與挑戰，並說明真實世界的解決方案。課程中以最新的資訊科技發展趨勢與組織應用的實例，包括：機器學習、自然語言處理、機器人、深度學習、區塊鏈以及金融科技，討論資訊管理的本質、架構與系統應用機制，了解資訊系統在企業中所扮演的關鍵角色。並結合真實世界的公司治理問題，讓學生思考如何運用資訊科技來協助公司解決問題、強化營運效率。

#### Management Information Systems

3 E

T.L.Chang，F

This course aims to analyze the challenges and solutions faced in the field of information management by integrating perspectives from business challenges, corporate solutions, information systems, management, and technology. It will cover real-world solutions, focusing on the latest trends in information technology and organizational applications, including machine learning, natural language processing, robotics, deep learning, blockchain, and fintech. The course will discuss the nature, structure, and application mechanisms of information management systems, highlighting the critical role of information systems in businesses. By addressing real-world corporate governance issues, students will explore how to leverage information technology to help companies solve problems and enhance operational efficiency.

### (二)工業管理系：

#### 半導體智慧製造

3 選

本課程將深入探討半導體智慧製造的核心概念與實踐，旨在幫助學生了解半導體製造過程，學習如何利用先進技術提升半導體生產的效率與質量。課程涵蓋半導體製造流程的基本知識、智慧製造的關鍵技術（如自動化、數據分析、物聯網和人工智慧等），以及這些技術在現實世界中的應用案例。學生將學習如何運用這些技術來解決半導體行業中的挑戰，包括生產成本、品質控制和供應鏈管理等。本課程還將探討半導體製程未來的趨勢與發展，鼓勵學生思考如何在不斷變化的市場環境中，利用智慧製造技術推動創新與增長。透過理論學習、案例研究和實際應用，本課程旨在培養學生的批判性思維和解決問題的能力，使他們能夠在未來的半導體行業中擔任關鍵角色。

#### Smart Manufacturing for Semiconductor

3 E

This course will delve into the core concepts and practices of smart manufacturing in the semiconductor industry, aiming to help students understand how to leverage advanced technologies to enhance production efficiency and quality. The curriculum covers the fundamental knowledge of semiconductor manufacturing processes, key technologies of smart manufacturing (such as automation, data analytics, IoT, and artificial intelligence), and real-world applications of these technologies.

Students will learn how to apply these technologies to address challenges in the semiconductor industry, including production costs, quality control, and supply chain management. Additionally, the course will explore future trends and developments, encouraging students to think about how to drive innovation and growth through smart manufacturing technologies in a constantly changing market



environment.

Through theoretical learning, case studies, and practical applications, this course aims to cultivate students' critical thinking and problem-solving skills, enabling them to take on key roles in the future semiconductor industry.

### (三)企業管理系：

#### 物流管理

3 選

本課程的主要目的，在於教導學生物流管理所涉及之相關概念，決策範圍及實務。因此，主要的授課內容將包括：物流導論、顧客服務、供應鏈管理、物流資訊、網際網路與物流整合、全球物流、物流定位與策略、物流組織。

#### Logistics Management

3 E

This course will teach students the related concepts, scope of decision-making and practice of logistics management. Therefore, the major subjects will include: overview, customer services, supply-chain management, business logistic information, internet and logistics resources, inventory management, transport management, warehousing management, logistics integration, global logistics, position and strategies of logistics, organization of logistic.

#### 品質管理

3 選

本課程揭櫫企業如何重視品質，如何實施品質規劃，如何進行品質決策，如何從事品質執行，如何遂行品質評核，以提升以品質為基礎的企業競爭優勢。課程將品質管理的內容依觀念、理論與方法介紹，間或輔以例題，期望同學在每章修習完品質管理理論、方法及應用技巧之後，對品質管理有基礎的認識與了解。

#### Quality Management

3 E

How does this curriculum indicate the enterprise to take the quality, how to implement the quality plan, how to carry on the quality decision-making, how to be engaged in the quality execution, how to carry out the quality rating, take promotes by the quality as the foundation enterprise competitive advantage. The curriculum quality control's content according to the idea, the theory and the method introduced that once in a while auxiliary by sample question, expected schoolmate after each chapter studies the quality control theory, the method and the application skill, has the foundation understanding and the understanding to the quality control.

#### 供應鏈管理

3 選

這個課程的目標將涵蓋供應鏈策略和觀念，而且要給學生對必要的分析工具以解決供應鏈有具體了解。此目標即開此課程能對下列領域及相互關係有認知：

1. 供應鏈的策略性角色
2. 供應鏈績效的主要策略性驅動要素
3. 供應鏈分析之方法

學習對每個公司好的供應鏈設計、規劃與營運之策略重要性，以此引導同學能了解好的供應鏈管理如何成為競爭優勢，然而其弱點如何傷害一公司之績效，這是第一個目標。在此策略性框架，我們將確認設施、庫存、運輸及資訊是供應鏈績效的主要驅動因子。

詳述、表達如何將這些驅動因子運用於觀念層次上在供應鏈設計、規劃及營運中

改善績效，這是本課程第二個目標。在每一供應鏈的驅動因子，提供同學實際管理槓桿及觀念，其可被用來改善供應鏈績效也是另一次目標。

給學生了解這些可用之方法是本課程第三目標。

本課程將提供約 5 個公司作為案例，針對其對供應鏈管理努力的不同觀點，這些將有助於同學對供應鏈運用的觀念及手法的觀摩，本課程將包括 6 主要部份：

第一部份 建立一策略性框架來分析供應鏈

第二部份 設計供應鏈網路

第三部份 規劃供應鏈的供需

第四部份 規劃並管理供應鏈的庫存

第五部份 產品之外包、運輸及定價

第六部份 供應鏈的協調與科技

## Supply Chain Management

## 3 E

The goal of this course will be to cover supply chain strategy and concepts, but also to give students a solid understanding of the analytical tools necessary to solve supply chain problems. The objective is to create a course that would develop an understanding of the following key areas and their inter-relationships:

The strategic role of the supply chain

The key strategic drivers of supply chain performance

Analytic methodologies for supply chain analysis

The first objective is to learn the strategic importance of good supply chain design, planning, and operation for every firm that leads students to be able to understand how good supply chain management can be a competitive advantage while weakness in the supply chain hurt that performance of a firm.

Within the strategic framework, We identify facilities, inventory, transportation, and information as the key drivers of supply chain performance. The 2<sup>nd</sup> goal is to convey how these drivers may be used on a conceptual level during supply chain design, planning and operation to improve performance. For each driver of supply chain performance, the goal is to provide students with practical managerial levers and concepts that may be used to improve supply chain performance.

The 3<sup>rd</sup> goal is to give students an understanding of these methodologies.

Some cases will be provided as examples of what occurred in about five different organizations, regarding various aspects of their Supply chain management efforts. They may each be used as a learning vehicle as well as providing information and description which demonstrate the application of concepts and techniques of supply chain.

6 main parts will be included in this course,

1. Building a strategic framework to analyze supply chains

2. Designing the supply chain network

3. Planning demand and supply in a supply chain

4. Planning and managing inventories in a supply chain

5. Sourcing, transporting, and pricing products

Coordination and technology in the supply chain

## 專案管理

## 3 選

從企業觀點，讓學員能夠先探索專案管理的概念，進一步思考專案成功的關鍵、確保專案的需要性與方法，引導學員深入了解，了解專案管理如何運作，了解專案管理的實務應用模式，建立學員具業界與學界期望有的能力與觀念。

教學內容包括：何謂專案管理、組織策略與專案管理之結合、專案之定義與確認、

專案計劃、風險管理、如何縮短專案時程、專案之資源規劃、專案組織運作、專案經理人之領導與專案小組之管理、專案績效之衡量與評估、專案稽核、跨國性專案之管理。

## Project Management

3 E

Over the past several decades, more and more work has been accomplished through the use of projects and project management. The use of projects has been growing at an accelerated rate. This course will be focused on the students' full understanding in the various roles the project manager must play and to the skills required to play them effectively. In addition, to cover the various ways in which projects can be organized. The nature of the project team and the behavioral aspects of projects are also briefly introduced. The skills of project planning, budgeting, scheduling, monitoring, controlling and risk management will be covered too. The major chapters of contents will be including: The world of project management、The manager, the organization and the team、Planning the project、Budgeting the project、Scheduling the project、Allocating resources to the project、Monitoring and controlling the project、Evaluating and terminating the project

## (四)時尚設計與管理系：

### 服裝構成基礎實務實習

1 選

黃賴炤容

本課程旨在向學生介紹服裝構成的基本概念，培養其對服裝設計和製作的理解與技能，同時提供一個良好的入門平臺，使其能夠在服裝領域中更深入地學習。

課程架構包含：服裝構成基本概念、服裝素材與面料、基本服裝製作技術…等理論與實作課程。

### Fundamentals of Garment Construction: Practical Internship 1 E Lai, Chao-Jung

This course aims to introduce students to the basic concepts of fashion construction, developing their understanding and skills in fashion design and garment production. It also provides an excellent introductory platform for students to pursue further studies in the fashion field. The course structure includes theoretical and practical components such as basic concepts of fashion construction, fabric and material selection, and essential garment-making techniques..

## (五)景觀暨遊憩管理研究所：

### 水環境實務特論

3 選

楊州斌，上

受全球氣候變遷影響，極端降雨誘發乾旱與洪水事件頻傳，臺灣地區面臨著水資源供應調配與開發新興公共用水課題。因此，本課程以親水及活水面向來討論水資源運用及水質淨化實務議題，主要目地在建立學生對水環境操作的認識與新思維，做為從事景觀設計與遊憩規劃之專業能力。課程進行方式為水環境內容講授及現場實務教學與討論，水環境內容包括水資源保育、新興水資源開發與水質淨化再利用等，現場實務教學則提供學生實際了解原水/污水處理設施的操作過程，例如自來水廠、再生水場及水質淨化場等。本課程對應 SDGs 4、6、11、13 之聯合國永續發展目標。

### Special Topics on Water Environment Practice 3 E C.P. Yang, F

Taiwan is facing issues such as water resource allocation and development of new public water due to affect by global climate change in recent years, resulting in extreme rainfall triggers frequent droughts and floods. Therefore, this course discusses on the use of water resources and water quality purification from the perspective of hydrophilicity and living water. The main purpose is to establish

students understanding and new thinking on water environment operations. Establish a professional ability to engage in landscape design and recreation planning. The course is consists of water environment content lectures and live practical teaching and discussions. The water environment content includes water resources conservation, emerging water resources development and water purification and reuse. In addition, the live practical teaching provides students understanding of the operation process of raw water/sewage treatment facilities. Such as water plants, reclaimed water plants and water purification plants, etc. This course corresponds to the United Nations Sustainable Development Goals of SDGs 4, 6, 11, and 13..

### **循環經濟與景觀創作(微型課程) 1 選 楊州斌，下**

循環經濟為聯合國永續發展目標(Sustainable Development Goals, SDGs)推動項目之一，本課程將帶與學生利用再生資源，如樹木、蘭草、粗鹽進行創作素材，創造景觀與經濟價值，將有助於永續發展目標的實踐，參與時數須達 18 小時以上

### **Circular Economy and Landscape Creation 1 E C.P. Yang，S**

This course is one of small course of “Sustainable Design and Regional Innovation Program”. Circular economy is one of the projects promoted by the United Nations Sustainable Development Goals, SDGs. This course will teach students to use renewable resources including of trees, rushes, and raw salts. Create landscape and economic value. Then, contribute to the implementation of sustainable development goals. The involved hours should be over 18 hours.

### **水資源景觀生態永續發展遊程(微型課程) 1 選 王英義，上**

本課程在永續發展目標的引領下，帶領學生校外參訪水資源景觀生態現地案例，以了解水資源對景觀規劃和環境生態三者間的相互關係，並培養學生對水資源管理、環境生態保護和永續發展的意識。

### **Sustainable Development Journey of Water Resources Landscape Ecology 1 E**

Under the guidance of sustainable development goals, this course will lead students to participate in off-campus visits to local cases of water resources landscape ecology. This aims to help students understand the interrelationships between water resources, landscape planning, and environmental ecology. Additionally, it seeks to cultivate students' awareness of water resources management, environmental conservation, and sustainable development.

## **(六)高階經營管理碩士在職專班：**

### **中小企業經營管理與談判專題 3 選 許文西、廖世義**

本課程旨在幫助學生瞭解中小企業經營管理與談判的奧妙，訓練學生學習中小企業經營所必須的專業知識及如何將談判的觀念、策略與技術運用於企業和私人的商業交易，以增強管理能力、提高經營績效，本課程會透過中小企業經營管理實務的案例及國內外期刊案例、政經時事、商業談判等個案進行剖析討論，課程報告中會請生用電影情節的敘述判斷出談判的學理。

### **Special Topics in Small and Medium Business Management and Negotiation 3 E**

The purpose of this course is to help students understand the intricacies of managing and



negotiating within small and medium-sized enterprises (SMEs). It aims to train students in the professional knowledge necessary for SME management and in applying negotiation concepts, strategies, and techniques to business and personal transactions. This will enhance their management capabilities and improve business performance. The course will analyze and discuss practical cases of SME management, cases from domestic and international journals, current political and economic events, and business negotiations. In course reports, students will be asked to use descriptions of movie plots to identify and judge the theoretical principles of negotiation..

### 專案與精實管理

### 3 選 洪宗乾、黃祥熙、陳韻珊

精實生產系統是由豐田汽車現場開發出來的生產概念，他的實踐讓豐田汽車在二戰後快速崛起成為全球 10 大公司之一，並在 2007 年成為世界最大的汽車製造商。豐田汽車由生產觀察中發展出由供貨端到客戶端的價值流評估方法，而理想的價值流就是精實生產系統，也就是要達即時生產的目標，也期望達成不生產不必要與瑕疵的產品。而這正是現在增加國際競爭力的客製化生產需要的生產概念，故台灣現在一些製造業者、醫療業、服務業等也紛紛將精實生產導入到他們到生產管理或經營管理中。且在工業 4.0 的前提下，工廠生產逐漸自動化與智慧化，若一條產線沒有好的價值流，將會有更多的不必要的浪費被製造出來。本課程內容包括精實生產系統基本概念與基本達成手法介紹、精實生產系統導入的步驟、精實生產案例分享等。同時也將專案管理及會計相關需要的概念導入來管控精實改善的績效與進度。

### Project and Lean Management

### 3 E

Lean production system is a production concept developed by Toyota. The implementation of lean makes Toyota quickly became one of top 10 companies in the world after World War II and then achieved the largest carmaker in 2007. Through observing in Gemba for years, Toyota developed a methodology to evaluate all production processes from suppliers to customers, called value stream map. An ideal value stream is a lean production which is required to achieve just-in-time manufacturing and not to produce unnecessary or flawed stuffs in any production process. Thus, lean production system can fit to the demand of mass customization. Therefore, some companies in manufacturing, healthcare industry and service industry in Taiwan also start introducing the concept of lean production into their management system. It is worth noting that nowadays, under Industry 4.0, many companies expect to build automatic and intelligent production lines. However, an automatic and intelligent production line without a good value stream should produce more waste and then cost the company much more than before. The content of this course includes the basic concept and methodology of lean production system, the process of introducing lean production system into a production line, and the case study. Meanwhile, the concepts of project management and accounting related knowledge are also introduced to control the performance and progress of lean improvement.

### 大數據分析與智慧物流

### 3 選

### 蔡正發、蘇泰盛

本課程將涵蓋大數據分析與智慧物流兩個部分。在大數據分析方面，本課程將引導學生由應用情境、商業分析的角度，思考可能數據分析之問題，以發展預測分析、人工智慧問題解決方法，例如：群組、分類、相似、異常、關聯、關係、連結、認知等。此外，亦將教授人工智慧、機器學習方法、深度學習方法、生成式 AI 發展以及本文挖掘分析、影像辨識分析等智慧應用。智慧物流將由人、車、貨資訊整合角度出發，探討如何透過人工智慧物聯網(AIoT)技術，運用地理資訊系統(GIS)與全球定位系統(GPS)的車

輛監控與管理，達成車輛排程最佳化、車機管理、車輛監控、績效管理、異常管理、郵件管理、影像處理與其它管理等工作。

### **Big Data Analytics and Smart Logistics      3      E**

This course will cover two parts: big data analysis and smart logistics. In terms of big data analysis, this course will guide students to think about possible data analysis issues from the perspective of application scenarios and business analysis, so as to develop predictive analysis and artificial intelligence problem solving methods, such as: clusters, classifications, similarities, anomalies, associations, relationship, connection, cognition, and so forth. In addition, artificial intelligence, machine learning methods, deep learning methods, generative AI development, text mining analysis, image recognition analysis and other smart applications will also be taught. Smart logistics will start from the perspective of integrating information about people, vehicles and goods, and explore how to achieve many smart logistics through artificial intelligence Internet of Things (AIoT) technology and vehicle monitoring and management using geographic information systems (GIS) and global positioning systems (GPS). Among them, vehicle scheduling optimization, vehicle management, vehicle monitoring, performance management, exception management, email management, image processing and other management tasks are the focus of the course.

### **商務考察實務專題**

**3      選**

**輪授**

本課程特別強調實地參觀與學習的要素，不同於傳統的課堂講授，本課程將帶領學生實際拜訪國內外知名企業進行商務考察，知名企業的經營管理理念融合學生本身之實務工作經驗，在授課教師的引導之下與參訪企業主管進行交流，藉此達到學習商務經營管理相關知識之目的。

### **Practical Topics in Business Study Tours      3      E**

**C. H. Huang**

This course places special emphasis on the elements of on-site visits and learning. Unlike traditional classroom teaching, this course will lead students on business study tours to renowned domestic and international companies. By integrating the management philosophies of these well-known companies with the students' practical work experiences, and under the guidance of the course instructors, students will engage in exchanges with the executives of the visited companies. This approach aims to achieve the goal of learning relevant business management knowledge.



傳閱附件 1-5--本校各學院所屬各系(所)課程中英文摘要-人文暨社會科學院

## 五、 人文暨社會科學院

### (一)幼兒保育系：

#### 幼兒比較教育

2 選 黃庭玫，上

本課程旨在幫助學生建立國際教育視野，理解全球化背景下的教育多樣性，讓學生在未來的幼兒教育領域中具備更多元的觀點和實踐能力。透過比較不同的教育系統，學生將培養對不同文化的尊重與理解，此有助於促進全球意識和跨文化交融。此外，課程將引導學生思考如何將幼兒比較教育的概念應用於實際的教學情況中，培養其成為具備全球素養的教保人員。

#### Comparative Early Childhood Education 2 E Ting-Mei Huang, S

This course aims to help students develop a global perspective and understand educational diversity in the context of globalization, thereby equipping student with a broader range of views and practical skills in the field of early childhood education. By comparing different educational systems, students will cultivate respect and understanding for different cultures, which contributes to fostering global awareness and intercultural integration. Additionally, the course will guide students to think about how to apply the concepts of comparative education to real-world teaching situations, training them to become early childhood educators with global competence.

#### 兒童英語讀寫專題研究

3 選 李俊逸，下

從幼兒學習英語讀寫能力方面切入，本課程著重協助學生建立對於英語發音與拼字基礎能力培養認知，同時，了解閱讀培養與字彙學習之關聯。課程中透過認識並選讀英語兒童繪本，以了解英語發音與拼字在繪本中的運用。此外，介紹並熟悉國內常見之發音標記符號與「字母與聲音對應原則」運用，並且應用學習英語發音與拼字概念設計適當之教學遊戲，以求學做合一。

#### Research Seminar in Children's English Literacy Skills 3 E Chun-Yi Lee, S

This course is designed to provide graduate students with a comprehensive overview of the theory and practice of teaching English reading and writing to children. The course will cover various topics, including phonetic awareness, phonological awareness, the role of phonics and K.K., and reading and building vocabulary. By doing and learning, the students will also apply what they have had on spelling to design learning games.

### (二)社會工作系：

#### 社會安全網實務

2 選

社會安全網計畫是政府為整合社會福利相關服務網絡的重要施政計畫，目的是建立社區為基礎的防護體系，提供家庭為中心的整合服務，計畫內容主要包括四個策略，一是布建社會福利服務中心整合社會救助與福利服務、二是整合保護性服務與高風險家庭服務、三是整合加害人合併精神疾病與自殺防治服務，四是整合跨部會服務體系。故，是目前社會工作專業服務重要的服務內涵。本課程內容涵括介紹社會安全網計畫之精神與重點項目、四大策略的內涵與實務處遇，促進學生對於社會安全網計畫了解，以及熟悉處遇服務

相關知能。

## **Special Project of Social Safety Network 2 E**

The project of Social Safety Net is an important administrative plan for integrating social welfare-related service network. The purpose is to establish a community-based protection system and provide family-centered integrated services. The content of the project includes four main strategies: (1) Establish social welfare service center to integrate social assistance and welfare services. (2) To integrate protective services and high-risk family services. (3) To integrate offenders with mental illness and suicide prevention services. (4) To integrate interagency service system. Therefore, it is an important service connotation of the current social work professional service. The content of this course includes an introduction to the spirit and key point of the Social Safety Net project, the connotation and intervention of four main strategies, facilitate students' understanding of Social Safety Net project and also familiar with the competence of intervention service.

### **(三)休閒運動健康系：**

## **進階繩索挑戰安全操作 2 選**

本課程主要目的在培養學生進階繩索挑戰安全操作能力，透過進階知識與技能介紹，加上課堂上實際操作，讓學生能夠獲得進階繩索挑戰安全操作能力，進而進行活動指導。

## **Advanced Rope Safety 2 E**

The purpose of this course is to develop students' competence for safety practice for challenge ropes courses through the introduction of advanced knowledge and skills as well as the actual practice in class to obtain the competence for advanced instruction.

### **(四)客家文化產業研究所：**

## **六堆客家音樂與展演生態研究 2 選**

三百年前，客家先民於下淡水溪、林邊溪及東港河流域建立抵禦外部勢力的村落形成「六堆」，成為屏東及高雄客家人的集體認同。三百年來因多元族群的衝突、適應與融合，六堆地區發展出臺灣其他客庄所沒有的獨特音樂型態，例如萬枝調、哥去採茶、半山謠、搖兒歌、送郎...等道地的南部客家山歌調；南部客家八音特殊的「中西樂團」現象；以及因社會實踐與文化認同產生的客語流行音樂創作如林生祥、陳雙、顏志文...等。

本課程探討六堆地區客家傳統與流行音樂的演變，並透過在地藝文活動、業師演講、課堂分組進行展演生態論述，使學生對六堆地區客家音樂發展有具體而即時的觀察，並在校外參訪與團隊訪談的過程中，發掘展演困境與研究議題，尋找創新永續的展演模式。

## **Research on Liudui Hakka Music and Performance Ecology 2 E**

Three hundred years ago, Hakka ancestors established villages along the lower Tamsui River, Linbian River, and Donggang River to resist external forces, forming the "Liudui," which became a collective identity for Hakka people in Pingtung and Kaohsiung. Over these three centuries, due to the conflicts, adaptations, and integrations of diverse ethnic groups, the Liudui area developed unique musical forms not found in other Hakka settlements in Taiwan, such as the Wanzhi Tune, Picking tea tune, Near-Mountains Tune, nursery rhymes, and other authentic southern Hakka mountain songs. Additionally, the region features a special "Chinese-Western Orchestra" phenomenon within southern Hakka bayin

music, as well as popular Hakka music creations influenced by social practices and cultural identity, exemplified by artists like Lin Shengxiang, Chen Shuang, and Yan Zhiwen.

This course explores the evolution of traditional and popular Hakka music in the Liudui area. Through local cultural activities, guest lectures, and group discussions, students will gain concrete and immediate insights into the development of Hakka music in the region. Furthermore, through field visits and interviews, they will uncover performance challenges and research topics while seeking innovative and sustainable performance models..

傳閱附件 1-6--本校各學院所屬各系(所)課程中英文摘要-國際學院

## 六、國際學院

### (一)觀賞魚科技及水生動物健康國際學位專班：

#### 魚類營養研究方法專論

**2 選**

水產飼料約佔集約養殖生產總成本的 40-60%，飼料最重要的功能是供應魚類營養素的來源，因此營養均衡的飼料將扮演水產養殖產業成敗的重要關鍵。魚類營養需求的資訊必須建立在具有可信度的結果上，所以合理的實驗設計以及具有統計意義的數據極為重要。本課程將介紹在水產養殖的不同場域，包括實驗室、中間試驗場及田間試驗場，如何進行實驗設計、數據收集及結果分析。課程將有助於學生瞭解魚類營養研究，並可以應用於飼料公司的研發單位或國內外研究機構。

#### Methodology of Fish Nutritional Research

**2 E**

Aquafeed accounts for about 40-60% of total production costs in most intensive aquaculture system. The feeds function as a source of nutrients for fish, thus, a well nutritionally-balanced feed plays an important role in the success of aquaculture business. Information on nutritional requirements for fish must be based on credible research results. Logical experimental design and statistically significant data are required. The course will introduce the experimental design, data collection and result analysis for fish nutritional study in different facilities, including laboratory system, test-field and field trial. It can help students to understand fish nutritional study and to apply the skills in R&D section in feed company and domestic or global research institutes.

#### 細胞與分子營養學專論

**2 選**

本課程以基礎營養學連結至水產動物細胞與分子層次的調控機制，以問題導引教學方式，結合分子營養、細胞營養及能量生化代謝營養學；並以必需營養素功能歸類，從基礎生物化學角度，深入探討能量代謝營養素、抗氧化營養素、甲基化與基因轉譯相關營養素的角色，並討論營養攝取不足與過量(補充劑來源)可能導致水產動物體內潛在的危害與風險。

#### Advanced Topics on Cellular and Molecular Nutrition

**2 E**

This course presents the cross-over disciplinary scientific knowledge, integrating nutrition into the regulatory mechanism in cellular and molecular grades of aquatic animals. The course combines molecular nutrition, cellular nutrition and energetic biochemical nutrition according to question-based teaching approach. Moreover, based on basic functions of nutrients and basic biochemistry explores nutrients relative to energy metabolism, antioxidant, methylation and gene translation. The course also discusses the potential harmful and risk in aquatic animal uptake deficiency or excess nutrients.

傳閱附件 1-7--本校各學院所屬各系(所)課程中英文摘要-獸醫學院

**七、 獸醫學院****(一)獸醫學院：****草食實驗動物 3R 認知與實務 1 選 潘昱儀，李旭薰**

本課程將介紹草食動物作為實驗動物之應用，以及如何透過大數據分析及牧場智慧設備以落實減量、替代、精緻化之 3R 精神。

**Cognition and Practice of Herbivorous Experimental Animals in 3R 1 E**

This course will introduce the application of herbivorous animals as experimental animals, as well as how to implement the spirit of reduce, replace, and refine (3R) through big data analysis and intelligent farm equipment.

**數位醫學影像處理結合 3D 列印實作 1 選 林莉萱，林春福**

高階數位影像配合 3D 列印製作教材與醫療器材，實作課程將讓校內外學生及產業人員了解如何利用數位影像與 3D 列印建立醫學模型，以取代實驗動物的使用。

**Digital Medical Imaging Processing Combined with 3D Printing Practice 1 E**

Advanced digital imaging combined with 3D printing to create educational materials and medical devices. This hands-on course will enable students and industry professionals both within and outside the institution to understand how to use digital imaging and 3D printing to create medical models, thereby reducing the need for laboratory animals.

**小型哺乳類實驗動物替代科技 1 選 陳雅媚**

本課程將介紹常見小型哺乳類實驗動物以及其相關應用。並介紹如何利用科技技術落實減量、取代、精緻化等 3R 措施。

**Replacement Technologies for Small Mammalian Laboratory Animals 1 E**

This course will introduce common small mammal laboratory animals and their relevant applications. It will also cover implementing measures such as reduction, replacement, and refinement (3R) using technological advancements.

**數位科技於實驗動物科學之應用 1 選 鐘曜吉，王祥宇，徐敏恭**

本課程將介紹數位科技替代或優化動物實驗之可行性及未來趨勢，讓受講者能夠從課程中了解或思考將新的技術導入未來的動物實驗中，以達到實驗動物減量與替代之效果。

**The Application of Digital Technology in Laboratory Animal Science 1 E**

This course will introduce the feasibility and future trends of using digital technology to replace or optimize animal experiments, allowing participants to understand or consider incorporating new technologies into future animal experiments. This course aims to achieve the effects of reducing and replacing experimental animals.



**擴增實境模擬動物實驗課程****2 選 林文崎，李伊嘉，潘昱儀**

本課程為線上收播國立中興大學開設課程。本課程讓學生了解與探討：(1)為什麼要使用實驗動物？為何要取代動物實驗？(2)取代動物實驗之優勢和限制為何？(3)如何決定哪種替代方法？(4)執行困難度。課程內容分三大重點：含細胞與組織培養、實體動物建立電腦模擬，AR 教學訓練。3R 的缺陷與努力的目標。課程除了讓學生了解如何建立的 3R 實驗動物替代；最後會讓學生用 AR 的方式體驗解剖的臨場試煉。

**Intelligent Biomedical Technology and Microfluidic 3R Applications 2 E**

This course is offered online by National Chung Hsing University. The course content is divided into three main points: including cell and tissue culture, computer simulation of live animals, and AR teaching training. It also discusses the shortcomings of the 3R principle and the goals of efforts to improve it. In addition to understanding how to establish alternatives to experimental animals according to the 3R principle, the course concludes by allowing students to experience anatomical challenges through AR simulations.

**智能化生醫科技與微流體 3R 應用****2 選 林文崎，李伊嘉，潘昱儀**

本課程為線上收播國立中興大學開設課程。本課程將先介紹利用 AI 智能輔助如影像科技及人工智能模擬疾病等工具以協助治療各種醫學狀況，包括組織損傷、器官衰竭和先天性缺陷等。課程中第二部份將深入淺出介紹當代組織工程學與 AI 智能結合的生醫產業發展。課程將重點說明微流體之器官晶片技術如何利用於實驗動物 3R 替代方案中。

**Intelligent Biomedical Technology and Microfluidic 3R Applications 2 E**

This course is offered online by National Chung Hsing University. The course will begin by introducing the use of AI-assisted tools. The second part of the course will provide an accessible introduction to the development of the biomedical industry, where contemporary tissue engineering intersects with AI intelligence. The course will also emphasize how microfluidic organ chip technology can be utilized in 3R replacement alternatives for experimental animals.

**落實 3R 於水生動物與野生動物之科學應用****1 選 蔡明安，陳貞志**

講授利用水生動物與野生動物進行科學應用時如何透過智慧管理、大數據與人工智慧分析，優化實驗動物之福祉。

**Implementing the 3Rs in the Scientific Application to Aquatic Animals and Wildlife 1 E**

Teaching how to optimize the welfare of laboratory animals through smart management, big data, and artificial intelligence analysis in scientific applications involving aquatic animals and wildlife.

**禽類實驗動物之 3R 替代科技****1 選****鄭明珠**

講授配合現有商業化飼養之農場之智慧管理系統利用人工智慧分析數據可替代傳統之家禽類動物實驗，優化現有動物實驗之設計與照護流程。

**3Rs Replacement Technologies for Poultry Laboratory Animals 1 E**

Teaching how to use artificial intelligence to analyze data from smart management systems in



commercial farming to replace traditional poultry experiments, thereby optimizing the design and care processes of existing animal experiments.

### **實驗豬隻之 3R 認知**

**1 選**

**邱明堂，林昭男，林韋豪**

講授利用豬隻進行科學應用時如何透過智慧管理、大數據與人工智慧分析，優化現有動物實驗之設計與照護流程。

### **3Rs Awareness for Laboratory Pigs**

**1 E**

**Yu-I Pan**

Teaching how to optimize the design and care processes of existing animal experiments through smart management, big data, and artificial intelligence analysis when using pigs for scientific applications.

## **(二)動物疫苗科技研究所：**

### **分子病毒學應用實務**

**2 選**

**王祥宇、曾俞靜**

本課程深入探討病毒的結構、複製過程及宿主交互作用機制，並著重於分子技術在病毒學研究中的應用與實務操作。課程內容涵蓋傳統病毒學、病毒診斷技術及疫苗開發的實務訓練，旨在培養學生扎實的病毒學理論基礎及分子技術應用能力。透過本課程，學生將提升獨立研究及創新能力，並能將分子病毒學知識應用於疫苗開發及相關生物醫學領域。

### **Molecular Virology Practical Application**

**2**

**E**

**Hsian-Yu Wang and Yu-Jing Zeng.**

This course provides an in-depth exploration of virus structure, virus replication, and the mechanisms of interaction with the host. It emphasizes the practical application of molecular techniques in virology research. The curriculum covers traditional virology, virus diagnostic technologies, and hands-on training in vaccine development. The goal is to equip students with a solid foundation in virological theory and the ability to apply molecular techniques. Through this course, students will enhance their independent research and innovation skills, applying their knowledge of molecular virology to vaccine development and related biomedical fields.

傳閱附件 1-8--本校各學院所屬各系(所)課程中英文摘要-達人學院

## 八、 達人學院中英文課綱

### 創新創業學堂課程(1 學分以下微型課程)

#### 創業基礎與實務(7) 0.1 選 王采蕎

會計基礎知識、創業的財務規劃與預算編制、融資策略。

#### Foundation and practice of entrepreneurship (7) 0.1 E T. C. Wang

1. Accounting Basics
2. A business financial plan and Budgeting
3. Financing strategy

#### 創業基礎與實務(8) 0.6 選 王采蕎

確定目標市場、調查潛在客戶、有效辨識客戶需求、新客戶開發的方法、客戶投訴和期望背後的心理。

#### Foundation and practice of entrepreneurship (8) 0.6 E T. C. Wang

1. How to identify your target market
2. Potential customers
3. Effectively identify customer needs
4. Ways to get new customers
5. The psychology behind customer complaints and expectations

#### 綠色創業體驗(犬隻照養管理與實習) 1 選 羅書珊

犬隻照養流程及實作、犬隻基礎訓練理論課程、訓練用具介紹、工作犬簡介。

#### Green Entrepreneurship Experience (Dog caring and kennel management)

#### 1 E S. S. Lou

Caring process for dog and practice. Basic training theory course and practice. Introduction to training tools. Introduction to working dogs.

#### 智慧財產權與科技創新 0.2 選 王采蕎

本課程涵蓋智慧財產權概述、科技創新概述、專利與科技創新、商標與品牌創新、著作權與數位創新、營業秘密與技術創新、智慧財產權管理與商業策略、智慧財產權案例分析及未來趨勢，旨在全面理解智慧財產權與科技創新的關聯。

#### Intellectual Property Rights and Technological Innovation 0.2 E T. C. Wang

This course covers an overview of intellectual property rights, an overview of technological innovation, patents and technological innovation, trademarks and brand innovation, copyrights and digital innovation, trade secrets and technological innovation, intellectual property management and business strategies, case studies of intellectual property, and future trends, aiming to comprehensively understand the relationship between intellectual property rights and technological innovation.

#### 新產品設計 0.6 選 王采蕎

應用創意思維技巧，開發以用戶為中心的創新產品設計；使用設計工具、軟件和技術，開發的關鍵；進行市場調查和分析消費者需求的技能，以設計決策；獲得有關製造過程和成本考量的見解，以確保設計具有可行性和經濟性；運用設計思維原則，以用戶為中心和迭代的方式來進行問題解決和產品設計。

#### New Product Design 0.6 E T. C. Wang

Apply creative thinking techniques to develop user-centered and innovative product designs. Utilize design tools, software, and technologies that are essential for development. Conduct market research and analyze consumer needs to inform design decisions. Gain insights into manufacturing processes and cost considerations to ensure design feasibility and economic viability. Employ design thinking principles to

approach problem-solving and product design in a user-centered and iterative manner.

### **創新創業實作(3) 1 選 王采蕎**

創業構想提案、創客實作、商業模式、成本計算與實務

### **Innovation and entrepreneurship (3) 1 E T. C. Wang**

Advanced entrepreneurship idea proposal. Advanced maker implementation. Advanced business model briefing. Advanced cost calculation and practical application.

## **產業增能學堂課程(1 學分以下微型課程)**

### **設計產業整合與創新 0.5 選 馮俊豪**

本課程以業界專業師資輔助教學，將產業需求及資訊帶入課程，培養學生運用設計創新概念於各行業之應用，提升學生未來就業發展之競爭力。

### **Integration and innovation of the design industry 0.5 E C. H. Feng**

In this course we invite industry professionals to explain design industry demand and information. We want students to create many different innovative ideas and apply them into industrial management. the purposes of this course are to improve competitiveness of student and employment opportunities in the future.

## **永續發展學堂課程(1 學分以下微型課程)**

### **農業數位轉型實務應用 0.5 選 吳庭育、潘建良**

本課程旨在培養學生在農業領域中實際應用物聯網技術、人工智慧等數位轉型技術的專業能力。本課程將融合理論知識與實務案例，讓學生深入運用農業數位轉型概念和實作技術，實際解決農業問題。

### **Practical Applications of Agricultural Digital Transformation**

### **0.5 E T. Y. Wu, J. L. Pan**

This course equips students to apply IoT, AI, and digital transformation technologies in agriculture through theory and practical case studies.

### **動物試驗與教學之減量、替代之方法綜論 1 選 陳雅媚**

試驗設計包含如何估計樣本所需數量，並通過分組討論和練習來進行樣本數估計。此外，課程還涵蓋了數學模式與試驗設計的範例與練習，並深入探討人工智慧和大數據在試驗設計中的應用。為減少實驗動物的使用，課程介紹了細胞培養技術，並討論了 3D 列印技術的基本概念，特別是如何利用 3D 列印來替代實驗動物的應用。

### **A Comprehensive Review of Methods for Reduction and Replacement in Animal Testing and Education 1 E Y. M. Chen**

The experimental design includes how to estimate the required sample size, with group discussions and practice sessions focused on sample size estimation. Additionally, the course covers mathematical models with examples and exercises in experimental design, along with an in-depth exploration of the application of artificial intelligence and big data in experimental design. To reduce the use of experimental animals, the course introduces cell culture techniques and discusses the fundamentals of 3D printing technology, particularly its application in replacing experimental animals.

### **記帳士實務入門(2) 1 選 馬上閱**

會計學概要、稅務相關法規概要、記帳相關法規概要、租稅申報實務、稅務法規。針對有意報考 11 月國家考試學生加強論述。

### **Introduction to Bookkeeper Practice (2) 1 E S. M. Ma**

Overview of Accounting, Summary of tax-related regulations, Summary of accounting-related laws and regulations, Tax declaration practice and Tax regulations.

## 木材科學與設計系木藝技優領航專班課程摘要(113 入學)

### 一、必修科目

<b>01 木材物理性質與利用</b>	<b>1 必</b>
本課程主旨在使學生體認木材的物理性質的特徵，諸如：木材之比重、水分特性(吸脫濕遲滯、收縮膨脹及吸水性)、熱性質(比熱、熱傳導及熱擴散)、音響性質(吸音率、吸音特性及遮音特性)、電氣特性(導電性及誘電性)等，俾有助於其加工製作與設計材料運用之理解。	
<b>01 Wood Physical Properties and Utilization</b>	<b>1 R</b>
The purpose of the course is introducing the physical properties of wood in the process and design. The contents include: wood specific gravity, wood-moisture relations of wood, thermal properties of wood, acoustic properties of wood, electrical properties of wood.	
<b>02 木材物理性質與利用實習</b>	<b>1 必</b>
本課程使學生熟悉木質物理學性質之測定方法，其內容包括木材之比重、含水率測定、木材之吸、脫濕的含水率遲滯現象、吸濕膨脹率及吸水膨脹率之測定、木材之熱傳導率測定及計算、木材之吸音率測定及計算、木材之誘電率及導電性測定及計算。	
<b>02 Wood Physical Properties and Utilization Lab.</b>	<b>1 R</b>
The objective of laboratory work is to teach the students who become familiar with the methods of measuring the physical properties of wood. The contents include determination of specific gravity and moisture content, observation of moisture absorption and desorption hysteresis measuring the and measurement of shrinkage and swelling, determination of thermal conductivity calculation, determination of sound adsorption coefficient, dielectric properties and electrical conductivity.	
<b>03 木材鑑別與商用木材</b>	<b>2 必</b>
本課程之目的在使學生了解木材解剖與鑑定之意義、木材之種類及鑑別方法、木材之巨視構造與微視構造及重要商用木材之特徵。針對各地區具有經濟用途及開發潛力的木材特徵與用途。	
<b>03 Wood Identification and Commercial Timber</b>	<b>2R</b>
Introducing the definition of wood anatomy and identification, the methods of identification, the macrostructure and microstructure of wood, the characteristics of important commercial timber.	
<b>04 木材鑑別與商用木材實習</b>	<b>2 必</b>
木材之解剖及鑑定乃在研究木材內部及外部形態之一門科學，對於木材之各種工藝利用，首先必須考慮木材之構造，因此不僅在樹種之鑑定乃必要，同時與其物理及機械性質具密切之關係。本實習課程包括下列項目：木材外觀特徵之觀察、木材鑑定別之方法及標本觀察之準備、商用木材巨視與顯微構造之觀察。	
<b>04 Wood Identification and Commercial Timber Lab.</b>	<b>2R</b>
The anatomy and identification of wood is a science that explores the internal structure and external morphology of wood. The structure of wood must first be taken into consideration with regard to technological utilization of wood. And thus, it is necessary not only in the identification of wood, but also in understanding the physical and mechanical properties of wood. This course mainly consists of the following parts: 1.the methods of wood identification and preparation of specimens, 2.the observation of gross feature and microstructure of commercial timber.	
<b>05 木材化學性質與利用</b>	<b>2 必</b>
本課程旨在講授木材內主要及次要化學組成分之基本知識，詳述纖維素、半纖維素、木質素及萃取成分等之結構性質及利用方法，期使學生充分瞭解影響木材化學性質之機制，進而達成合理化之化學工業應用。	
<b>05 The Chemical Properties and Application of Wood</b>	<b>2R</b>
The course is designed to fulfill the needs of the forest products students to be better acquainted with the fundamental knowledge of various major and minor chemical components in wood. The molecular structure, properties as well as utilization methods of cellulose, hemicellulose, lignin and extractives will	



be fully described to enable students to understand the mechanisms that control the properties and to manipulate those properties to suit industrial needs.	
<b>06 木材化學性質與利用實習</b>	<b>2 必</b>
配合木材化學性質與利用有關理論之介紹，設計八項實習使學生從動手操作中體會各種木材化學成分之不同性質。實習內容包括試材之製備木粉、含水率、水萃取物、1%NaOH 萃取物、灰分、乙醇甲苯萃取物、全纖維素與木質素等之定量分析。	
<b>06 The Chemical Properties and Application of Wood Lab.</b>	<b>2R</b>
Eight labs are established to enable the students fully understand the different properties of various wood chemical constituents lectured in the classroom. The contents include : preparation of testing materials, moisture content determination of wood meal, analysis and determination of water, 1% NaOH and ethanol-toluene extractives, measurement of ash, determination of holocellulose and lignin.	
<b>07 木材乾燥與保存實務</b>	<b>2 必</b>
本課程介紹有關木材之乾燥以及保存處理之性質、原理、實際作業方法，使學生具有實際操作之技術並期獲得最低之處理成本與最佳之成品品質。常用之乾燥方法有氣乾及窯乾兩種方法。而木材保存常用之方法有空胞法(有魯賓法及勞力法)及滿胞法。	
<b>07 Wood Drying and Preservation Practice</b>	<b>2R</b>
This course presents information on wood drying. Related treating properties, principles and practical techniques that can be applied to the drying and preservation of lumber, dimension stock and many special items will be emphasized in order to reduce cost of treatments and maintain high quality of wood products. There are two major wood drying processes (1)Air dry(2)Kiln dry. Also there are two General classes of wood preservatives: such as full-cell (Bethel) and empty-cell (Ruepping) processes.	
<b>08 木材膠合與表面裝飾實務</b>	<b>2 必</b>
本課程之內容設計主要在訓練學生瞭解木材工業常用的膠合劑之種類、反應化學、使用方法、硬化後膠膜性質，以及包括木工塗裝材料、塗裝系統、塗裝機具、特殊塗裝方法、塗裝缺點及其對策等。同時也教導學生木材薄片貼面與實木鑲嵌之實務技能。	
<b>08 Wood Adhesion and Surface Decoration Practice</b>	<b>2R</b>
This course is designed to acquaint students with types of adhesive commonly used in the wood industry, their reaction chemistry, application methods and properties of glued members, and with finishing materials, finishing systems, operating systems, special finishing methods, finishing problems and remedies, etc.. And also to guide student making the practical skills of wood veneer overlay and wood inlay.	
<b>09 木質板應用實務</b>	<b>3 必</b>
本課程旨在傳授學生合板、木芯板、層積材、單板層積材、粒片板及纖維板等以木質材料為原料的初級加工產品(木質複合材料)之性質，使學生瞭解市售木質複合材料之特殊使用性能，充分應用於設計實務，增進材料應用範疇等有關知識。	
<b>09 Wood-Based Processing and Application Practice</b>	<b>3R</b>
This course is designed to acquaint students with types of adhesive commonly used in the wood industry, their reaction chemistry, application methods and properties of glued members, and with finishing materials, finishing systems, operating systems, special finishing methods, finishing problems and remedies, etc.. And also to guide student making the practical skills of wood veneer overlay and wood inlay.	
<b>10 專題製作</b>	<b>3 必</b>
此課程培養學生基礎實務能力,藉由在學中所學理論與實作加以應用與實現。	
<b>10 Special topic</b>	<b>3R</b>
The goal of this course is to cultivate students' basic ability through applying and realizing theory into practice.	
<b>11 暑期職場實習(3)</b>	<b>4 必</b>
本課程主旨在讓學生提早體驗職場，建立正確工作態度，藉由至本系相關企業見習與觀摩學習，	



使學校理論教學與實務結合，激發學生學習及進行未來生涯發展規劃，養成專業興趣及就業能力，縮短學用落差。本課程採暑期制施行，需在同一機構連續實習至少為期 2 個月，學生應全職於實習機構實習。

<b>11 Summer Vacation Profession Workplace Practice (3)</b>	<b>4R</b>
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The main purpose of this course is to allow students to experience employment environment and to establish a positive working attitude. The course combines both theory and practice in wood science and design by cooperating with related institutions to provide on-the-job learning opportunities. Students could learn and develop their career plans. Furthermore, the course aims to develop professional interests and employment ability for students to shorten the gap between academic and real employment. The course is available in the summer vacation. It requires the students to participate in internships of the institutions for no less than 2 consecutive months. During the internship period, students should take full-time internships at internship institutions.

<b>12 學年職場實習(1)</b>	<b>4 必</b>
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本課程主旨在讓學生提早體驗職場，建立正確工作態度，藉由至本系相關企業見習與觀摩學習，使學校理論教學與實務結合，激發學生學習及進行未來生涯發展規劃，養成專業興趣及就業能力，縮短學用落差。本課程採學期制施行，需在同一機構連續實習至少為期 4.5 個月，實習期間除依各校訂定定期返校之座談會或研習活動等外，學生應全職於實習機構實習。

<b>12 Academic year Profession Workplace Practice (1)</b>	<b>4R</b>
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The main purpose of this course is to allow students to experience employment environment and to establish a positive working attitude. The course combines both theory and practice in wood science and design by cooperating with related institutions to provide on-the-job learning opportunities. Students could learn and develop their career plans. Furthermore, the course aims to develop professional interests and employment ability for students to shorten the gap between academic and real employment. This course is implemented on semester basis. A continuous internship in the same institution is required for at least 4.5 months. During the internship period, students should take full-time internships at internship institutions, except for scheduled regular seminars or study activities that require students to return to school.

<b>13 學年職場實習(2)</b>	<b>4 必</b>
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本課程主旨在讓學生提早體驗職場，建立正確工作態度，藉由至本系相關企業見習與觀摩學習，使學校理論教學與實務結合，激發學生學習及進行未來生涯發展規劃，養成專業興趣及就業能力，縮短學用落差。本課程採學期制施行，需在同一機構連續實習至少為期 4.5 個月，實習期間除依各校訂定定期返校之座談會或研習活動等外，學生應全職於實習機構實習。

<b>13 Academic year Profession Workplace Practice (2)</b>	<b>4R</b>
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The main purpose of this course is to allow students to experience employment environment and to establish a positive working attitude. The course combines both theory and practice in wood science and design by cooperating with related institutions to provide on-the-job learning opportunities. Students could learn and develop their career plans. Furthermore, the course aims to develop professional interests and employment ability for students to shorten the gap between academic and real employment. This course is implemented on semester basis. A continuous internship in the same institution is required for at least 4.5 months. During the internship period, students should take full-time internships at internship institutions, except for scheduled regular seminars or study activities that require students to return to school.

## 二、選修科目

<b>14 設計概論</b>	<b>1 選</b>
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設計概論為設計領域的基礎必修學科，旨在引導設計系大一學生，在習得設計實踐必備之理論知識與技法之前，先建立有關設計專業領域的基本概念。探討主題將從設計的定義與範圍進行設計探討包括生活設計中的理解與審美、設計教育，透過國內外設計產品賞析培養自身對工業設計的詮釋與美學建立，鼓勵學生從課題中自主思考與學習。

<b>14 Introduction to Design</b>	<b>1 E</b>
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Design Introduction is the basic compulsory subject in the field of design. It aims to guide a university student in design department to establish the basic concepts of design profession before acquiring the theoretical knowledge and skills necessary for design practice. The theme of the discussion will be from the definition and scope of design to explore including understanding of life design and aesthetic education, design education through the appreciation of design products at home and abroad to cultivate their own interpretation of industrial design and aesthetics, to encourage students to think and study independently from the subject.	
<b>15 設計史</b>	<b>1 選</b>
本課程教學主要目的在引出一些設計史的重要設計年代、代表性的設計師思考理念、設計作品和重大設計事件的原由等。藉由歷史觀點，認識「設計」的脈絡演變，進而探討設計的本質。思考歷史的變化過程，設計與社會、政治經濟等社會文化背景之間的因果關係。透過對設計師的了解建構設計與鑑賞設計作品的能力，使學生建立自我批判的能力。	
<b>15 Design History</b>	<b>1 E</b>
The main purpose of this course teaching leads to some important design age of the design history, representative designers to think about ideas, design work and major design events and so on. From a historical point of view, we understand the evolution of “design” to explore the nature of design. Thinking about the process of change in history, design and social, political and economic and other social and cultural causal relationship between. Through the understanding of designers to construct design and appreciation of the ability to design work, so that students build self-critical ability.	
<b>16 木工實習(1)</b>	<b>1 選</b>
本課程旨在提供家具工廠一貫作業所使用的機械之基本原理、操作技術與安全衛生之必須知識，以訓練學生熟知並練習各種機械之正確操作與應用為目的。本課程分為：機械原理及木工機械總論、鋸切機械、鉋切機械、銑削機械、鑽孔機械、成型機械、研削機械、加壓機械(油壓或壓縮空氣機)及加熱設備(含電熱、蒸汽熱源、大電流發熱、微波及高週波發振機等)等之選用、調整、操作及基本維護。	
<b>016 Woodworking Practice (1)</b>	<b>1 E</b>
The topics of this course are to introducing the machinery of furniture manufacture. It includes: the principles of machinery, woodworking machine, safety and healthy of processing. Introducing contents the selection, operating, adjustment and maintain of sawing, jointing, planning, routing, shaping, drilling, moulding, tenoning, sanding (grinding), pressing (by hydraulic or air compressor) and heating (by electronic heater, steam boiler, high current, microwave or high frequency generator) equipments, in this course.	
<b>17 基本設計</b>	<b>1 選</b>
基本設計是學習設計的基礎學科，課程目標在建立美學概念並將設計原理與方法應用於設計，包括平面、立體與空間構成的設計實作。課程內容包含設計概論、設計史、美學原理，並探討設計的造形、色彩、質感、空間、機能等主題。本課程的訓練有助於建立學生正確的美學概念，激發創意思考能力並熟練表現技巧，本課程是學生未來從事空間設計、室內設計、產品設計、工業設計等工作的基礎。	
<b>17 Basic Design</b>	<b>1 E</b>
Basic Design is the introductory course of design studies. The objective of the course is to establish concept of Esthetics and to apply design theory and method to the actual design including the operation in constructing two-dimensional, three-dimensional and space designs. This course content includes introduction to design, the history of design and theory of Esthetics, as well as discussions on themes such as the style, color, material, space and functions of design. Through the training in this course, students will acquire and develop in the concept of Esthetics, creativity and presentation skills. This course is the foundation to all students pursuing a career in space planning, interior design, merchandise design, and industrial design.	
<b>18 基本設計實習</b>	<b>1 選</b>
基本設計實習是配合基本設計課程，讓學生從事基本設計之操作實習，從設計的操作、觀摩與討	

論過程增加對設計的認識與經驗。主要課程內容包含平面造形設計之構成方法與形式，以及立體造形設計之構成方法與形式。本課程之進行以實作與講評討論為主要教學方式，訓練學生將所學到的基本設計原理，藉由各種材料的質感與色彩的操作，具備多元化造形設計表現的能力。	
<b>18 Basic Design Practice</b>	<b>1 E</b>
Basic Design Practicum is combined with the Basic Design course. The practicum allows the students to apply Basic Design in practice. Students will acquire further knowledge and design skills through the practice, demonstration and discussions offered in the practicum. The content of this course includes the method and style in constructing two-dimensional and three-dimensional designs. Lectures will be conducted in the form of a practicum, which will require the students to practice basic design theories with various materials and color schemes, to equip the students with the capability of creative design in various styles.	
<b>19 基礎圖學</b>	<b>1 選</b>
本課程乃相關設計之圖說語言，著重於培訓學生表達及記錄設計與製造所需的觀念與知識，供學生未來從事空間設計、室內設計、產品設計的基礎。其內容包括：繪圖基本技巧、平面幾何圖法、正投影視圖、剖面視圖、輔助視圖、尺度標註與註解、公差與配合、立體圖與透視圖的繪製等，並配合設計圖面練習模型製作。	
<b>19 Basic Graphics</b>	<b>1 E</b>
The universal graphical language used in the related design work is offered in the course. It focuses on training for students in expressing and recording the ideas and information necessary for designing and manufacturing. The course establishes foundation for students in future career development, such as space design, interior decoration design and products design. The content includes basic skill of drawings, descriptive geometry, orthographic projection, sectional views, auxiliary views, dimensioning and marks, tolerance and fits, axonometric drawings and perspective views, etc. In addition, the course includes model making based on design drawing.	
<b>20 專業技術增能實習(1)</b>	<b>1 選</b>
本課程乃相關木藝技術之提升，課程內容以實務操作方向設計，包括實木榫接技法、箱體結構、薄片拼貼、五金按裝等相關技術。以提升本系木藝技優學生實務專業技術與正確工作態度之養成，因應未來職場需求。	
<b>20 Professional Skill Empowerment Practice (1)</b>	<b>1 E</b>
The purpose of this course is to improve students' skills in woodworking, and it is designed to be a practice-oriented course. The content includes techniques of making tenon and joint, laminating, installing accessories, and introduction of cabinet structure. The course aims to improve professional skills of students who are enrolled through special achievement program and cultivate a correct working attitude for them.	
<b>21 職類技能實習(1)</b>	<b>1 選</b>
為鼓勵本系技優學生參加全國技能競賽，本課程乃針對各學生所參與職類競賽提供其專業師資技術指導，如家具木工、門窗木工、油漆裝璜...等相關職類。讓技優學生可增加其本身技能，以爭取獲獎機會。	
<b>21 Practice in Skills of Related Trades</b>	<b>1 E</b>
In order to encourage the department's special achievement-based admission students to participate in the National Skills Competition, the course provides instructions in professional skills for students who participate in the National Skills Competition in related trades, such as Cabinatemaking Trade, Joinery Trade and Painting Trade. The course aims to enhance students' skills to improve their performances in the National Skills Competition.	
<b>22 國際技能競賽實習(1)</b>	<b>1 選</b>
本課程乃針對本系獲選國技能競賽國手，可依各職類國手培訓計畫規畫進行培訓，並可選擇在校或培訓機構加強訓練。提供國手最佳訓練場地及師資，提升技能競賽國手本身技能，以爭取為國爭光機會。	
<b>22 WorldSkills Competition Practice (1)</b>	<b>1 E</b>



This course is designed for students of the department who have been selected to be the national champions to participate in WorldSkills Competition. The content is based on the training plan of champions of each trade, and the champions are allowed to be trained at the school or at training institutions. The course provides suitable training environment and team for champions, aiming to improve their skills to have better performances in WorldSkills Competition.	
<b>23 色彩計畫</b>	<b>1 選</b>
本課程主要講授之重點在於培養學生對色彩的基本認識與激發學生自我的色彩應用技巧。基本上授課內包含：認識色彩、色彩體系、色彩混合與對比、色彩感覺與應用、配色原理與色調分析、色彩計畫的專題製作運用。其次分組報告：同學以自由分組方式對於色彩的使用實例進行研究，並於課堂上發表各組之研究成果，並繳交書面報告及作品呈現。	
<b>23 Color Scheme</b>	<b>1 E</b>
The main focus of this course is to give students a basic understanding of color and stimulate student self-color application skills. Basically, the lectures include: production of knowledge, color system, color mixing and contrast, color perception and application, color matching principle and color analysis, and color planning. The second, group report: students to use free grouping of examples of the use of color research, and in the classroom published research results, and provide a written report and presentation.	
<b>24 木工實習(2)</b>	<b>1 選</b>
本課程旨在提供家具工廠一貫作業所使用的機械之基本原理、操作技術與安全衛生之必須知識，以訓練學生熟知並練習各種機械之正確操作與應用為目的。本課程分為：機械原理及木工機械總論，鋸切機械、鉋切機械、銑削機械、鑽孔機械、成型機械、研削機械、加壓機械(油壓或壓縮空氣機)及加熱設備(含電熱、蒸汽熱源、大電流發熱、微波及高週波發振機等)等之選用、調整、操作及基本維護。	
<b>24 Woodworking Practice (2)</b>	<b>1 E</b>
The topics of this course are to introducing the machinery of furniture manufacture. It includes: the principles of machinery, woodworking machine, safety and healthy of processing. Introducing contents the selection, operating, adjustment and maintain of sawing, jointing, planning, routing, shaping, drilling, moulding, tenoning, sanding (grinding), pressing (by hydraulic or air compressor) and heating (by electronic heater, steam boiler, high current, microwave or high frequency generator) equipments, in this course.	
<b>25 人因設計</b>	<b>1 選</b>
課程規劃以培養學生具有以人類行為與心理之角度去探討產品、介面與互動等相關研究之能力。人因設計為探討人類生理與心理因素，感知、動作與行為之訊息、特性及能力，將之應用在設計上。使產品不但能達成使用者目標，且易於使用，並讓使用者對使用過程滿意，進而產生品牌忠誠度。本課程將介紹針對以產品之人機介面設計與使用者介面為重點，包含人機互動概念、原理與手法，並探討如何融入於產品與系統的設計過程中，設計出更符合人性的產品，進一步提升產品使用性與魅力。	
<b>25 Human Factors Design</b>	<b>1 E</b>
Curriculum planning to develop students with the human behavior and psychological perspective to explore the product, interface and interaction related research capabilities. Human factors designed to explore human physiological and psychological factors, perception, action and behavior of the message, features and capabilities, will be applied to the design. So that the product not only achieve user goals, and easy to use, and allow users to satisfaction in the user's process, resulting in brand loyalty. This course introduces how to design a more human-friendly product that focuses on the design and user interface of human-machine interface, including concepts, principles and practices of human-computer interaction and how to integrate it into the design process of products and systems. Further enhance product usability and charm.	
<b>26 設計表現技法</b>	<b>1 選</b>
設計表現技法課程的主要目的是訓練學生熟練各種圖形的繪製技巧。課程內容包含設計概念與設計圖的表達方法。課程最主要的部分是各種圖形的繪製方法與技巧的熟習。設計表現技法主要是	

作為設計表達的進階訓練，包括平面圖、立面圖、剖面圖及透視圖的繪製。此外本課程也訓練學生配合設計圖面練習模型製作。本課程是學生未來從事空間設計、室內設計、產品設計的基礎。	
<b>26 Design Presentation</b>	<b>1 E</b>
The objective of this course is to familiarize the students with the presentation method of design. Course content includes design concept and the presentation of design in drawing. The core of the course is familiarization of the method and skills of diagrams drawing. Design Drawings Presentation Practicum provides the advance training of presenting design ideas in two-dimensional, three-dimensional, section and perspective drawings, as well as producing. This course is a pre-requisite for students pursuing a career in space planning, interior design, merchandise design, and industrial design.	
<b>27 設計表現技法實習</b>	<b>1 選</b>
設計表現技法實習是配合設計表現技法課程，主要目的是訓練學生熟練各種圖面的繪製技巧。課程內容包含設計概念與設計圖的表達方法。課程最主要的部分是各種圖面的繪製方法與技巧的熟習。設計表現技法主要是作為設計表達的進階訓練，包括平面圖、立面圖、剖面圖及透視圖的繪製。此外本課程也訓練學生配合設計圖面練習模型製作。本課程是學生未來從事空間設計、室內設計、產品設計的基礎。	
<b>27 Design Presentation Practice</b>	<b>1 E</b>
Design Presentation Practicum is combined with the Design Presentation course. The objective of this course is to familiarize the students with the presentation method of design. Course content includes design concept and the presentation of design in drawing. The core of the course is familiarization of the method and skills of diagrams drawing. Design Drawings Presentation Practicum provides the advance training of presenting design ideas in two-dimensional, three-dimensional, section and perspective drawings, as well as producing. This course is a pre-requisite for students pursuing a career in space planning, interior design, merchandise design, and industrial design.	
<b>28 專業技術增能實習(2)</b>	<b>1 選</b>
本課程乃相關木藝技術之提升，課程內容以實務操作方向設計，包括手提電動工具、圓鋸機、帶鋸機、花鉋機、立軸機、作榫機等相關技術。以提升本系木藝技優學生實務專業技術與正確工作態度之養成，因應未來職場需求。	
<b>28 Professional Skill Empowerment Practice (2)</b>	<b>1 E</b>
The purpose of this course is to improve students' skills in woodworking, and it is designed to be a practice-oriented course. The content includes techniques of operating portable power tool, circular saw machine, band saw machine, router, spindle shaper and tenoner. The course aims to improve professional skills of students who are enrolled through special achievement program and cultivate a correct working attitude for them.	
<b>29 職類技能實習(2)</b>	<b>1 選</b>
為鼓勵本系技優學生參加全國技能競賽，本課程乃針對各學生所參與職類競賽提供其專業師資技術指導，如家具木工、門窗木工、油漆裝璜...等相關職類。讓技優學生可增加其本身技能，以爭取獲獎機會。	
<b>29 Practice in Skills of Related Trades (2)</b>	<b>1 E</b>
In order to encourage the department's special achievement-based admission students to participate in the National Skills Competition, the course provides instructions in professional skills for students who participate in the National Skills Competition in related trades, such as Cabinatemaking Trade, Joinery Trade and Painting Trade. The course aims to enhance students' skills to improve their performances in the National Skills Competition.	
<b>30 國際技能競賽實習 (2)</b>	<b>1 選</b>
本課程乃針對本系獲選國技能競賽國手，可依各職類國手培訓計畫規畫進行培訓，並可選擇在校或培訓機構加強訓練。提供國手最佳訓練場地及師資，提升技能競賽國手本身技能，以爭取為國爭光機會。	
<b>30 WorldSkills Competition Practice (2)</b>	<b>1 E</b>
This course is designed for students of the department who have been selected to be the national	



champions to participate in WorldSkills Competition. The content is based on the training plan of champions of each trade, and the champions are allowed to be trained at the school or at training institutions. The course provides suitable training environment and team for champions, aiming to improve their skills to have better performances in WorldSkills Competition.	
<b>31 家具製圖</b>	<b>2 選</b>
本課程主要內容在訓練學生針對家具產業繪圖技術人員的職能強化，課程中由桌、椅、櫃、廚、床與生活用品的設計圖繪製到結構設計探討分析後的工作圖繪製，再由工作圖解構後的生產零件圖繪製與裝配組合圖繪製技巧訓練。	
<b>31 Furniture Drawing</b>	<b>2 E</b>
The main content of this course is to train students who reinforce the functions of drawing technicians in the furniture industry. The courses training the design from the sketch of tables, chairs, cabinets, kitchens, beds and household products which could be converted to the working drawings for the analyzing and analyzing structural designs. Furthermore, the graphical production after the production of parts drawing and assembly combination drawing skills training.	
<b>32 電腦輔助設計(1)</b>	<b>2 選</b>
本課程以教導學生學習與使用電腦 3D 繪圖軟體，使同學具備製作出各式各樣的電腦 3D 模型，並應用於設計課程中。且藉由對不同案例的繪製練習，讓學生們更能充分運用電腦 3D 繪圖軟體的優點，加以整合設計出出色的作品來。	
<b>32 Computer Aided Design (1)</b>	<b>2 E</b>
Guiding the students familiar with skills using computer 3D drawing software. Training the attendants to handle or create various types of 3D models and applied to design courses. The attendants can fully employ the advantages of computer 3D sketch software through the practice on several different case studies and produce an integrated design project.	
<b>33 家具製作實習(1)</b>	<b>2 選</b>
本課程以配合同學學習的背景及技術能力等因素，實地設計製作自己擅長的木藝作品，並幫助學生具備家具木工乙級技術士的技能。課程中訓練學生有關帶鋸機、圓鋸機、角鑿機、鑽孔機、懸臂鋸、花刨機等木工機具使用。教導木材高階之榫接技術、拼板技術、封邊技術，並透過實際製作桌子，訓練同學木工操作技能，培養個人品質要求素質及熟練度。	
<b>33 Furniture Manufacturing Practice(1)</b>	<b>2 E</b>
This course is aimed at training the students having the ability to design and to make out the wood works which they want and like to do. The purpose is to enhance the students' ability to pass the B grade qualification held by the Committee of Labors. The course offers students the training in using woodworking machines including band saw, circular saw, drilling machine, overhang saw, router and the other basic tools. Advanced woodworking techniques including connection of joints, lumber assembly, and edge sealing are highlighted in the course. Each student will be asked to make a wood table as a practice training of woodworking skill and quality control.	
<b>34 智能加工技術精進實習(1)</b>	<b>2 選</b>
本課程主旨在讓學生學習智能化加工原理及機械操作技術，課程內容有智能化的基本組成知識，如物聯網、大數據、雲端計算、自動化等基本概念。自動化數值控制機械的基本操作技術，如機械操作介面設定、加工圖面繪製、刀具規畫、路徑規畫等等，讓學生了解智能化加工的應用範圍。	
<b>34 Intelligent Processing Technique Improvement Practice (1)</b>	<b>2 E</b>
The course aims to allow students to be familiar with the principle of intelligent processing and operation of machines. In order to allow students understand the application of intelligent processing, the content includes basic knowledge of intelligent processing, such as IoT, big data, cloud computing and automation. In additon, it also includes basic techniques to operate automative machine, such as setting of interface, drawing of processing draw, planning of cutter and planning of routing.	
<b>35 暑期職場實習(1)</b>	<b>2 選</b>
本課程主旨在讓學生提早體驗職場，建立正確工作態度，藉由至本系相關企業見習與觀摩學習，使學校理論教學與實務結合，激發學生學習及進行未來生涯發展規劃，養成專業興趣及就業能力，	

縮短學用落差。本課程採暑期制施行，需在同一機構連續實習至少為期 2 個月，學生應全職於實習機構實習。	
<b>35 Summer Vacation Profession Workplace Practice (1)</b>	<b>2 E</b>
The main purpose of this course is to allow students to experience employment environment and to establish a positive working attitude. The course combines both theory and practice in wood science and design by cooperating with related institutions to provide on-the-job learning opportunities. Students could learn and develop their career plans. Furthermore, the course aims to develop professional interests and employment ability for students to shorten the gap between academic and real employment. The course is available in the summer vacation. It requires the students to participate in internships of the institutions for no less than 2 consecutive months. During the internship period, students should take full-time internships at internship institutions.	
<b>36 成本估算與報價</b>	<b>2 選</b>
本課程係提供學生有關利潤與成本觀念，並進而估算、分析和控制製品之成本，以增加對經營者之信心。其講授內容包括有：成本結構的要素與分類、成本估算的步驟、如何估算材料成本、如何估算人工成本、如何估算製造費用、如何估算銷售費用、如何決定產品的總成本與單位成本、緊急訂單的產品如何估算成本、成本估算與事前降價成本規劃、成本估算與產品報價策略等等。	
<b>36 Cost Estimates and Quotes Price</b>	<b>2 E</b>
The aim of this course is training the students about the concept of profit and costs, and thus estimating the cost, analysis and control products, in order to increase the confidence of the operators. It's offered to cover: Factor and classification on cost structure, Cost estimating steps, How to estimate materials cost, How to estimate labor cost, How to estimate manufacturing expenses, How to estimate selling expense, How to determine total cost and unit cost on the product, How to estimate the product cost under emergency orders, Cost estimates and cost price reduction plan in advance, Cost estimates and product quotes strategy, and so on.	
<b>37 電腦輔助設計(2)</b>	<b>2 選</b>
本課程以教導學生學習與使用電腦 3D 繪圖軟體，使同學具備製作出各式各樣的電腦 3D 模型，並應用於設計課程中。且藉由對不同案例的繪製練習，讓學生們更能充分運用電腦 3D 繪圖軟體的優點，加以整合設計出出色的作品來。	
<b>37 Computer Aided Design (2)</b>	<b>2 E</b>
Guiding the students familiar with skills using computer 3D drawing software. Training the attendants to handle or create various types of 3D models and applied to design courses. The attendants can fully employ the advantages of computer 3D sketch software through the practice on several different case studies and produce an integrated design project.	
<b>38 家具設計</b>	<b>2 選</b>
本課程主要著重於引導學生從設計、專門方案到家具成品之完整設計過程的觀念。講授內容包括：（一）設計觀念的發展。（二）定義設計產品的範疇。（三）產品使用的功能標準。（四）研擬計畫書。（五）組件材料的選擇。	
<b>38 Furniture Design</b>	<b>2 E</b>
This course is intended to be a practical guide to planning processes, of concept through design, shop plans and finishes. A sequence of the custom furniture design process is presented in the following chapters: (1) Developing the concept — A menu of ideas from what has been done before, or created in your own style — get the creative juices flowing. (2) Defining the scope — Temper the concepts with the realities of your resource — time, interest, capabilities and shop space—for the level of complexity. (3) Applying standards — Follow or depart from convention. Look at size and stature of the user-pleasing proportions, style relationships. (4) Committing to paper — Lock in your design, adapting plans and photos, preplanning construction steps. (5) Converting to parts — Select best woods, mill cuts, joinery techniques.	
<b>39 家具製作實習(2)</b>	<b>2 選</b>
本課程以配合同學學習的背景及技術能力等因素，實地設計製作自己擅長的木藝作品，並幫助學	

生具備家具木工乙級技術士的技能。課程中訓練學生有關帶鋸機、圓鋸機、角鑿機、鑽孔機、懸臂鋸、花刨機等木工機具使用。教導木材高階之榫接技術、拼板技術、封邊技術，並透過實際製作桌子，訓練同學木工操作技能，培養個人品質要求素質及熟練度。	
<b>39 Furniture Manufacturing Practice(2)</b>	<b>2 E</b>
This course is aimed at training the students having the ability to design and to make out the wood works which they want and like to do. The purpose is to enhance the students' ability to pass the B grade qualification held by the Committee of Labors. The course offers students the training in using woodworking machines including band saw, circular saw, drilling machine, overhang saw, router and the other basic tools. Advanced woodworking techniques including connection of joints, lumber assembly, and edge sealing are highlighted in the course. Each student will be asked to make a wood table as a practice training of woodworking skill and quality control.	
<b>40 智能加工技術精進實習(2)</b>	<b>2 選</b>
本課程主旨在讓學生學習智能化加工原理及機械操作技術，課程內容有智能化的基本組成知識，如物聯網、大數據、雲端計算、自動化等整合概念。自動化數值控制機械的操作技術，如機械操作介面設定、加工圖面繪製、刀具規畫、路徑規畫、多軸加工等，讓學生了解智能化加工的技術整合及應用範圍。	
<b>40 Intelligent Proccessing Technique Improvement Practice (2)</b>	<b>2 E</b>
The course aims to allow students to be familiar with the principle of intelligent processing and operation of machines. In order to allow students understand the application of intelligent processing, the content includes basic knowledge of intelligent processing, such as IoT, big data, cloud computing and automation. In additon, it also includes basic techniques to operate automative machine, such as setting of interface, drawing of processing draw, planning of cutter and planning of routing.	
<b>41 木材設計力學</b>	<b>3 選</b>
首先教導材料之基本應力及應變觀念以及求解方法，包括平面至三維之應用。導入向量觀念求解及物件受力之靜力問題求解，同時探討基本結構受力靜定求解方法。其次教導木材基本之抗拉、抗彎、抗壓、抗剪特性，以及相關之影響因子。同時，瞭解木材在工程應用容許強度之推導以及安全係數之觀念。	
<b>41 Mechanics for Wood Design</b>	<b>3 E</b>
Introduces the concepts of stress and strain of materials and the related solving approaches. The application on plane and three dimension cases are covered. The vector concept is introduced to solve static problems for objects subjected to external forces. Basic determinant problems for simple structure are covered. The fundamental characteristics of tensile strength, bending strength, compressive strength, and shearing strength of wood materials with related influential factors are demonstrated. The derivation of allowable stress and the concept of safety factor in the engineering application for wood are guided.	
<b>42 木質材料自動化加工</b>	<b>3 選</b>
傳授木材工業自動化加工之基礎知識，簡介機械視覺、自動演算及數值控制等概念。主要內容為教導木工用電腦數值控制加工機，含數值控制基本觀念、電腦數值控制花鈹機之指令、程式設計、定位模之製作、立體圖文繪製及加工，雷射加工機之應用軟體、向量圖、點陣圖、外框、封閉區塊、開口區塊、交叉區塊、雷射切割及雷射雕刻，立體圖文自動轉換及逆向工程設備之應用等。培養學生成為自動化加工知行能力兼備的專業人才	
<b>42 Automated Processing for Wood-based Materials</b>	<b>3 E</b>
Introducing the state of art for woodworking processing automation, machine vision, automatic computing, numerical control and related background. The topics covers programming practice for (computer) numerical controlled machine, components of woodworking CNC router, and fundamental procedures on programming numerically, operations of Laser engraver, CNC router and relate application.	
<b>43 木質材料自動化加工實習</b>	<b>3 選</b>
訓練學生具備自動化加工之基本知識及實務應用電腦數值控制加工機械、電腦輔助軟體及立體物件逆向工程等能力。設計為校內實習，練習自動化加工用電腦軟體、機械視覺逆向工程設備、電腦數值控制花鈹機及雷射加工機；校外實際參與生產線，見習木料自動鋸切與分配系統、自動演	



算裁板系統、數控花鉋機、全自動木質板加工系統及化妝單板生產線等。	
<b>43 Automated Processing for Wood-based Materials Practice</b>	<b>3 E</b>
Training students to know the automation related background. The topics cover campus courses and furniture factor courses. Campus courses: learning the computer programs, operations of machine vision equipment, CNC router and Laser engraver. Furniture factor courses: automatic sawing and admeasuring system, automatic computing system of panel sawing, NC router, panel processing automation system and the production line for fancy veneer.	
<b>44 電腦輔助製圖實習</b>	<b>3 選</b>
本課程以電腦輔助設計製圖實務為基礎背景，在熟悉電腦繪圖軟體操作及應用後，進階瞭解數位軟體在產品設計概念發想到量產製造之配合，以及運用於生產設備之輸出製作。本課程以強化軟體應用和加工製成等方面之知識和技術為主，並提升學生專業能力。	
<b>44 Computer Aided Manufacture Practice</b>	<b>3 E</b>
The basic background of this course is computer aided design and drawing practice. In this course we give student to know how to apply the different digital software in the process of product design to manufacture, and input material parameters to manufacturing facility to finish the product. This course is to enhance student's ability of software application and product process.	
<b>45 家具製造程序</b>	<b>3 選</b>
本課程之主旨除了探討一般有關家具的製造技術外，更積極培養訓練學生對家具製造之程序、生產速度及各種工廠設備與製造系統之整合觀念，使學生能靈活運用在實際家具的生產作業。其講授內容包括：家具工業概況、家具工廠組織、木料之進廠、儲存及乾燥、配料間的加工、配料間的木料利用、配料間的生產、薄片間及其加工、細作間及其生產管制、組合間作業、塗裝間作業、打蜡及包裝間作業、倉儲運輸管理、製作家具之成本分析等。	
<b>45 Furniture Manufacturing Processes Practice</b>	<b>3 E</b>
The intent of the course is to enable students to develop techniques and integrated manufacturing concepts in the furniture industry. It covers: introduction of the furniture industry, organization of a furniture factory, lumber receiving, storage and drying, process, lumber utilization, production of parts at the rough end, veneering components, machining parts, production control, assembly, finishing methods, the finishing conveyor, rubbing and packing, warehousing and shipping, the cost of manufacturing furniture, and so on.	
<b>46 專業技術精進實習(3)</b>	<b>3 選</b>
本課程乃相關木藝技術之提升，課程內容以實務操作方向設計，包括桌、椅、櫃等相關製造技術。以提升本系木藝技優學生實務專業技術與正確工作態度之養成，因應未來職場需求。	
<b>46 Professional Skills Improvement Practice (3)</b>	<b>3 E</b>
The purpose of this course is to improve students' skills in woodworking, and it is designed to be a practice-oriented course. The content includes techniques of making table, chair and cabinet. The course aims to improve professional skills of students who are enrolled through special achievement program and cultivate a correct working attitude for them.	
<b>47 暑期職場實習(2)</b>	<b>3 選</b>
本課程主旨在讓學生提早體驗職場，建立正確工作態度，藉由至本系相關企業見習與觀摩學習，使學校理論教學與實務結合，激發學生學習及進行未來生涯發展規劃，養成專業興趣及就業能力，縮短學用落差。本課程採暑期制施行，需在同一機構連續實習至少為期 2 個月，學生應全職於實習機構實習。	
<b>77 Summer Vacation Profession Workplace Practice (2)</b>	<b>3 E</b>
The main purpose of this course is to allow students to experience employment environment and to establish a positive working attitude. The course combines both theory and practice in wood science and design by cooperating with related institutions to provide on-the-job learning opportunities. Students could learn and develop their career plans. Furthermore, the course aims to develop professional interests and employment ability for students to shorten the gap between academic and real employment. The course is available in the summer vacation. It requires the students to participate in internships of	

the institutions for no less than 2 consecutive months. During the internship period, students should take full-time internships at internship institutions.	
<b>48 設計行銷與管理</b>	<b>3 選</b>
本課程以經營戰略的角度於設計過程中導引學生技術創新與新產品開發活動，並密切關注建立開放的組織架構以吸納全方位的創新資源，強調設計企業的知識管理和知識產權管理。同時還吸納了當今創新非常重要和關鍵的開放式創新的思考和企業間動態聯盟的思想，並準備了足夠的案例幫助學習與實踐創新管理的模式。課程內容涵蓋 3 個主題：創新管理的概念、技術與知識管理與新產品開發和行銷。	
<b>48 Marketing and Management for Design</b>	<b>3 E</b>
The aim of this course is training the students how to operate a strategic of the design processes. To guide the students the technological innovation and the new product development. To establish an open organizational structure which could absorb the full range of innovative resources, emphasizing the design of enterprise knowledge management and intellectual property management. Furthermore, a dynamic critical thinking and open innovation ideas become very important capability today. And through the cases study help the students learning and practicing the innovation management model. The course will covers three topics: the concept of innovation management, technology & knowledge management and new product development & marketing.	
<b>49 展示設計</b>	<b>3 選</b>
本課程的目的在於介紹一個裝飾藝術的領域，包括臨時的節日裝飾的街道，公共廣場，門面修飾，公眾假期，遊行，實物解說的裝飾和展示的設計，以及各類展覽型態等。	
<b>49 Display and Exhibit Design</b>	<b>3S</b>
The purpose of this course is to introduce a field of the decorative arts that includes the temporary festive decoration of streets, public squares, window dressing, public holidays, parades, the design of decorations and displays for demonstrations, and various types of exhibitions.	
<b>50 職業安全與衛生</b>	<b>3 選</b>
介紹有關職業安全與衛生的法規概要，通盤探討一般的職業安全與衛生，再聚焦於木材設計與製造專業上的安全與衛生問題。通論內容旨在培養職場上發揮合作並有執行力的多元職能，聚焦內容在培育本系專業人才面臨新科技的時空及人員等的變革之際，應用專業知識跨領域解決新產生的安全與衛生困擾的基本能力。講授內容有職業安全與衛生法規概要，工地、工廠及危害物等屬於地點性質的安全管理，個人安全護具，機具之安全管理及維護。衛生內容除了職業衛生概要之外，另以影響木材產業從業人員的健康管理為主點。	
<b>50 Occupational safety and health</b>	<b>3 E</b>
To introduce occupational safety and health, discuss the topics in general, and focus on the safety and health issues in wood design and manufacturing. The purpose of the general seminar is to cultivate a multi-functional role of cooperation and execution in the workplace. Focusing on train students develop the abilities of interdisciplinary to solve the problems of safety and health issues, base on the expertise when the technologies and personnel were changed. Lectures include outline of Occupational Safety and Health Act, safety management of workplace, factories and hazardous materials, personal protective equipment, safety management and maintenance of machines. The management of Health contents in addition to profiles, and other point is the effects wood and processing of wood on the health.	
<b>51 專業技術精進實習(4)</b>	<b>3 選</b>
本課程乃相關木藝技術之提升，課程內容以實務操作方向設計，包括家具設計、結構研發、製程規畫、行銷策略等相關技術。以提升本系木藝技優學生實務專業技術與正確工作態度之養成，因應未來職場需求。	
<b>51 Professional Skills Improvement Practice (4)</b>	<b>3 E</b>
The purpose of this course is to improve students' skills in woodworking, and it is designed to be a practice-oriented course. The content includes furniture design, structure development, process planning and marketing strategy. The course aims to improve professional skills of students who are enrolled through special achievement program and cultivate a correct working attitude for them.	



## 農企業管理系技優領航專班

Department of Agribusiness Management-Technical Excellence program

### 一、必修科目 Required Courses

#### 502001 農企業概論 3 必 全系教師 上

本課程旨在使學生瞭解農企業基本概念。其授課內容包括：(1)緒論、農場生產企業(2)農民組織(3)農產品行銷企業(4)農用品企業(5)農企業資源規劃系統(6)休閒農業(7)國際農企業與貿易(8)食品加工業(9)農企業社會責任與倫理(10)農企業與循環經濟(11)農企業政策與法規。

#### 502001 Introduction to Agribusiness 3 R All Teachers, F

The contents of the course include the followings: (1)Introduction and Farm production enterprise; (2)Farmers' Organization; (3)Agricultural product marketing company; (4)Agricultural Inputs Industry; (5)Agricultural Enterprise Resource Planning System; (6)Recreational

Agriculture; (7)International Agribusiness and Trade; (8)Food processing industry; (9) Social Responsibility and Ethics for Agribusiness; (10)Agribusiness and Circular Economy; (11) Government Policy and Regulations for Agribusiness.

#### 502002 微積分 3 必 陳淑恩 上

本課程之目的在使學生了解函數微分、積分之概念與應用，其課程內容包含函數、極限、微分基本概念、導函數之應用、指數與對數函數之微分、積分、定積分的應用、最佳化等。

#### 502002 Calculus 3 R S.E. Chen, F

The purpose of this course is concerned with the concepts and applications of differentiation and integration. Course contents include functions, limits, basic concepts of differentiation, application of derivative, exponential and logarithmic functions, integration, application of integration, optimization, and etc.

#### 502003 綜合農業(1)、(2) 4 必 蔡青園 上 下

本課程目的在於讓修課同學深入瞭解農、林、魚、牧各部門中有關分類、育種、繁殖、栽培及飼養技術等專業知識，並介紹目前國內最新農業科技，使同學對未來參與校外相關實習及實務操作奠定良好基礎。本課程分內容分為上、下兩學期各 2 學分。上學期為植物部分包括：園藝農藝及森林等三部分。下學期為動物部分包括：畜牧及水產養殖等兩部分。

#### 502003 Complex Agriculture(1)、(2) 4 R C.Y. Tsai, F, S

This course aims to enable students to understand and develop expertise in agriculture, forestry, fishery, and animal husbandry regarding classification, breeding, propagation, cultivation and breeding technology and introduce the latest domestic agricultural technology to make students' future participation in school-related practice and a good foundation for practical operation. The course content is divided into two semesters with 2 credits each. The first semester covers the plant section: horticulture, agronomy and forestry. The second semester for the animal section includes: Livestock and aquaculture.

**502004 綜合農業實習(1)、(2) 2 必 蔡青園 上 下**

本實習課程分上、下學期，為配合綜合農業課程將所學理論與實際配合，在實務操作中學習。上學期為農園藝農場實習，內容包括作物育苗、田間栽種管理程序、肥料控制及採收處理等。下學期為禽畜農場實習，課程內容包括，畜牧之現在及未來之展望、牧場工作簡介、養豬實習、蛋雞實習、乳牛實習、牧草管理等。實習期間完成預定進度，繳交報告，並經實習單位主管及授課老師共同考核合格者，始給予本學分。

**502004 Practice of Complex Agriculture(1)、(2) 2 R C.Y. Tsai, F, S**

This internship course is divided into first and second semesters. In order to cooperate with the complex agricultural course, the theory and practice will be combined, and the students will learn in practical operation. The first semester was an internship in the agricultural and horticultural farms, including crop seedlings, field planting management procedures, fertilizer control and harvesting. The second semester will be an internship on a livestock farm. The course content includes the present and future prospects of animal husbandry, an introduction to pasture work, pig breeding practice, laying hen practice, dairy cattle practice, and pasture management. This credit will only be granted to those who have completed the scheduled progress during the internship, submitted the report, and passed the assessment jointly by the supervisor of the internship unit and the teaching teacher.

**502005 農企業管理 3 必 黃文琪 下**

本課程目的在於介紹農企業管理之基本理論與實務應用。內容包含：農企業管理學內涵、經營規劃與決策、農企業資金與預算、農企業成本與收益及成本與效益分析、農企業經營目標之設計、負責任之農企業投資、農企業永續發展目標、國內外農企業個案研討。

**502005 Agribusiness Management 3 R W.C. Huang, S**

The course intends to introduce the basic principle and practice for agribusiness management. The core components include: introduction to the course, planning and decision; capital and budgeting, costs and revenue, cost benefit analysis, key management indicators, responsible investment, agribusiness and UNSDG, domestic and international cases of agribusiness management.

**502006 經濟學(2) 3 必 鄭秋桂 下**

本課程旨在介紹總體經濟表現及測度、金融體系、貨幣創造與政策、財政政策、均衡所得決定、總合供需、通貨膨脹與景氣循環、失業率與經濟成長、國際金融等方面之基礎概念。

**502006 Economics (2) 3 R C.K. Cheng, S**

The purposes of this course is to provide the basic concepts in measuring nation's production and income, banking system, money creation and monetary policy, fiscal policy, equilibrium income decision, aggregate demand and supply, inflation and business cycle, unemployment and economic growth, and international finance.

**502007 農業經營組織管理 3 必 彭克仲 上**

本課程旨在探討農業組織行為，幫助學生瞭解、預測和控制農業組織中，個人、群體(團體)、組織系統的行為。授課內容包含：(1)農業經營組織組織行為之基本概念與特質 (2)個體行為：個體價值觀、態度、性格、知覺、學習、激勵、工作壓力、創造力與創新，及個體差異 (3)群體行為：群體結構、決策與任務、凝聚力、領導與溝通、權力與政治、衝

突管理 (4)組織系統：組織結構與設計，績效評估與酬償制度，組織文化，組織變革與發展。

**502007 Agribusiness Organization Management 3 R C.K. Cheng, F**

The objective of this course is to discuss agribusiness organizational behavior and to teach students how to understand, to predict and to control individual, group, and organizational system behavior. The contents of this course are as follows: (1) the basic concepts and characteristics of agribusiness organizational behavior; (2) the individual behavior: value, attitude, personality, perception, learning, motivation, job pressure, creativity and innovation, and individual difference; (3) the group behavior: group structure, group decision making and tasks, communication and leadership, power and politics, conflict management; (4) the organizational system: organizational structure and design, performance evaluation and reward systems, organizational culture, organizational change and development.

**502008 休閒農業 3 必 段兆麟 下**

本課程旨在使學習者了解休閒農業之意義與發展背景，理論與類型，規劃設計的原理與方法，經營管理的策略與實務，解說教育的功能和技巧，相關法令和規定，診斷評估的技術和方法，以增進學習者對休閒農業之知識及經營管理之能力。課程架構如下：休閒農業理論、休閒農業政策與法規、各國休閒農業發展、休閒農業規劃設計、休閒農場經營管理、台灣休閒農業特色、休閒農業發展趨勢等。

**502008 Recreational Agriculture 3 R C.L. Tuan, S**

This course provides a comprehensive introduction to the management of recreational agriculture. The contents as following: theory of recreational agriculture, policy and regulation on recreational agriculture, development of recreational agriculture in the countries, planning and design of recreational agriculture, operation management of recreational farm, features of Taiwan recreational agriculture, trend of recreational agricultural development.

**502009 農產行銷 3 必 林俊男 下**

本課程旨在使學生了解農產行銷之理論與運作，以為農企業管理者因應行銷環境有效地行銷管理。內容包括：(1)農產行銷基本概念、(2)農產品供需與價格理論、(3)農產品市場與農產行銷企業、(4)農產品價格、(5)農產行銷績效、(6)農產行銷政策制度與法規。

**502009 Marketing of Agricultural Products 3 R C.N. Lin, S**

This course gives students the knowledge of marketing of agricultural products. It includes: (1) the concept and operations of marketing of agricultural products, (2) theory of demand, supply, and price of agricultural products, (3) markets and marketing agribusiness, (4) prices of agricultural products, (6) marketing performance of agricultural products, and (6) policy and regulations of agricultural product marketing.

**502010 策略管理 3 必 林俊男 上**

本課程旨在使學生了解，管理者在面臨快速變遷及競爭劇烈的環境中，如何採取有效的管理策略。內容包括：(1)策略管理概論(2)內外部環境分析(3)競爭策略(4)策略的執行與控制(5)農企業經營策略管理。

**502010 Strategic Management 3 R C.N. Lin, F**

This course gives students the knowledge of business strategic management. It includes: (1) the concept and structure of strategic management, (2) the analysis of internal and external environments, (3) competitive strategy, (4) strategic implementation and control, and (5) agribusiness strategic management.

### 502011 農企業法規 3 必 陳淑恩 上

本課程主要目的在使學生認識農企業的相關法規，以配合農企業在經營管理上可能面臨的法律規範。授課內容包括：(1)法學緒論、(2)農業發展條例、(3)農產品市場交易法、(4)農會法、(5)世界貿易組織之相關規定。

#### 502011 Agribusiness Law 3 R S.E. Chen, F

The major objective of this course is to teach students the associated agribusiness regulations which an agribusiness owner or manager will need to deal with. It includes: 1. juristic introduction; 2. Agricultural Developments Act; 3. Agricultural Products Market Transaction Act; 4. The Farmers Association Act; and 5. related regulations of WTO.

### 502012 農企業社會責任與倫理 3 必 邱郁仁 下

本課程主要內容涵蓋：(1)企業社會責任的概念與實踐；(2)道德法則與道德研判；(3)環境倫理議題；(4)農企業經理人的倫理原則；(5)行銷倫理；(6)科技與資訊應用倫理；(7)全球化經營的倫理議題。

#### 502012 Agribusiness responsibility and ethics 3 R Y.J. Chiu, S

The main content of this course includes: (1) The theory and practice about corporate social responsibility. (2) Moral rules and moral judgments. (3) Environmental ethics. (4) The ethical rules for agribusiness managers. (5) Marketing ethics. (6) Agriculture technology and information ethics. (7) Ethical issues of international agribusiness.

### 502013 農企業管理資訊系統 3 必 劉芳怡 下

農企業管理資訊系統是使農企業能以有系統的方式，有效收集相關資料，以提供管理決策的依據。本課程內容包含：(1)符合農業特性的智慧化管理資訊系統設計(2)友善的農企業進銷存資訊系統操作介面(3)學習農企業第三方金流系統實務操作(4)建立網路社群資訊系統數據分析觀念(5)台灣農企業數位轉型之現況及農業區塊鏈資訊安全議題。

#### 502013 Agribusiness Management Information Systems 3 R F.Y. Liu S

Agribusiness management information system is to enable agribusiness to collect relevant data in a systematic way to provide a basis for management decision-making. The content of this course includes: (1) Design of intelligent management information system in line with the characteristics of agriculture ; (2) Friendly agribusiness invoicing information system operation interface; (3) Learning the practical operation of the third-party cash flow system of agribusiness; (4) Establishing a network community information system data analysis concept; (5) The current status of digital transformation of Taiwan's agribusiness and the issue of agricultural blockchain information security.

### 502014 農企業管理實習 9 必 全系教師 上

本課程目的為訓練學生深入了解農企業管理實務之運作，增加實務經驗以養成就業能力。修習學生應於大學三年級上學期洽詢指導老師，實習期間至少為期十八週。但有必要時，經申請核准，實習期間得延展到部分的寒假或暑假。

#### 502014 Agribusiness Management Practice 9 R All Teachers, F

The purpose of the course is to prepare the student with practical experience for a duration of one semester (at least 18 weeks). The period can be extended to include semester breaks (summer and winter breaks) upon approval.

## **502015 實務專題**

**1 必 全系教師 下**

本課程主旨乃訓練學生將理論與實務相結合，經由親自動手製作，完成作品。達到技職教育特色。

### **502015 Special Projects**

**1 R All Teachers, S**

The main purpose of this course is to let students combine the theorem and practical practice together. The students work by themselves and come out a real object finally. To achieve the goal of technique education.



## 二、選修科目 Elective Courses

### 502016 園藝種苗生產技術 2 選 蔡青園 上

本課程在使學生瞭解果樹，蔬菜及觀賞植物種苗生產之最新技術，課程內容包括：種苗生產之意義及重要性、園藝種苗生產及經營之特性、種子採集，儲藏及播種、無性繁殖之意義及優缺點、扦插，嫁接，壓條，分株繁殖法之利用及大量之無性繁殖、組織培養在園藝種苗生產上之應用、單倍體及多倍體植物之培養及利用、穴盤育苗之重要性及效益、自動化穴盤育苗在園藝種苗生產上之應用。

### 502016 Seeding Production Techniques of Horticultural Crops 2 S C.Y. Tsai F

The course is make student learn the modern technique of horticultural crops seedling production. The course contents are following: Introduction: meaning and importance of seedling production, Properties and perspective of seedling production, Seed harvest, storage and planting, Meaning of asexual propagation and its characters, Propagation by cutting, grafting, layering and dividing, Application of tissue culture plantlets in horticultural crops, Culture of haploid and polyploid plants, The importance of plug production system, Automatic nursery production of horticultural plants.

### 502017 園藝種苗生產技術實習 1 選 蔡青園 上

使學生瞭解及實地實習各種園藝苗生產技術，除包括種子（有性）繁殖，嫁接操作，扦插繁殖外，並由組織培養技術，大量應用於加速繁殖，此外並練習自動穴盤育苗技術等。

### 502017 Practice of Seeding Production Techniques of Horticultural Crops 1 S C.Y. Tsai, F

The course is designed to provide students practical operation of seedling production techniques. Contents include not only sexual (seed) propagation, grafting and cutting, but also mericlone seedling production, and automatic plug nursery production.

### 502018 設施園藝 2 選 林俊男 下

本課程主要利用組織行為學的基本原理和議題，進一步使學生了解個體、團體、和組織在組織環境中所應扮演的角色。以循序漸進的理論推導，輔以案例實務的探討，引導學生進入組織行為知識廣度與深度。主要課程內容涵蓋四大領域：一、組織行為的概念；二、組織行為的個體層次：態度、情緒、人格特質、知覺與決策及激勵；三、組織行為的團體層次：溝通、團體、團隊、領導、權力與政治、衝突與協商；四、組織系統層次：組織結構、組織文化及組織變革。

### 502018 Horticultural Production under Structures 2 S C.N. Lin, S

This course is designed for students planning careers in commercial horticultural production under structures. The contents include types of structures and materials; microclimate in the greenhouse and its management; techniques of watering, fertilization; media and growth regulator handling; disease and pest control. Hydroponics, plug system and related appliances are also briefly introduced.

### 502019 設施園藝實習 1 選 林俊男 下

本課程主要介紹園藝設施種類、構造規劃和材料選擇。此外討論設施內光線、溫度、溼度、空氣等微氣候之特性、管理控制方法和作物的反應。並以水耕栽培為例、深入介紹無土栽培的運用和施肥、灌溉技術。另外簡介溫室病蟲害防治的使用、穴盤育苗等及相關

的機械化設備。

**502019 Practice of Horticultural Production under Structures 1 S C.N. Lin, S**

This course is designed for students planning careers in commercial horticultural production under structures. The contents include types of structures and materials; microclimate in the greenhouse and its management; techniques of watering, fertilization; media and growth regulator handling; disease and pest control. Hydroponics, plug system and related appliances are also briefly introduced.

**502020 造園技術 2 選 林俊男 下**

本課程之目的在於讓學生學習如何從基地分析至各種造園元素之規劃設計,進而創造出合理之空間。規劃設計之案例如中式庭園、日式庭園、西洋式庭園、台灣式庭園、住宅庭園、亞熱帶庭園、自然野花庭園等。

**502020 Landscape Design 2 S C.N. Lin, S**

The objectives of this course are to allow students learn the principles from site analysis, element arrangements, and garden construction in order to create a reasonable space. The study case are Chinese-style garden, Japanese-style garden, Western-style garden, Taiwanese-style garden, home garden, subtropical garden, naturalistic wildflower garden etc.

**502021 造園技術實習 1 選 林俊男 下**

配合正課,以各案方式進行製圖,模型製作及討論。規劃設計之案例如中式庭園、日式庭園、西洋式庭園、台灣式庭園、住宅庭園、亞熱帶庭園、自然野花庭園等。期能讓學生可以應用於實際規劃設計上。

**502021 Practice of Landscape Design 1 S C.N. Lin, S**

The lab is proceeded corresponding to lectures. The topics include basic graphics, model construct, and case-study. The study case are Chinese-style garden, Japanese-style garden, Western-style garden, Taiwanese-style garden, home garden, subtropical garden, naturalistic wildflower garden etc.

**502022 生產管理 2 選 蔡青園 上**

本課程旨在使學生瞭解如何有效且經濟的提供農企業產品之生產及服務,授課內容包括:生產與作業之重要性、農企業產品之分類、工業性產品之製造途程、農業性產品之生產途程、服務性產品之 4P's 技術。

**502022 Production Management 2 S C.Y. Tsai, F**

Contents Abstract: The Importance of Production; The classification of Agribusiness Products; Industrial Products - Routing; Farming Products - Routing; Service Products - 4P'S Techniques.

**502023 行銷管理 2 選 黃朝欽 上**

本課程將以農場投入部門、農產品生產與加工部門、及食品部門等三大部門之行銷管理學與技術作一深入探討。其中包括:行銷規劃、市場區隔、行銷組合、農產品的行銷特質、運銷職能、運銷成本、運銷制度、消費市場之變化、國際貿易等;本課程以講授與討論方式進行。

**502023 Marketing Management 2 S C.C. Hung, F**

This course targets at the theory and technique of marketing management for the department of the agricultural inputs, farming and agricultural product processing, and food marketing agribusiness. The content investigates the marketing planning, market segmentation,

marketing mix, marketing attributes of agricultural products, marketing functions, marketing costs, marketing system, changes of consumer market, and international trade. The course is in a free discussion and lectures format.

**502024 農場企業經營 2 選 段兆麟 上**

本課程內容在於介紹目前我國台灣地區主要農場企業之經營管理。包含：1.農作物：花卉、蔬菜、果樹、特用作物 2.林產物 3.水產養殖 4.畜產 5.休閒農業。

**502024 Farm Business Management 2 S C.L. Tuan, F**

This course introduces management practices for the major enterprises of farms in Taiwan. The enterprises which will be of major concerns are: 1.Major Crops: Flowers, Vegetables, Orchards, and Special crops; 2.Forest Farming; 3.Agriculture; 4.Livestock farming; 5.Leisure Farming.

**502025 食品企業經營 2 選 黃朝欽 上**

本課程主要在提昇學生對農產加工企業之管理能力。就農、林、漁、牧四類農產加工企業，分別講授下述內容：(1)企業環境與現況(2)企業特質與未來(3)企業的企業功能如何運作(4)企業的管理功能如何運作。

**502025 Food Business Management 2 S C.C. Hung, F**

The major goal of this course is to enhance the students' capability on managing food processing of agribusiness. Four sections are included in this course: (1)Business Environment; (2)Business Characteristics & It's Future Insight; (3)How to Operating the Business Function; (4)How to Operating the Management Function.

**502026 無人載具概論 2 選 鍾秋悅 上**

本課程旨在使學生了解無人機的基本概念。其授課內容包括(1)無人載具機的發展歷程(2)無人機之飛行原理及類型 (3)無人機相關之法規及證照(4)無人機在農業及農企業上的應用(5)無人機之市場展望。

**502026 Introduction to Unmanned aerial vehicle 2 S C.Y. Chung F**

This course is designed to give students a basic understanding of Unmanned Aerial Vehicles (UAVs). The course content include (1) the history of UAVs, (2) the types of UAVs and principles of flying UAVs, (3) relevant regulations and licenses for UAV flying, (4) the application of UAVs in agriculture industry and agribusiness management, and (5) an overview of the UAV market.

**502027 無人載具田間管理實習 1 選 鍾秋悅 上**

本課程主要介紹無人機、植保機的功能及操作植保機時作業需注意事項，並進行田區植保機噴藥作業與田間管理，及作業完畢後植保機各項維修與保養。在課程中也會介紹無毒農業資材的種類及防治原理。

**502027 Unmanned vehicle field management practice 1 S C.Y. Chung F**

This course introduces the functions of drones and agricultural protection drones and the matters needing attention when operating agricultural protection drones, and is engaged in field agricultural protection drones spraying operations and field management, and repair and maintenance of agricultural protection drones after the operation is completed. The types of non-toxic agricultural materials and prevention principles will also be introduced in the course.

## 502028 統計學實習(1)、(2) 2 選 彭克仲 上下

本課程將配和統計學的教授，作為統計學的支援課程。期以實作與練習增加同學對統計方法之瞭解與認識。本課程內容將包括敘述統計、機率、機率分配、抽樣、抽樣分配、估計、假設、假設檢定、變異數數分析、迴歸分析、相關分析、卡方檢定等之習作。

### 502028 Practice of Statistics(1)、(2) 2 S K.C. Peng, S, F

This course mainly goes with Statistics as a supporting course. This course includes cases and problems practice of contents of Statistics.

## 502029 人力資源管理 2 選 段兆麟 下

本課程之目的在培養學生認知人力資源管理之意義及重要性，熟悉人力資源管理之規劃與實施方法，以為將來擔任農企業主管及從事人力資源管理工作之用。內容包括：(1)人力資源管理的意義、目的、功能(2)人力資源之羅致管理：人力需求預測、人力規劃、甄選等(3)人力資源之開發管理：教育訓練、績效考核、升遷等。(4)人力資源之報償管理：薪資、福利、非財務之誘因等(5)人力資源之維護管理：人際關係、勞資關係、勞工安全與健康等。

### 502029 Human Resources Management 2 S C.L. Tuan, S

The contents are as follows:(1) The Definition, Objectives, and Functions of H.R.M.; (2) Acquisition of H.R.: Job Analysis, Personnel Planning and Recruiting, and Employee Testing and Selection; (3) Development of H.R.: Education and Training, Performance Appraisal, and Promotion; (4) Compensation of H.R.: Financial Incentives, Benefits and Services and Nonfinancial Motivation Techniques; (5) Maintenance of H.R.: Human Relation, Labor Relation, and Employee Safety and Health.

## 502030 產業組織 2 選 鍾秋悅 下

本課程旨在教授產業組織的基本理論，並說明農企業的市場結構、行為和績效的實證研究，其內容包括：(1)產業組織的基本概念(2)市場佔有率和集中度(3)進出市場條件(4)購併和規模經濟(5)寡佔定價與差別定價(6)產品差異及產品增值(7)聯合行為(8)利潤及價格績效(9)技術效率(10)公平績效(11)實例分析。

### 502030 Industrial Organization 2 S C.Y. Chung S

The objective of this course is to teach the basic theory of industrial organization, and interpret the market structure, conduct, and performance of agribusiness. It contains:1.Basic Concepts of Industrial Organization; 2.Market Share and Concentration; 3.Market Entry Conditions; 4.Merger and Economic Scale; 5.Monopolistic Pricing and Price Discrimination; 6.Product Differentiation and Added Value; 7.Collusion; 8.Profits Performance; 9.Technical Efficiency; 10.Equity Performance; 11.Case Study.

## 502031 休閒農場經營管理與實習 1 選 劉芳怡 下

本課程目的在讓學生了解休閒農場的規劃和經營管理實務。內容包括：1.休閒農場的規劃 2.生產管理 3.行銷管理 4.人力資源管理 5.財務管理 6.教育宣導 7.民宿經營 8.田園餐飲管理 9.環境管理 10.安全管理 11.經營診斷 12.觀摩休閒農場實務。

### 502031 Leisure Farm Management and Internship 1 S F.Y. Liu S

The purpose of this course is to let students understand the planning and Management of leisure farm. The contents include:1.The planning of leisure farm; 2.Production management; 3.Marketing management; 4.Human resource management; 5.Finance management; 6.Education; 7.Housing management; 8.Restaurant management; 9.Environmental management;



10.Safety management; 11.Managerial diagnosis; 12.Visiting leisure farms.

### 502032 農企業行動 APP 開發設計 1 選 邱郁仁 下

本課程採用視覺化的程式設計工具，讓學生能在循序漸進的學習引導下，從範例 App 的實作練習，掌握各項開發環節與習得解題能力，進而設計並完成 App 專案的開發。

### 502032 Mobile App Development of 1 S Y.J. Chiu, S Agribusiness

This course uses visual programming tools to learn various development links and acquire problem-solving skills from the practical exercises of sample apps under the guidance of step-by-step learning, and then design and complete the development of app projects.

### 502033 農業品質認證 2 選 鄭秋桂 下

農業相關產品之品質水準，依賴農業機關推行之農產品標章與相關生產責任溯源制度。農業最高指導機構依據法源，責成認證單位，輔導農業生產及相關產業，通過驗證為管理目標，以保障國人健康及農業發展。討論範圍包括 TAP 產銷履歷農產品、有機農產品驗證、CAS 優良農產品驗證、生產責任溯源制度(包括臺灣農產品生產追溯、水產品生產追溯、生鮮豬肉追溯、生鮮蛋品追溯)等。

### 502033 Agriculture Quality Certification 2 S C.K. Cheng, S

The content of agriculture quality certification are TAP, Organic Certification, CAS, QR Code.

### 502034 農業品質認證實習 1 選 鄭秋桂 下

本課程與有認證農產品之農場配合並簽約，讓學生至相關農場實習。

### 502034 Practice of Agriculture Quality 1 S C.K. Cheng, S Certification

This course to find and agree on contract of agriculture quality certificate farms, let students practice on those farms.

### 502035 農產品貿易實務 1 選 彭克仲 下

農產品貿易有別於工業產品，因其生命性、易腐性、季節性、地區性，討論農產品貿易實務宜包括產品之區域、產量、季節、分級、包裝、運輸儲藏條件、主要生產者；目前已有農產品貿易公司之活動狀況；國貿作業流程及市場推廣技巧；貿易條件及價格計算；貿易與金融；貿易與運輸；貿易與報價；貿易與保險；貿易與糾紛；貿易公司之運作。

### 502035 Agricultural Products Trade 1 S K.C. Peng, S Practice

The purpose of this course is to provide student to understand the practical agricultural products trade operation, in order to integrate the theory and practice of agricultural products trade. The content of Agricultural Products Trade Practice are recognizing products, trade flow, terms of conditions, trade and finance, trade and transportation, trade and insurance, trade and claim, trade company operation.

### 502036 市場調查與分析 2 選 鍾秋悅 上

本課程的目的在於介紹進行市場調查與分析的原理及方法。學習者可以透過實際進行資料收集、問卷設計及調查、資料回收、進行資料整理、分析，並利用各種不同統計的方法以及統計軟體輔助資料分析。本課程的主要內容包含：1.緒論 2.市場調查之範圍 3.市場

調查方法與技巧 4.資料的整理與分析 5.市場調查報告。

**502036 Market Survey and Analysis 2 S C.Y. Chung F**

The purpose of this course is to provide technique of market survey to the undergraduate students. The principle of market survey and procedure will be introduced in this course. In addition, technique for data processing and analysis as well as preparation for final survey report will also be introduced. Common spreadsheet software and other statistical software will be used in this course. Outline of the course includes: 1.Introduction; 2.The scopes of market survey; 3.Methods and technique for market survey; 4.Data processing and analysis; 5.Market survey report.

**502037 農產品品牌管理 2 選 鄭秋桂 上**

本課程旨在學習農產品的品牌管理理論與概念，共分成十大單元，包括品牌意涵、品牌策略、品牌權益、品牌知名度、品牌聯想、知覺品質、品牌專屬資產、品牌忠誠度、品牌關係及品牌延伸，提供學生在農產品整合品牌行銷企劃活動、設計與執行品牌策略等有效建立品牌與經營管理的方法。

**502037 Brand Management of Agricultural Products 2 S C.K. Cheng, F**

A brand represents everything that a product or service means to consumers. As such, brands are valuable assets to an agricultural business. Brands are powerful assets that must be carefully developed and managed. Thus, the major topics of this course are: Brand implication, Brand strategy, Brand equity, Brand Awareness, Brand association, Perceived quality, Brand asset specificity, Brand loyalty, Brand relationship, Brand extension, Brand positioning, Brand name selection, Brand sponsorship and Brand development.

**502038 跨文化溝通實務工作坊(微型課程) 1 選 黃文琪 上**

本實務工作坊之微型課程旨在透過密集實作訓練活動，培養學生在各種情境下與來自不同文化背景的人進行交流的能力。學生將反思文化差異並探索世界各地族群的特徵，以培養跨文化的知識、技能和動力，以有效適應跨文化環境和提升跨文化交流技巧。

**502038 Intercultural Communication Workshop 1 S W.C. Huang, F**

This micro-credit workshop course is designed for students to develop competence of communication with people from different cultures in a variety of contexts. Students will reflect on cultural differences and explore characteristics of ethnic groups around the world to cultivate their knowledge, skills, and motivation that enable individuals to adapt effectively in cross-cultural environments and intercultural communication skills through hands-on activities.

**502039 短期海外實習 1 選 鍾秋悅 上**

本課程主要提供學生赴海外農企業相關政府單位、產業、學術機關進行實地實習機會；透過本課程，學生將深入學習到國際農企業的經營管理模式及實務技能。藉由本課程的施行，可培育國內農企業經營管理人才，提升我國農企業的國際競爭能力。

**502039 Internship abroad of Forestry 1 S C.Y. Chung, F**

This course will allow students to engage in hands-on learning through internships with government, industry, and academic institutions overseas. Through this course, students will be able to gain an in-depth understanding of the management and practical skills involved in multinational agribusiness. As a result, the course is expected to cultivate agribusiness management skills and enhance the competitiveness of our agricultural enterprises in international markets.

## 502040 溝通與領導 2 選 邱郁仁 下

本課程內容包含溝通與領導，第一部份介紹領導的本質、西方領導理論、華人領導理論等領導相關理論。第二部份將介紹人際溝通技巧、談判技巧、職場的人際關係與溝通等內容。

### 502040 Communication and Leadership 2 S Y.J. Chiu, S

This course contains both communication and leadership. The first part introduces the essence of leadership, Western leadership theories, Chinese leadership theories, and other relevant leadership theories. The second part will teach interpersonal communication skills, negotiation skills, interpersonal relationships, and communication in the workplace.

## 502041 農企業投資管理 2 選 劉芳怡 下

本課程目的在讓學生了解休閒農場的規劃和經營管理之原理與實務。內容包括：1.休閒農場的規劃 2.生產管理 3.田園餐飲管理 4.民宿經營 5.行銷管理 6.解說教育 7.人力資源管理 8.財務管理 9.經營診斷 10.環境管理 11.安全管理 12.觀摩休閒農場實務。

### 502041 Agribusiness Investment Management 2 S F.Y. Liu, F

This course contains both real capital investment and security investment. The major contents are as follows: 1. introduction to agribusiness investment; 2. the formation of investment plan; 3. investment feasibility analysis; 4. capital budgeting; 5. investment plan; 6. securities and security markets; 7. risks and returns; 8. the concept of portfolio management; 9. capital asset pricing models; 10. security evaluation; and 11. the introduction to international investment management.

## 502042 農園產品處理學 2 選 黃朝欽 下

本課程主要在介紹果園產品收穫後之生理變化及處理與貯運技術，包括選別、分級、包裝、預冷、貯藏及運輸等等。

### 502042 Postharvest Technology of Agricultural Products 2 S C.C. Huang, S

This course is to offer knowledge on postharvest physiological changes and factors affecting losses of horticultural products. Various postharvest handling techniques and storage methods to reduce postharvest losses are also introduced.

## 502043 農園產品處理學實習 1 選 黃朝欽 下

本實習主要在使學生熟悉農園產品採收後處理之有關技術，內容包括包裝、果品處理、貯藏、品質分析、呼吸率及乙烯發生率測定...等等，使學生能將理論與實習實際結合。

### 502043 Practice of Postharvest Technology of Agricultural Products 1 S C.C. Huang, S

This course is to make students practice the various postharvest handling and storage techniques, including packaging, handling, storage, quality analysis, and determination of respiration rate and ethylene production, among others to let students understand both practical operation as well as theoretical aspects of the lecture subjects.

## 502044 創客教育與農業應用 1 選 林俊男 下

本課程主要是以農業的產業知識與技術為基礎，做為創客實做的創意來源，從農產品

生產的環境、方式，農產品及食物的加工製作到，農業的休閒服務業；透過手作實踐，將創意具體實現，從學生「動手做」的學習，培養學生創新、批判、思考與解決問題的能力，在實作過程中，訓練專注力、堅持，從實際體驗中學習，再透過分析歸納建構經驗、獲得農業知識應用的創業能力。

**502044 Application of Maker in 1 S C.N. Lin, S Agriculture**

This course is mainly based on the industrial knowledge and technology of agriculture, as a source of creativity for makers, from the environment and methods of agricultural production, the processing and production of agricultural products and food, to the agricultural recreation service industry; through hands-on practice, Concretely realize the creativity, from the students' "hands-on" learning, can cultivate students' ability to innovate, criticize, think and solve problems, in the process of implementation, train concentration, persistence, learn from actual experience, and then analyze Summarize and construct experience and acquire entrepreneurial ability to apply agricultural knowledge.

**502045 生鮮物流管理 2 選 陳淑恩 下**

本課程旨在學習於供應鏈的跨組織中，如何管理農企業生鮮產品之物流活動內容。主要內容如下：1 生鮮供應鏈 2 顧客服務 3 物流資訊管理 4 生鮮物流中心 5 存貨管理 6 倉儲和運輸管理 7 物流委外管理 8 全球運籌。

**502045 Fresh-Product Logistics 2 S S.E. Chen, S Management**

The purposes of this course focus on how to manage logistics activities of raw and fresh products within the supply chain. This course will discuss the following topics for raw and fresh products: 1. supply chain of raw and fresh products; 2. customer service; 3. logistics information systems; 4. raw and fresh distribution center; 5. inventory management; 6. warehousing and transportation management; 7. outsourcing management; and 8. global logistics management.

**502046 農企業營運計畫撰寫 2 選 林俊男 下**

本課程主要在教導學生如何撰擬「農企業營運計畫書」；藉由「營運計畫書」管理者可檢視其創業目標、產品、定位、市場分析等是否詳實；更攸關其創業的可行性與成功機率。課程內容包括下列主題之撰寫：（1）摘要（2）營運動機與產業背景（3）農產品或服務之經營概況；（4）市場研究與分析（5）行銷計畫（6）營運計畫（7）管理團隊（8）財務規劃（9）結論與願景。

**502046 Writing for Agribusiness 2 S C.N. Lin, S Operate Prospectus**

This course intends to teach students how to write an operating plan for an agribusiness. Entrepreneurs can look over their goal, products, market positioning, market analysis, etc. to make sure that they are comprehensive and accurate to start an undertaking; moreover, it will affect the feasibility and the chance of success. The course content includes the writing of the following topics: (1) Summary (2) Operation motive and industry background (3) Overview of agricultural products or the service; (4) Market survey and analysis (5) Marketing plan ( 6) Operation plan (7) Management team (8) Financial plan (9) Conclusion and Prospect.

**502047 電子商務應用與實習 1 選 邱郁仁 下**

本課程旨在使學生瞭解電子商務技術與發展現況、電子商務運作流程以及電子商務規劃方法，並透過實作規劃演練，將電子商務充分運用於農企業經營或開創新的應用領域。

**502047 The Application and Practice of 1 S Y.J. Chiu, S E-Commerce**



This course aims to understand the current state of e-commerce technology and development, e-commerce operation processes, and e-commerce planning methods. Apply e-commerce in agribusiness management or create new application fields through practical planning exercises.

### **502048 農業大數據分析應用工作坊 1 選 黃文琪 下**

本工作坊課程以實作方式使學生熟悉大數據資料分析之技術，課程內容涵蓋資料科學、資料探勘、大數據分析、機器學習與人工智慧等相關基礎概念，並以農業數據資料為案例，透過實作方式讓學生可以簡易的應用軟體 (RapidMiner)，有效的學習運用大數據分析。

### **502048 Workshop for Agricultural Big 1 S W.C. Huang, S Data Analysis**

This workshop course enables students to familiarize themselves with the technology of big data data analysis in a practical way. The content of the course covers relevant basic concepts such as data science, data mining, big data analysis, machine learning and artificial intelligence. Through practical methods, students can easily apply the software (RapidMiner) to effectively learn to use agricultural big data analysis.

傳閱附件 4---時尚設計與管理系 113 學年度技優領航專班課程大綱

**時尚設計與管理系技優領航專班(113 學年度入學適用)****一、必修科目 1.Required Courses****762001 色彩學****3 必 徐秀如、上**

課程的主要重點在於色彩應用上的基本法則，包括色彩的本質、色彩的體系、色彩的感覺、色彩的混合與配色聯想及色彩的視覺效果。期望學生經由認識色彩、欣賞色彩，並能利用色彩美化人生。

**762001 Color****3 R Hsiu Ju Hsu F**

This course focuses on the basic rules of color applications, including the nature of color, the system of color, sense of color, combination of color, and color selection. Students are expected to be able to recognize, appreciate, and eventually beautify their lives throughout the course.

**762002 基礎設計概論****3 必 黃淑芳、上**

本課程透過理論與實務的演練，著重設計思考與設計感知之啟發。藉由對於色彩、圖案、造型、空間、裝飾等單元之練習，引導學生熟練於材料之運用、以及美的形式之呈現，以期能夠達到掌握設計的方法與敏感性。

**762003 Introduction of Basic Design****3 R Shu-fang Huang F**

Through theoretical and practical experiments, this course focuses on inspirations of design thinking and design perception. Practicing on the units of colour, pattern, form, space and decoration, etc., students will be guided to learn proficiently the use of materials, as well as to the presentation of aesthetic forms, to achieve the mastery of design method and practice sensitivity.

**762003 時尚美學****3 必 黃淑芳、上**

美學作為一種學問，旨在探尋有關美與藝術的知識，就像所有其它的學問一樣，也有其獨特的方法。本課程首先針對美學加以闡述藝術、科學與倫理三者間的知識內容，進而指出科學真理中所隱含的藝術特質。其次探討傳統美學與當代美學家的不同觀點，以及其存在的意義與價值。

**762003 Fashion Aesthetics****3 R Shu-fang Huang F**

The study of aesthetics is to discover all knowledge regarding beauty and art. Like any other study, aesthetics has its own learning methods. The course will look at art, science, and ethics and how art exists in science. Then the course will discuss the different perceptions on traditional aesthetics and contemporary aesthetics, as well as the significance and value of its existence.

**762004 時尚行銷學****3 必 徐秀如、下**

課程主要目標是瞭解時尚產業與行銷的關係。學習產品發展，價格策略，行銷通路與行銷

溝通組合之概念，應用於時尚產業，以便學生能成功進入就職市場，結合專業的流行教育及結實的行銷與管理的背景。

### **762004 Fashion Marketing**

**3 R Hsiu Ju Hsu S**

The purpose of this course is to understand the relationship between marketing and fashion industry. Learning the principles of product development, pricing strategies, marketing channel and marketing communications mix to apply in fashion industry. In order to support students to enter the fashion marketplace and succeed. It is also to combine a specialized education in fashion with a solid background in marketing and management.

### **762005 創意服裝構成**

**2 必 賴炤容、上**

進階服裝構成(一)課程旨在提升學生的進階服裝設計和製作技能，包括衣身和袖子原型的設計與應用，基本款式的變化製作、褶轉移，以及流行款式的製作變化和服裝版型補正。學生將學習進階服裝生產、服裝製版和技術設計等方面的知識和技能，並掌握服裝製作中的關鍵技術與工具使用。課程旨在培養學生成為具備專業知識和技能的服裝設計和製作專業人士。

### **762005 Advanced Apparel Construction (1)**

**2 R Lai, Chao-Jung、F**

This course aims to improve students' advanced clothing design and production skills, including the design and application the prototypes of body and sleeve, production of changes in basic styles, pleat transfer, production changes in popular styles and garment pattern correction. Students will learn knowledge and skills in advanced garment production, garment pattern making and technical design, and master the key techniques and tools used in garment production. The course aims to train students to become fashion design and production professionals with professional knowledge and skills.

### **762006 創意服裝構成實習(1)**

**2 必 賴炤容、上**

本課程的實習重點包括進階服裝生產技能、服裝製版操作、縫紉技術實踐，以及服裝生產流程分析與製造實習。學生將透過實際操作，瞭解包含服裝構成、版型及製作技術等關鍵技能，培養成為具備專業素養的服裝設計和製作專業人士。

### **762006 Practice in Advanced Apparel Construction (1)**

**2 R Lai, Chao-Jung、F**

The internship focus of this course includes advanced garment production skills, garment pattern making operations, sewing technology practice, as well as garment production process analysis and manufacturing internships. Students will learn about key skills such as clothing composition, pattern, and production technology through practical operations, and become professional clothing design and production professionals.

### **762007 多媒材表現技法**

**3 必 黃淑芳、上**

本課程結合當代設計創作發展之內涵，透過學習多媒體表現之特質，並運用各種技藝，

加強學生具藝術內涵之設計創作，開發系列創意作品。本課程期望開發學生於設計實作中的創作風格與想法。

### **762007 Techniques of Multi-media Presentation 3 R Tseng-Chin Yeh、F**

The course is integrated with the content of contemporary design development, and by means of learning the characteristics of multimedia expression, as well as using various skills to enhance students' design creativity with artistic connotations and to develop series of creative works. Focusing on idea incubation and experiences in the creative process, the course intends to educate students with personal style and creative ideas in the way of design practice.

### **762008 統計學實習(1) 1 必 王韻、上**

本課程教導學生使用 SPSS 統計軟體，讓同學將統計學所學的理论與管理實務結合應用相互印證，課程中提供實際行銷管理學上的市場調查問卷、及統計資料，期許學生能了解問卷內容並理解問題所在，學會將問卷資料轉換成統計資料、建檔，並分析出結果，最後提出管理實務上的建議。統計實習(1)課程內容包含：SPSS 統計軟體功能畫面介紹、問卷的編碼與資料的輸入整理、置換資料遺漏值、統計圖表的繪製、敘述性統計資料的集中趨勢與離散情形、以及研究變數的信、效度(因素)分析。

### **762008 Practice in Statistics(1) 1 R Yun Wang F**

Teach students to use statistical software to mutually corroborate statistical theory and practical applications to achieve learning goals which is be able to analyses data and give proper suggestions in real world. The course content includes: SPSS initial data screen and function, statistical data input and managing data, statistical chart of the frequencies, and descriptive statistical data centration trend and dispersion situation.

### **762009 服裝設計 2 必 黃淑芳、上**

引導學習對現今流行動向的分析方法及解讀方式，指導使用多彩布料作配色調色及圖案設計練習方法及學習意義，探討學習用各種不同材質做引導設計的方法及成果評價方式。講解以視覺所感受的結果學習做有型的服裝創意設計的方法。

### **762009 Fashion Design 2 R Shu-fang Huang、F**

Learn the analytical method and reading method of the present popular trend, receive instruction on the use of colorful cloth to make nuance, color adjustment, and pattern design practice method, and learn the method and result of guiding the design evaluation method with different materials. Explain in detail the result learning and the envisioned clothing creativity through the design method.

### **762010 服裝設計實習 1 必 黃淑芳、上**

配合服裝設計理論課程，做流行動向分析報告的實習、布料配色計畫實習、各種素材的組合創意服裝設計實習及主題引導式服裝創意設計的實習，實際練習服裝設計技能與表達能力。

### **762010 Practice in Fashion Design 1 R Shu-fang Huang、F**

Put the costume design theories in the curriculum into practice, such as analysis of fashion trends, matching colors of the cloth, combinations of creative fashion designs with various materials, and



theme-based designs. Actual practices will help improve designing skills and the ability to express.

### **762011 消費者行為學**

**3 必 徐秀如、上**

了解消費者和家庭單位如何作購買決策，及為何不同的獨立個體/團體作不同的購買決策。以行為及心理理論概念應用在個人(個性、知識、動機、涉入、態度、信念和感覺)，次文化(種族、社會階層、家人及家庭單位、團體及個人影響)及文化層次。

### **762011 Consumer Behavior**

**3 R Hsiu Ju Hsu F**

Understanding how consumers and households make decisions, and why different individuals/groups make different decisions. The behavioral and psychological science concepts apply at individual (personality, knowledge, motivation, intentions, attitudes, beliefs, and feelings), subcultural (ethnicity, social class, family and household, group and personal influence) and cultural levels.

### **762012 統計學實習(2)**

**1 必 王韻、下**

本課程將配和統計學的教授，作為統計學的支援課程。期以實作與練習增加同學對統計方法之瞭解與認識。本課程內容將包括敘述統計、機率、機率分配、抽樣、抽樣分配、估計、假設、假設檢定、變異數數分析、迴歸分析、相關分析、卡方檢定、指數和時間數列等之習作。

### **762012 Practice in Statistics(2)**

**1 R Yun Wang S**

This course mainly goes with Statistics as a supporting course. This course includes cases and problems practice of contents of Statistics.

### **762013 時尚商用英文**

**3 必 王韻、下**

本課程旨在訓練時尚系學生能有時尚專業英文的能力。期望學生能將時尚產業中的專業英文單字，如：纖維布料、服飾造型、美容化妝等基本單字，加入到日常生活中常用會話或商用溝通中。課程內容主要使用英文來介紹時尚產業，使學生能夠輕鬆的認識織品材料、服裝流行、整體造型等，並能閱讀英文時尚流行雜誌，與欣賞時尚美學。

### **762013 Fashion Business English**

**3 R Yun Wang S**

The purpose of this course is using English to introduce the fashion contents of fashion industry such as textile, fabric, fashion style and design, branding, hairstyle and makeup. Students will learn these professional English through different media such as reading fashion magazine, watch fashion show, or directly go shopping in retail stores. As the result, students would have a higher English ability of understand the apparel, fashion design, prestige brand, hair style and makeup in fashion industry. Moreover, appreciate the aesthetically appealing of fashion merchandising. In addition, this course will help students to use English to communicate within business circumstance, such as apparel shopping with others and buy cosmetics while traveling abroad.

**762014 時尚推廣企劃****3 必 王韻、上**

教導學生在全球市場下，整合行銷溝通對流行時尚品牌的意義，以及對消費者、行銷市場、社會環境所造成的影響。時尚整合行銷溝通課程包含：品牌行銷傳播、區隔目標消費者、企劃與策略、媒體總論、電子媒體、媒體企劃與購買、促銷活動、公共關係、直效行銷、服裝秀、人員銷售、櫥窗佈置以及效益評估等內容。除課堂上授課外，課程中有小組報告，會讓學生分組選擇參加縣市政府所舉辦的觀光節慶活動，回來後依據上課媒體推廣的重點分享給同學，以期讓學生學習到實際行銷推廣活動操作手法。另外為了讓學生準備進入職場，加入行銷專案企劃的撰寫練習。

**762014 Fashion Marketing Communication Planning****3 R Yun Wang F**

Teach students the significance of integrated marketing communication for popular fashion brands in the global market, as well as the impact on consumers, marketing, and the social and technology environment. Fashion Integrated Marketing Communication courses include: Brand Marketing Communication, Segmenting Target Consumers, Planning and Strategy, General Media, Electronic Media, Media Planning and Buying, Promotional Activities, Public Relations, Direct Marketing, Fashion Show, Personal Sales, Showcase layout and benefit assessment. In addition of teaching in the classroom, there are group reports in the course, which will allow students to choose to participate in the sightseeing festivals organized by the county and city government. To prepare entering job market in future, this course will practice in writing integrated marketing plan.

**762015 專家講座****3 必 徐秀如 上**

課程主要目標為邀請專家蒞臨演講現階段時尚議題，引導同學對時尚產業界訊息和趨勢的了解。

**762015 Experts Lecture****3 R Hsiu Ju Hsu F**

The main goal of this course is to invite experts to talk and discuss the hot topics of the fashion industry. Through the speeches and discussions, students can make a better understanding of the information and trend in the fashion industry.

**762016 實務參訪****3 必 徐秀如 上**

課程主要目標是參訪流行產業公司為主以參訪為主，讓學生能夠瞭解企業的運作。

**762016 Business Visits****3 R Hsiu Ju Hsu F**

The main goal of this course is to visit companies of the fashion industry, enabling students to understand corporations' operation in the fashion industry.

**762017 企業倫理****3 必 徐秀如 上**

課程主要目標是讓學生瞭解企業倫理的理論與應用

**762017 Business Ethics****3 R Hsiu Ju Hsu F**

The main purpose of this course is to help students understanding theory and applications of business ethics.

**762018 時尚應用商品企劃****3 必 王韻、下**

本課程教導學生時尚商品企劃流程礎，課程採用分組討論學習授課方式，依學期時間安排，主要分為前後兩大主軸：(1)期中考前主要教授學生流行商品行銷策略：內容涵蓋-分析品牌市場，探究環境、科技改變對服飾產業的影響，目標消費者、價格定位、競爭對手等、並加入時尚產品設計專業的靈感來源、色彩喜好等推導出商品定位；(2)期中考後小組將依據自己所選擇商品種類市場地位、目標市場喜好等，去設計創作、採購適合的流行商品，並做適切的管理規劃。課程授課內容走向為思考分析課程，將指派問題給學生，讓學生做商品品牌市場調查、整合分析融會貫通後，帶入流行色彩、流行趨勢、靈感啟發等時尚相關主題，讓小組同學開始創作自己小組商品策略。

**762018 Fashion Merchandises Planning****3 R Yun Wang S**

This course teaches students the basics of fashion merchandises planning process. The course adopts group discussion and lecture teaching methods. According to the timetable of the semester, it is mainly divided into two main axes: (1) Before the mid-term exam, it mainly teaches students the marketing strategy of fashion products which content - analysis of brands market, explore the impact of environmental and technological changes in fashion industry, target consumers, price positioning, competitors, etc.. In addition, add the source of inspiration and color preferences for fashion product design majors to derive product positioning. (2) After the mid-term exam, students group will according to their market position of the selected product type, target market preferences, etc., to design, create, and purchase suitable fashion products, and make appropriate management planning. The teaching content of the course is an intelligent and analysis course, assigning questions to students, allowing students to do market research on commodity brands, and integrating analysis.

**762019 實務專題****1 必 指導教授、上、下**

本課程在訓練學生運用適當之研究方法完成專題計畫。學生將以團隊合作方式進行資料蒐集、分析、論文撰寫、與專題發表。

**762019 Graduation Project****1 R Major Advisor、F、S**

This course aims to develop students ability in completing research as well as cooperation work. Students will have to work as a group to finish a study with a special topic they choose. A final oral presentation will be held later this year.

**762020 流行產業管理研究法****3 必 陳唯珍、上**

課程提供學生有演練有關服飾管理及市場調查之問題形成、問題確定、操作定義、研

究設計、研究方法、問卷設計、資料蒐集及分析的經驗。行為研究的哲理及方法包括實驗法設計和進階研究技巧的評估，是課程所包含的一部分之一。

## **762020 Research Methods of Fashion Industries and Managements 3 R**

**Wei-Chen Chen F**

This study provides students with practical experience in the research process of problem identification, problem definition, alternative identification, research design, methodology, questionnaire design, data collection and analysis in apparel marketing and management. Theories and methods of behavioral research including experimental design and advanced evaluation research techniques are all included in this course.

### **762021 流行分析**

**2 必 徐秀如 下**

以服裝歷史背景來分析流行與社會、文化的關係及其發生的原因與傳播途徑

### **762021 Fashion Trend Forecasting**

**2R Hsu, Hsiu-Ju S**

Historic analysis of fashion in relation to the social and cultural environment and its causes as well as the way of transmission.

### **762022 流行分析實務實習**

**1 必 徐秀如 下**

以實務實習方式演練流行趨勢分析，例如練習分析目前流行趨勢、分析趨勢的演變、列出流行資源清單、建立個人的趨勢部落、製作簡報及追蹤趨勢等等。

### **762022 Practice of Fashion Trend Forecasting**

**1R Hsu, Hsiu-Ju S**

Practicing the analysis of fashion trend forecasting, including analyzing a current trend, analyzing the evolution of a trend, listing of fashion resources, building a personal trend, making presentations and tracking trends...etc.

### **762023 實務實習**

**2 必 指導教授、下**

給予學生在他們所興趣的服飾領域範圍能實際的在業界有實習的機會,以增加專業的經驗。實習處所包括紡織公司、成衣公司、百貨公司、服飾商品店相關業界。

### **762023 Internship in Fashion Design**

**2 R Major Advisor S**

To offer students the opportunity at work in established internship settings to gain professional experience in their areas of study. Internship place include textiles companies, ready-made clothes companies, general merchandise companies, and apparel commodities stores.



## 二、選修科目 ( Elective Courses)

### 762024 時尚設計史

2 選 田履屏、上

由服裝與飾品等商品流行的演變，引導學生了解不同時期之時尚風格演變、潮流趨勢，並學習服裝飾品等流行商品之特色與時尚發展與歷史、文化、社會背景、品牌發展的關係。培養學生理解過去各個時期服飾的重點特色元素，應用在平時生活之時尚風格之搭配與美學應用，更進而運用於服裝設計與時尚商品企劃行銷等相關專業。

### 762024 History of Fashion Design

2 S Lu-Ping Tien F

Through the evolution of the popularity of clothing, accessories and other commodities, students are guided to understand the evolution of fashion styles and trends in different periods, and to learn the characteristics of clothing and accessories and other popular commodities and the relationship between fashion development and history, culture, social background and brand development. Cultivate students to understand the key elements of clothing in various periods in the past, apply it to the matching and aesthetic application of fashion styles in daily life, and further apply it to related majors such as fashion design and fashion product planning and marketing.

### 762025 美膚學與實習

3 選 陳秀足、上

藉由課室教學讓學生建立基本皮膚學概念，包括皮膚基礎知識、常見的皮膚疾病等，並能運用於生活及美容專業上常見皮膚的美容問題與各式護理技能，並透過專業的肌膚檢測，針對不同膚質需求進行各種皮膚保養療程，做差異化且精質化的保養。

### 762025 Practice of Dermatology

3 S Hsiu- Tsu Chen F

This subject teaching is to establish basic dermatological concepts, including basic skin knowledge, common skin diseases, etc., which can be applied to life and beauty professions

Including common skin beauty problems and various care skills, and through professional skin testing, various skin care treatments are carried out according to the needs of different skin types, and differentiated and refined maintenance.

### 762026 頭皮養護

3 選 謝維合、上

帶領學生深度了解頭皮養護目前市場概況及未來趨勢。課程包含頭皮的基本構造、頭皮養護、產業趨勢、醫學構想與專業經營模式內容，透過頭皮養護實務技法，以了解產業上操作模式補充更多的專業說明，藉由諮詢分析與實作，培訓頭皮養護之師資人才養成，進而提升專業與競爭優勢。

### 762026 Hair Scalp Care

3 S Weiher Hsieh F

Lead students to deeply understand the overview of current market and future trends of hair scalp care. This course includes the basic structure of hair scalp, hair scalp care and industry trends, which include medical concepts and professional business models, through this practice techniques, students

will understand the industrial operation model and supplement with more professional instructions. They will also cultivate business model through consulting and analysis of this practice, train them more confidence and enhance professional and competitive skills.

### **762027 服裝畫**

**3 選 田履屏、下**

介紹基本服裝畫技法及各種服裝素材的畫法，學習在人體上著裝時的各種形態畫法，運用各種不同的畫材呈現各種不同的風格，引導利用配色及著色技法做服裝設計的呈現並學習靜態展示的呈現方法。

### **762027 Illustrations of Fashion Design**

**3 R Lu-Ping Tien S**

Introduce the basic dress painting skill method and various technique of painting of clothing material, learn at human body up wear to pack of various appearance technique of painting, make use of various different painting materials to present various different style, guide to make use of the nuance and apply color the skill method to do the costume design to present and learn the static state exhibition to present the method.

### **762028 醫學美容概要**

**3 選 陳秀足、下**

本課程之內容介紹目前醫學美容之新知識，皮膚之生理、常見問題皮膚之病理與在美容醫學之應用，及術後照護來教授基礎知識與專業技能。讓學生了解當前有關醫學美容的最新發展

### **762028 Medical Beauty**

**3 S Hsiu- Tsu Chen S**

This course introduces the new knowledge of medical cosmetology, the physiology of skin, the pathology of skin, the application in cosmetic medicine, and postoperative care to teach basic knowledge and professional skills. So that students understand the current development of the latest medical beauty

### **762029 時尚彩妝設計與實務**

**3 選 陳秀足、上**

1 本課程協助學生了解時尚彩妝的專業知能與技巧，以培育優秀之彩妝專業人材為目標。  
2. 課程內容包含進階彩妝工具的應用、色彩計畫配色原理，結合臉型特色進行修飾美化；其次進階彩妝專業技能方面 結合時尚流行與美學原理，培養職場彩妝美容造型從業人員須具備之專業能力與態度。

### **762029 Internship in Fashion Make-Up Design**

**3 S Hsiu- Tsu Chen F**

1. Take cultivates the outstanding color make up specialized capable person as the goal, curriculum color make up creativity and utilization ability display for course content  
2. The curriculum content contains each kind of cosmetics tool application method, the color to

match, the color make up skill and so on for the study main foundation; Simultaneously joins the specialized color make up personnel should the ready basic accomplishment education and training.

### **762030 服裝材料學**

**2 選 賴顯松、下**

講述服裝原料之纖維、紗線、織物、編織物、不織布等的製法，以及物理的、化學的、機械的特性。課程內容包括纖維結構、纖維密度、濕、熱性質、抗張性質、時間效應及纖維化學特性等。

### **762030 Textiles and Clothing Materials**

**2 S Sang Song Lai、S**

Study of textile materials such as fiber, yarn, woven fabric, knitted fabric, nonwoven fabric production techniques and their physical, chemical, and mechanical properties. The course covers fiber structure, fiber density, moisture, thermal property, tensile property, time effect, fiber chemical property, etc.

### **762031 服裝材料學實驗**

**1 選 賴顯松、下**

練習纖維製品之定量、定性鑑別，以及物理、化學及力學性能實驗。課程內容包括實驗概論、纖維結構與品質、紗結構性能、織物結構性能、抗張強度實驗及纖維化學特性等。

### **762031 Lab. of Textiles and Clothing Materials**

**1 S Sang Song Lai、S**

Practice of quantitative and qualitative materials validation on properties of material in terms of physics, chemistry, and mechanics. Course contents include the introduction to experimentation, fiber structure and quality, yarn structure, fabric structure and properties, tensile strength experiment, and fiber chemical properties.

### **762032 美髮造型**

**2 選 謝維合、下**

學習髮型設計首先要先了解整個頭髮的狀況，頭髮就像一般人，它有顏色，有不同的型態與尺寸，還有成份、結構組織、生長狀況，以及如何保健，維護它的健康亮麗。其次是頭髮的造型，即髮型，髮型是運用各種剪髮工具如剪刀、削刀、打薄刀等及技巧，配合頭型、髮質、髮量、髮流、臉型以及個人習性、生活習慣，來達到頭髮造型的效果。

### **762032 Basic Hair Design**

**2 S WEI-HER HSIEH、S**

The contents of this course include the introduction of hair structure, sculpting concepts-four basic hair cutting forms, finger position, design line, and texturizing. Throughout this course students will be able to understanding the foundation, and to achieve the predictable results by using the proper tools and skills

**762033 美髮造型實務****1 選 謝維合、下**

此課程將藉由剪、燙、染、整的基本理念與技術，再將髮型與臉型、頭型的相互配合關係，做一組合搭配設計，包括流行性剪髮設計、燙髮設計與染髮設計，將髮型的形狀、線條和裝飾效果作一適當的安排，使髮型設計造型趨向高流行感與變化性，以期符合教學目標。

**762033 Practice of Hair Design****1 S WEI-HER HSIEH、S**

The concepts of this course are a perfect blend of fashion and hair design. Cutting ,is considered a sculptural technique. Perming , is to create a personal hair design. Coloring, is to realize that nature creates such an endless variety of haircolors. Throughout this course, students will be able to stay informed of the latest hair trends by following the fashion scene.

**762034 電腦輔助設計****3 選 田履屏、上**

課程以教導電腦影像與繪圖之基本技巧，藉由對不同影像與圖樣的繪製練習，讓學生們熟悉與運用電腦影像與繪圖軟體的各項指令，表達完整的設計作品並運用於服飾 e 化設計。

**762034 Computer Aided Design****3 S Lu-Ping Tien F**

This course teaching the basic techniques of computer-aid graphic and drawing. training the students to familiar with how to using the computer to express the ideas to create projects in the fashion field.

**762035 高級立體裁剪與實習(1)****3 選 賴炤容、上**

立體裁剪是直接在人台上進行造型，通過分割、摺疊、抽縮、拉展等技術手法，巧妙地處理織品以創造設計效果，呈現服裝美感以及其立體性、空間性。本課程著重於教授立體裁剪原理和技巧，學生透過實際操作以胚布在人台上進行實務演練，以掌握別針法、布料計算以及版型轉換等，學習服裝布料紋理、鬆份、平衡和切線等關鍵原理和操作技巧。

**762035 Advanced draping and internship (1)****3 S Lai, Chao-Jung F**

Draping is the direct modeling on the mannequin. Through technical techniques such as segmentation, folding, shrinking, and stretching, the fabrics are skillfully processed to create design effects and present the beauty of the clothing as well as its three-dimensionality and space. This course focuses on teaching the principles and techniques of draping. Through practical exercises on the mannequin, students can master the pin method, fabric calculation and pattern conversion, etc., and learn the texture, looseness, balance, and quality of clothing fabrics. Tangential and other key principles and operating techniques.



**762036 國際比賽演練(1)****3 選 賴炤容、上**

本課程是初級階段，介紹時尚產業發展和國際競爭的重要性，建立基礎設計能力、培養創意思維，瞭解國際競賽要求。課程包括時尚趨勢分析、基礎設計原理、剪裁縫紉基礎、基本材料認識、設計繪圖技能等，旨在培養學生的設計基礎知識和技能，為進階階段打下扎實基礎。

**762036 International Design Competitions(1)****3 S Lai, Chao-Jung F**

This course is the beginner stage, introducing the development of the fashion industry and the importance of international competition. It focuses on building basic design skills, nurturing creative thinking, and understanding the requirements of international competitions. The course includes fashion trend analysis, basic design principles, cutting and sewing basics, basic material knowledge, and design drawing skills. Its goal is to cultivate students' foundational design knowledge and skills, laying a solid foundation for the advanced stages.

**762037 時尚髮型設計與實務(1)****3 選 謝維合、上**

此課程目標設定在運用整、梳髮各技巧組合搭配與多元化的學習。強調髮型整體設計，配合設計造型實務，以現場示範教學方式，引導學生在理論與實務上能掌握與設計具流行感的髮型。配合共同實際參與資料整理運用於髮型設計中，以達成學術並重的目的。

**762037 Practice of Hair Design (1)****3 S Weiher Hsieh F**

The goal of this course is to use the skills of combing, combing and combining various skills. Emphasizing the overall design of hair styles, in conjunction with design styling practices, and using on-site demonstration teaching methods, guide students to master and design popular hair styles in theory and practice. Cooperate with the actual participation of data collection and apply it in hair design to achieve.

**762038 藝術美甲設計與實習****3 選 陳秀足、上**

培養人造指甲製作與設計技術能力，激發學習興趣與美甲設計的藝術美感，訓練指尖肢體靈活與細膩度，提升了解市場趨勢，增加就業競爭力。學生能瞭解美化指甲的專業知識 2. 學生能操作手部保養的的專業技巧及工具與材料的運用方法 3. 學生能操作美甲的各種專業技巧及工具與材料的運用方法 4. 學生能欣賞並培養指甲美化的審美觀念與設計能力。

**762038 Nail Art Design****3 S Hsiu- Tsu Chen、F**

Cultivate of artificial nails making and design technical capacity, to stimulate interest in learning the artistic beauty and nail design, training fingertip the limbs flexible with delicate, to enhance the understanding of market trends, increase their competitiveness in the job market. 1.The student can understand that beautifies nails specialized knowledge 2.The student can the operator nails maintenance

specialized skill and tool and material utilization method 3.The student can operate the nail-painting on pottery each specialized skill and the tool and the material utilization method 4.The student can appreciate and raise the esthetic idea which and designed capacity the nail beautifies

### **762039 服務業管理**

**3 選 王韻、上**

首先了解服務的特色，並加入全球的觀點。接著從行銷的角度深入探究，包含溝通策略、服務品質、市場區隔、顧客導向、實體環境設計、人員銷售及相關服務業的管理研究等內容。

### **762039 Service Management**

**3 S Yun Wang、F**

Teach students understand the service marketing characteristics in both Taiwan and global view. Teach students know the personnel sales of promotion, and satisfy customers. Understand how to investigate the service quality, the difference of service in culture, the new technology of service marketing.

### **762040 進階服裝構成**

**2 選 賴炤容、上**

本課程旨在培養學生對進階服裝設計與製作的高級技能。課程包括不同剪接線條的衣身設計和對不對稱和立體輪廓的剪接應用，以及雙滾邊口袋的製作與開叉處理等之進階縫紉技巧。學生將學習如何運用各種剪裁技術，使服裝更加具有立體感和流行性。同時，課程也著重於素材應用和流行款式的製作變化，讓學生能夠掌握時尚設計的最新趨勢和技術。這門課程旨在培養學生成為具有豐富設計和製作經驗的專業時尚人才，打下堅實的專業基礎。

### **762040 Advanced Apparel Construction (2)**

**2 S Lai, Chao-Jung F**

This course is designed to develop students' advanced skills in advanced clothing design and production. The course includes advanced sewing techniques such as body design with different cutting lines and cutting application of asymmetrical and three-dimensional silhouettes, as well as the production of double-piping pockets and slit processing. Students will learn how to use various tailoring techniques to make clothing more three-dimensional and pop. At the same time, the course also focuses on material application and production changes of popular styles, allowing students to master the latest trends and technologies in fashion design. This course aims to train students to become professional fashion talents with rich design and production experience and lay a solid professional foundation.

### **762041 進階服裝構成實習**

**1 選 賴炤容、上**

本實習課程將通過實際操作來加強學生對專業技術的理解和應用能力。學生將根據理論課程進行設計應用，以掌握版型與縫製技巧。同時，學生還將進行素材應用和流行款式的製作變化的實習，以更好地理解時尚設計的趨勢和技術。這個實習課程旨在讓學生通過實際操作和專業指導，將理論知識轉化為實踐能力，為他們未來的設計和製作職業生涯做好準備。

備。

## **762041 Practice in Advanced Apparel Construction (2) 1 S Lai, Chao-Jung F**

This internship course will enhance students' understanding and application ability of professional technology through practical operations. Students will conduct design applications based on theoretical courses to master pattern and sewing techniques. At the same time, students will also conduct internships in material application and production changes of popular styles to better understand the trends and techniques of fashion design. This internship program is designed to prepare students for their future design and production careers by transforming theoretical knowledge into practical capabilities through hands-on practice and professional guidance.

## **762042 高級立體裁剪與實習(2)**

**2 選 賴炤容、下**

本課程引入更多高級的服裝設計造型，讓學生學習處理斜裁布料、創造立體造型和版型轉換的技巧，並使其了解平面織品與 3D 立體構成之版型關係，以深化學生對裁剪技術的理解和應用。透過立體裁剪增加在服裝設計上之獨創性和造型的藝術呈現。結合理論與實作，讓學生掌握高級的裁剪技術，運用立體裁剪的技術創作出具有時尚感和獨特風格的服裝作品，提升其在時尚設計領域的競爭力和創作能力。

## **762042 Advanced draping and internship (2)**

**2 S Lai, Chao-Jung S**

This course introduces more advanced fashion design styles, allowing students to learn the skills of processing bias-cut fabrics, creating three-dimensional shapes and pattern conversion, and allowing them to understand the pattern construction between flat fabrics and 3D three-dimensional composition, to deepen students' understanding of cutting technology. understanding and application. Through draping, the originality in clothing design and the artistic presentation of styling are increased. Combining theory and practice, students are allowed to master advanced tailoring techniques and use draping techniques to create fashionable and unique clothing works, thereby enhancing their competitiveness and creative ability in the field of fashion design.

## **762043 國際比賽演練(2)**

**3 選 賴炤容、下**

本課程為中級階段，深入理解時尚趨勢和國際競賽要求，提升設計能力、加強創意表達，準備參加實際競賽。課程內容包括時尚趨勢與文化分析、創意設計風格、高級剪裁和縫紉技術、面料與素材深入認識、設計效果圖與平面(機械)圖製作等，旨在提升學生的設計能力和競賽準備能力，使其具備參加國際比賽的實力。

## **762043 International Design Competitions(2)**

**3 S Lai, Chao-Jung S**

Training Course is the intermediate stage, delving deeper into fashion trends and international competition requirements, enhancing design capabilities, fostering creative expression, and preparing for actual competitions. The course covers topics such as fashion trend and cultural analysis, creative design styles, advanced cutting and sewing techniques, in-depth material understanding, and design drawing and mechanical drawing production. Its aim is to elevate students' design capabilities and competition

readiness, enabling them to compete internationally effectively.

### **762044 身體保健按摩**

**3 選 陳秀足、下**

美膚美體學與實務常利用按摩達到身體的保健早已獲得東西方的文化社會的支持且按摩的功效早已被運動界人士肯定另外在研究的臨床發現:按摩的功效不只是肉體而在心理上的成效更是有目共睹!! 本課程就其按摩的力道及手法技術與速度的不同示範不同身體部位的手部操作方式及其如何增進健康!

### **762044 Body Massage**

**3 S Hsiu- Tsu Chen S**

The human body takes musculoskeletal and countless acupoints as the main axis. Through the understanding of body health, the European massage method is used to practice commonly used pressure relief techniques, and various demonstration operations are used to learn practical application skills.

### **762045 時尚髮型設計與實務(2)**

**3 選 謝維合 下**

此課程目標設定在運用剪、染、梳髮等技巧組合搭配以多元化的學習。強調髮型整體設計，配合設計造型實務，以現場示範教學方式，引導學生在理論與實務上能掌握與設計具流行感的髮型。配合共同實際參與資料整理運用於髮型設計中，已達成學術並重的目的。

### **762045 Advanced Hair Design (2)**

**3 S Weiher Hsieh S**

This course is aimed to apply the combinative techniques and comprehensive study through hair cutting, colour, combing etc into hairstyle. By using practical teaching method of demonstration emphatic the whole hairstyle in order to lead students are able to handle and design fashionable hair styling in the theoretical and practical practice. Operation with research and arranging the information to apply into the hairstyle to conclude the balance of the theoretical and practical purpose.

### **762046 流行飾品設計與應用**

**3 選 陳秀足、下**

學習各種流行裝飾物件的製作原理、方法與設計理念、廣泛地應用於流行款式上。並實際操作各種裝飾物件的製作方式，爾後製作成成品，推廣應用於流行產品上。

### **762046 Practice of Fashion Accessory**

**3 S Hsiu- Tsu Chen、S**

Learn a variety of production principles, method and design on fashion accessory and application on different fashion styles. Practice and implement a variety of fashion product and to apply the skills of fashion product making.

### **762047 布料設計**

**2 選 賴顯松、下**



本課程提供、並示範多樣的布料設計技藝與方法。學生透過經驗各種織品材質特色與布料工藝，包括各種漂染技藝、刺繡技藝、拼布技藝、皺摺處理等，來創作出嶄新且具有個人風格的織品設計作品。藉由各類布料設計案例介紹，加強學生對於視覺美學的內涵；結合技藝的實習演練，來豐富其對於布料設計創作之方法，以期能發展出更具藝術與創意風格之衣飾用途之材質。

## **762047 Surface Design**

**2 S Sang Song Lai、S**

This course provides and demonstrates a variety of skills and methods regarding fabric design. Through experiencing various characteristics of textile materials and fabric crafts, including various dyeing techniques, embroidery skills, quilting skills, folding techniques, patching skills ..., and so on, students will explore new way of making and create textile design work with personal styles. Through case study of various types of fabric design, this course suggests ways of generating visual aesthetics for the students. Combining practice with skills exercises, students' creative methods relating fabric design can be enriched. By this way, the course encourages students with an approach to develop more artistic and creative styles relating to clothing materials.

## **762048 布料設計實習**

**1 選 賴顯松、下**

實際利用梭織機、織帶機、綴織機以及生活週遭隨手可得之素材作為織物編織之工具，並自行製作編織用具編織製作編織物，以及實際分析與觀察各種織物之組織與特性。

## **762048 Practice of Surface Design**

**1 S Sang Song Lai、S**

This course will utilize inkle weaving loom, and tapestry and knitting machine. The materials for this course will be taken from the surrounding environment. The students will be asked to observe different kinds of fiber textiles and make analyses of features of weavings. This practice course will make a real product with Dobby Loom.

## **762049 時尚商品陳列**

**2 選 田履屏、上**

認識陳列設計的起源、風格形成與目的，剖析商品展示設計的基本概念。培養學生學習商品展示的全方位知識，如商品展示的各種設計原理、商品陳列技巧、色彩運用、分析不同的藝術風格如何誘發創意，並模擬演練陳列設計作品。

## **762049 Visual Merchandising**

**2 S Lu-Ping Tien、F**

Understand the origin, style and purpose of display design, and analyze the basic concepts of product display design. Cultivate students to learn all-round knowledge of product display, such as various design principles of product display, product display techniques, color application, analyze how different artistic styles induce creativity, and simulate and practice display design works.

## **762050 時尚商品陳列實習**

**1 選 田履屏、上**

讓學生有實際櫥窗操作布置的機會，包含利用課堂所學習的核心設計策略繪出與櫥窗同等大小的設計圖稿，櫥窗背景的布置與服飾、配件的搭配組合。

### **762050 Practice of Visual Merchandising**

**1 S Lu-Ping Tien、F**

Offer students the chance to engage in hands-on window display setup, utilizing core design strategies learned in class. This involves sketching out designs of equal size to the window display, incorporating the backdrop arrangement, and coordinating combinations of clothing and accessories.

### **762051 電腦輔助成衣設計打版**

**2 選 陳唯珍、上**

運用法國力克系統專業成衣打板與馬克軟體，示範電腦讀版與裁片的製作、修改和放縮等功能。再經由成衣檔的建立，教導電腦馬克排版的製作、用料預估和繪圖機操作等功能。授課時，可依教學單元主題，搭配台灣內外銷服裝公司打版實例講解，以達理論與實例配合的目標。

### **762051 Computer-Aided-Design in Pattern Making**

**2 S Wei-Chen Chen、F**

This course demonstrates the function to create the original vectored patterns and to input the paper patterns into the computer for later alteration and grading by using the professional apparel industrial CAD/CAM software from the Lectra System. Through the marker making software, it enables the students to manipulate the material savings for the high apparel productivity. Also, the lectures compile the cases from the Lectra's customers during the class practice to give the students a better understanding on the apparel industry in Taiwan.

### **762052 電腦輔助成衣設計打版實習**

**1 選 陳唯珍、上**

運用法國力克系統專業成衣打板與馬克軟體，使學生學習電腦讀版與裁片的製作、修改和放縮等功能。再經由成衣檔的建立，使學生學習電腦馬克排版的製作、用料預估和繪圖機操作等功能。

### **762052 Computer-Aided-Design in Pattern Making**

**1 S Wei-Chen Chen、F**

This course instructs the students to have the ability to create the original vectored patterns and to input the paper patterns into the computer for later alteration and grading by using the professional apparel industrial CAD/CAM software from the Lectra System. Through the marker making software, it enables the students to manipulate the material savings for the high apparel productivity.

### **762053 創意髮型設計**

**2 選 謝維合、上**

開發學生髮型操作專業技巧與整體造型設計之應變能力，融合科學與美學概念，以實際共同參與實驗與創意發想運用於美髮藝術創作上，以期掌握高階髮型設計之造型實務。

### **762053 Creative Hairstyle Design**

**2 S WEI-HER HSIEH、F**

By using practical teaching specialty method of demonstration the whole hairstyle. Students are able

to handle and design fashionable hair styling in the theoretical and practical practice.

### **762054 創意髮型設計實務**

**1 選 謝維合、上**

開發學生髮型操作專業技巧與整體造型設計之應變能力，融合科學與美學概念，以實際共同參與實驗與創意發想運用於美髮藝術創作上，以期掌握高階髮型設計之造型實務。

### **762054 Creative Hairstyle Design Practice**

**1 S WEI-HER HSIEH、F**

By using practical teaching specialty method of demonstration the whole hairstyle. Students are able to handle and design fashionable hair styling in the theoretical and practical practice.

### **762055 創意彩妝學與實習**

**3 選 陳秀足、上**

1.以培育優秀之彩妝專業人材為目標，將課程彩妝創造力與運用能力發揮為教學內容。2.課程內容包含各類彩妝工具使用方法、色彩搭配、彩妝技巧等為學習主要基礎，藉由不同的主題讓學生以多元方式學習各種不同的彩妝技巧以激發學生的想像力及創作能力。流行性彩妝之運用，具實用性及創意之進階性技巧，創意時尚彩繪化妝是彩妝加上彩繪技術，結合多元化化妝技術與材質之運用，創造高階技術的研發。

### **762055 Practice of Creative make-up**

**3 S Hsiu- Tsu Chen、F**

1. Take cultivates the outstanding color make up specialized capable person as the goal, curriculum color make up creativity and utilization ability display for course content 2. The curriculum content contains each kind of cosmetics tool application method, the color to match, the color make up skill and so on for the study main foundation; Simultaneously joins the specialized color make up personnel should the ready basic accomplishment education and training. Fashion, Stagecraft, Various types are practical, but the skillful difficulty compares the depth to enter the step.

### **762056 成衣版型與實習(1)**

**3 選 賴昭容、上**

本課程旨在幫助學生獲得成衣打版的基本知識和技能，內容包含成衣版型製作技巧、版型設計的變化和風格、剪裁技術、實際應用等內容。學生將學習如何根據不同尺寸的身體測量製作成衣版型，掌握原型製作和版型設計的基本步驟，並學會應用不同風格和變化設計成衣版型，讓學生能應用版型於實際成衣製作中。

### **762056 Garment pattern Making and internship (1)**

**3 S Lai, Chao-Jung F**

This course is designed to help students acquire the basic knowledge and skills of garment pattern making. The content includes garment pattern making techniques, pattern design changes and styles, tailoring techniques, practical applications, etc. Students will learn how to make garment patterns based on body measurements of different sizes, master the basic steps of prototyping and pattern design, and learn to apply different styles and variations to design garment patterns, allowing students to apply patterns in actual garment production.

**762057 時尚採購學****3 選 賴炤容、下**

提供潛在服飾零售業者能有基本知識且在基於滿足消費者及維持一定利潤水準的前提下，作採購及企劃商品的決策。同時了解服飾採購員的責任含跨至服飾產品陳列於店面所進行的過程。服飾採購員必須與設計師溝通以確定他們的品牌符合時下的最流行的趨勢，能與販賣商洽商成本，與打版設計師合作，以確定服裝適合消費者的喜愛及確定販售商能在期限內送達貨物。

**762057 Fashion Buying****3 S Lai, Chao-Jung、S**

Gives potential retailers the knowledge base to make decisions on buying and merchandising to satisfy customers and maintain an adequate profit level. Understanding of a fashion buyer (merchandiser) is essential for the process that allows the final clothing line to appear in a store. Buyers work with designers to ensure that their brand will represent the most recent trends, negotiate costs with vendors, work with technical designers to ensure the garment fits the customer perfectly, and make sure the vendors meet the delivery deadline.

**762058 禮服設計與構成****3 選 賴炤容、下**

本課程旨在培養學生對禮服設計與製作的能力。課程包括禮服設計與趨勢、材質選擇、版型設計、內層結構的製作技巧和細節裝飾製作等工藝技術。以培養符合市場需求和流行趨勢的禮服設計製作之專業能力，使學生具備獨立設計和製作禮服的能力。

**762058 Dress design and Construction****3 S Lai, Chao-Jung、S**

This course aims to cultivate students' ability in dress design and production. The course includes dress design and trends, material selection, pattern design, inner structure production techniques and detailed decoration production and other craftsmanship. To cultivate the professional ability of dress design and production in line with market demand and fashion trends, so that students have the ability to independently design and make dresses.

**762059 男士髮型設計與實務****3 選 謝維合、下**

男士髮型設計實務課藉由髮型設計分析示範與訓練從基礎男士方型層次運用、手推剪造型應用、電推應用、國際多元美感訓練，達到髮型分析設計與訓練真人實作與操作的完整全方位學習。

**762059 Men's Barbering****3 S Weiher Hsieh S**

The goal of this course is training students to use scissor/clipper over comb, army/cops cut, corporate cut, long flat graduation, razor fade, a sharp fade pompadour, skin fade, over-directed crop, layer square, skater classic, a real tapered pompadour and dry cut. The haircutting training will be followed by teaching you the right hair dryer & finishing techniques.



**762060 婚禮造型設計與實習****3 選 陳秀足、上**

課程以實務新娘造型規劃與設計搭配與了解商業廣告人像(時尚)攝影專業知識及相機操作為主軸，輔以婚禮規劃流程設計運用，經由攝影棚實作使學生具備商業廣告人像(時尚)攝影拍攝能力，提升優化作品。

**762060 Practice of Wedding Styling Plan****3 S Hsiu-Tsu Chen F**

The course focuses on practical bridal styling planning and design matching and understanding of commercial advertising portrait (fashion) photography professional knowledge and camera operation. Supplemented by wedding planning process design and application, Through studio practice, students have the ability to shoot commercial portraits (fashion), and improve and optimize works.

**762061 成衣版型與實習(2)****3 選 賴炤容、上**

本課程深入成衣打版的技術與應用。學生將學習不同款式的版型製作技巧和設計變化，並掌握相應的剪裁技術和素材應用。課程內容涵蓋了各種不同風格和變化的成衣版型，讓學生能夠應對各種不同的設計需求和市場趨勢。

**762061 Garment pattern Making and internship (2)****3 S Lai, Chao-Jung、F**

This course provides an in-depth understanding of the technology and application of garment pattern making. Students will learn the pattern making techniques and design changes of different styles and master the corresponding cutting techniques and material applications. The course content covers a variety of different styles and variations of ready-to-wear silhouettes, allowing students to respond to various design needs and market trends.

**762062 男裝設計與構成****3 選 陳唯珍、上**

男裝設計與構成的課程中，學生在磨練設計美感及具有男裝市場的洞察力時，也將同時學習到如何發展時尚的男裝產品、創造獨有的設計、以及了解男裝流行趨勢。學生將學習到一連串關於男裝的打版及製作技巧，包括手繪及進階的定製服技巧等。

**762062 Menswear Design and Pattern Making****3 S Wei-Chen Chen F**

Students will learn how to develop contemporary menswear product, create original designs, and understand trends while sharp the design aesthetic and gaining insights into the menswear market. Students will master a range of skills, including hand sketching, and advanced tailoring techniques.

**762063 時尚內衣設計與打版****3 選 陳唯珍、上**

本課程時尚內衣設計與打版將讓帶領學生學習從打版到最後的成品。學生也將學習到可拉扯的布料、彈性布料的不同，以及如何使用這樣的布料，並且學習需要如何處理這樣的布料。因此，課程中將介紹特別的可拉伸布料機器的縫紉機給學生。

**762063 Underwear Design and Pattern Making****3 S Wei-Chen Chen F**

In this course, students will learn the underwear design from pattern to a final product. Students will learn about different stretch fabrics and elastics, their properties and how to handle them and discover the best practice for sewing these items. Students will be introduced to specialized stretch machinery alongside the use of a domestic sewing machine.

**762064 半永久美妝設計與實務****3 選 陳秀足、上**

透過不同單元及實習在眉、眼線、眼睫毛美學方面，藉不同的訓練使學生掌握半永久眼眉、美瞳內眼線及嫁接睫毛等專業技術，從而成為極具競爭力及專業的「眉、眼線、眼睫毛」美學專家。

**762064 Course Semi-Make Up Course****3 S Hsiu- Tsu Chen F**

Aesthetics of eyebrows, eyeliner and eyelashes through different modules and internships, Through different trainings, students can master professional skills such as semi-permanent eyebrows, inner eyeliner and eyelash extension, Become a highly competitive and professional "eyebrow, eyeliner, eyelashes" aesthetic expert.

**762065 特效彩繪設計與實習****3 選 陳秀足、上**

台灣對於具備特殊效果造型這方面的專才有日漸提高的需求，在一些表演會上，都會配合化妝的目的，以特殊的化妝加強演出的效果。例如電視、電影、戲劇等劇情內容所需及秀場活動、公司跨年晚會等活動內容所需。希望學生能將所學融會貫通多元化運用，提升技術與創作能力。主要是教導學生製造特殊效果造型的專業知識與技能，主要的內容包含：1.受傷妝 2.老妝 3.毛髮特效造型 4.皮膚蠟的使用 5.光頭套 6.創意特效假皮與彩繪

**762065 Practice of Effects Painted Makeup Design****3 S Hsiu- Tsu Chen 、F**

Taiwan in recent years, with expertise in this area of the special effects modeling only the rising demand in some of the performances at the meeting will be with the purpose of make-up, special make-up to enhance the performance results. Such as television, film, theater and story content required to show activities, New Year's Eve activities required. I hope the students can learn mastery diversified use to upgrade their skills and creativity. The special effect course is designed to teach students the professional knowledge and techniques of making special effect. The content of this course is included: 1. Being injured Make-up. 2. Old skin making. 3. Crepe wool special effect. 4. Face and Body Wax. 5. Bald sets. 6. Dream stage painted makeup.

**762066 織品品質鑑定與管理****2 選 賴顯松、上**

學習織品品質鑑定的原理、方法和應用。課程內容包括基礎統計、織品品質管理的內涵、檢驗樣本選擇、實驗設計、檢驗方法、標準與儀器使用、纖維品質鑑定、紗線品質鑑定、織物品質鑑定等。

**762066 identification and management of Textile 2 S Sang Song Lai、F**

Quality identification of textile goods in terms of principles, methodology, and application. Course contents include the elements of statistics, the meaning of fabric quality management, test design, the selection of samples for testing, a method of assay, standard and instrument, fiber quality identification, yarn quality identification, fabric quality identification.

**762067 織品品質鑑定學實習****1 選 賴顯松、上**

實驗操作布料成份的分析、組織的測定、各種布料物性的測試，增加學生的研判性。課程內容包括織物瑕疵檢驗、染色堅牢度檢驗、纖維結構及種類鑑定、紗線結構與性質檢驗。

**762067 Lab. of Textile Goods with Quality****1 S Sang Song Lai、F**

Test validation on quality identification of textile goods in organization measurement and property of material. Course contents include the woven fabric defects, color fastness, fiber structure, type quality, and yarn structure and properties.

**762068 專業實習****9 選 指導教授、下**

本課程涵蓋織品、服飾、美容美髮設計與管理等時尚領域之專業實習。透過校外專業之實習，提供學生與業界實際連結，使本系學生有機會接觸實習公司或工作室的實務專業，了解實務運作、材料運用與製作系統。實習處所涵蓋紡織公司、成衣公司、百貨公司、服飾商品店、時尚創意工作室、服飾工坊、創意設計公司、展覽與文化機構…等時尚相關業界。藉此課程使本系學生兼具時尚設計創意的涵養與業界實務經驗。

**762068 Professional Practice****9 S Major Advisor、S**

This course includes professional practices in fields of fashion and management of textile, apparel, makeup and hairdressing. Through off-campus professional internship, the course offers students opportunities of actually connecting with industry, in order that the students have accesses to internship companies or studios concerning practical professions, and to understand the practical operations, the use of materials and production systems. Internship places include textile companies, apparel companies, department stores, fashion merchandise stores, fashion creative studios, costume workshops, creative design companies, exhibitions and cultural institutions ... and other fashion-related industries. Through this course, students will be trained to have both the ability of fashion design creativity and the

experiences of practical work.

### **762069 銀髮族服裝設計與構成**

**3 選 謝維合、下**

以服裝人體工學角度去探討銀髮族群在衣著方面的問題與需求，透過課堂上整合分析模式，歸納銀髮族群對服裝設計需求要素，設計研發適合銀髮族之服裝，並進一步研究如何於服裝中結合設計巧思，透過衣著試驗設計製作出適合銀髮族的一衣多穿的服飾，並考量年長者著裝的便利性，將功能性服飾提升成實用性價值，並增加服裝穿著的使用頻率。

### **762069 Silver-Haired Group Clothing Design Construction 3 S Weiher Hsieh S**

From the perspective of clothing ergonomics, students will investigate the problems and needs of the silver-haired group in terms of clothing design. It will summarize the elements of the silver-haired group's demand for clothing design through the integration and analysis in the classroom, finally, design and develop clothing suitable for silver-haired people. Moreover, study how to combine design ingenuity in clothing, make it suitable for silver-haired people through trial design, and consider the convenience of elderly clothing, enhance functional clothing into practical value, and increase the frequency of use of clothing.

### **762070 多功能服裝設計**

**3 選 謝維合、下**

本課程針對特殊服裝需求設計要求，布料及材質特性需符合服裝功能性的要求，多功能性服裝設計結合服裝外觀美學需求及內在機能性的舒適性需求之滿足，它結合纖維材料本身特性、紗線、與織物結構性能、活動生理、活動人因工學、服裝力學、打版和裁剪設計技能、縫製細節、及服裝合身尺寸、重量、與實務之整體結構設計之精神。

### **762070 Multifunctional Clothing Design**

**3 S Weiher Hsieh S**

This course is designed for special clothing needs, include fabric and material characteristics to meet the requirements of clothing functionality, which design combined with the appearance of clothing as well as aesthetic needs, and the most important thing is satisfaction of the comfort, it combines the characteristics of the fiber material, yarn, and fabric structural properties, such as ergonomics, clothing mechanics, patterning and cutting design skills, sewing details, and clothing fit size, weight, and the spirit of the structural design of clothing.

### **762071 美容業界專家講座**

**3 選 陳秀足、下**

藉由校外產學實務專家解說並分析目前美容產業現況，以提供學生未來就業之準備。本系課程迎合美容與異業結合帶動流行風潮的健康美麗趨勢，以培養美容專業人才為培育目標。召集業界專家、在校生、強調由內而外的美容知能及技術，發展出健康美容及形象造型兩個領域，進行產業實務的分享，引導學生發展生涯。



**762071 Beauty Industry Expert Lectures****3 S Hsiu- Tsu Chen S**

Service experience economy era in customer focus, customer service-oriented business philosophy, it is necessary to locate the current service enterprises. "Without a good customer service.. "Without a good customer service. Convene industry experts and students, emphasize beauty knowledge and technology from the inside out, develop two fields of health beauty and image modeling, share industry practices, and guide students to develop their careers.

**762072 時尚產業整合實務實習****2 選 指導教授、下**

本課程設計旨在追求時尚產業整合人才培養與市場需求的完美契合，協助學生領悟時尚產業從紡織纖維到流行成衣所有製造過程要義和文化，拓展學生對於時尚產業國際視野，未來產業整合發展以及培養學生對時尚行業的發展及綜合管理技能。

**762072 An Integrated Practice and Internship in Fashion Industry 2 S Major Advisor、S**

This course is designed to match the needs of the fashion industry, and help students understand the essentials and culture of fashion business and marketing placements cover a wide variety of responsibilities depending on different student's background. It will start with the goal to provide students and young professionals interested in this exciting industry, it also seeks any opportunities to work in the world's top fashion hubs, to expand students' international perspective on the fashion industry, and to develop their comprehensive management skills in the fashion industry.

**762073 國際比賽演練(3)****3 選 賴炤容、下**

強化國際競賽準備和競技能力，加強專業技能、提高競賽表現，準備實際比賽。課程內容包括口頭和書面表達能力培訓、設計展示和演示技巧、模擬比賽演練等，旨在提升學生的競賽能力和溝通表達能力，使其具備參加國際比賽的自信和實力。

**762073 International Design Competitions(3)****3 S Lai, Chao-Jung S**

Strengthening preparation for international competitions and competitive skills, enhancing professional abilities, improving competition performance, and preparing for actual contests. The course content includes training in verbal and written communication skills, design presentation and demonstration techniques, simulated competition exercises, aimed at enhancing students' competition capabilities and communication skills, equipping them with the confidence and competence to participate in international competitions.

**762074 國際比賽演練(4)****3 選 賴炤容、下**

培養學生達到國際競賽水準，精進專業技術、備戰國際競賽。課程內容包括進階專業技術和展示技巧、實際比賽演練、評審反饋和改進等，旨在培養學生的頂尖競賽能力和專

業技術水準，促進參與國際比賽機會。

**762074 International Design Competitions(4)**

**3 S Lai, Chao-Jung S**

Cultivating students to reach the level of international competitions, refining professional skills, and preparing for international contests. The course content includes advanced professional techniques and presentation skills, actual competition exercises, feedback from judges, and improvement strategies, aiming to develop students' top-tier competition capabilities and professional skill level, facilitating their participation in international competitions.

傳閱附件 5-----113 學年度第 1 學期教師申請開授通識課程大綱

## 113 學年度第 1 學期教師申請開授通識課程中英文課程大綱

### 1. 世界遺產賞析 UNESCO World Heritage Sites

中、英文課程綱要：

本課程內容包括

1. 聯合國教科文世界遺產組織、世界文化遺產的名單與觀察名單，指定的過程，相關宣言、世界遺產價值認定標準、以及世界遺產的保存與發展策略等。
2. 對於已被指定的世界遺產，特別是西方史前以及古典、拜占庭、中世紀時期、文藝復興時期城市與建築做深入的解說。
3. 台灣原民舊社等具世界遺產潛力點的深入解說。

This course content includes

1. The list and watch list of UNESCO and World Cultural Heritage, the designation process, relevant declarations, standards for identifying world heritage values, and strategies for the preservation and development of world heritage, etc.
  2. Provide in-depth explanations of designated world heritage sites, especially Western prehistory and classical, Byzantine, medieval, and Renaissance cities and architecture.
  3. An in-depth explanation of Taiwan's ancient Aboriginal communities and other potential World Heritage sites.
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### 2. 華人飲食文化 Chinese food culture

中、英文課程綱要：

「華人飲食文化」課程重視理論與實踐，先以中國飲食史為基礎，討論世界華人飲食文化的傳承與變異、族群遷徙的融合與創變，從閱讀文本與討論中認識飲食文化的跨時空演變脈絡；進一步關注臺灣飲食的本土化與國際化議題，以當代臺灣飲食現況的重要議題進行討論，並回歸自身鄉土飲食文化的檢視及研究，讓美食觀光不流於形式，而能深具食學、食育、食農等永續價值。

The "Chinese Food Culture" course attaches great importance to theory and practice. Based on the history of Chinese food, it discusses the inheritance and variation of Chinese food culture in the world, the integration and innovation of ethnic migration, and understands the evolution of food culture across time and space from reading texts and discussions. context; further pay attention to the localization and internationalization of Taiwanese food, discuss important issues on the current situation of contemporary Taiwanese food, and return to the examination and research of our own local food culture, so that food tourism is not just a formality, but can be deeply rooted in food. Sustainable values such as learning, food education, and food agriculture.

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### 3. 創業基礎與行動 Foundations of Entrepreneurship and Action

中文課程綱要：

本課程主要目的在於提供創業過程中所需要的基礎知識及發展技能，課程將連結三大系統：第一部分「創業基礎」著重於創業相關的基本管理知識，目的在於建構良好的創業相關管理基礎。第二部分「創業發展」從創意發想，自身資源，商業模式及市場評估等方面協助創業者實際發展創業計劃。第三部分「創業行動」審視創業家的環境資源，邀請過去創業團隊經驗分享，了解創業過程中的陷阱，以及財務相關考量，並於最後進行整體課程的回顧及總結。

This course aims to provide the fundamental knowledge and essential skills needed in the entrepreneurial process. The course will connect three main systems:

**Foundations of Entrepreneurship:** This part focuses on fundamental management knowledge relevant to entrepreneurship, with the goal of establishing a strong foundation in entrepreneurship-related management. **Entrepreneurial Development:** Starting from creative ideation to self-resources, business model, and market assessment, this part assists entrepreneurs in developing their entrepreneurial plans practically. **Entrepreneurial Action:** This section examines the environmental resources available to entrepreneurs, invites past entrepreneurial team experiences to share, understands the pitfalls in the entrepreneurial process, considers financial implications, and concludes the course with an overall review and summary.

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#### 4. 食在有幸福-智慧的食物設計師 Happiness comes from eating: wisdom food designers

中、英文課程綱要：

全球因溫室效應導致氣候異常，氣候變遷與糧食危機會影響我們未來的飲食型態，科技進步也改變糧食供應與生產方式，但是這個改變也為我們帶來無限具有創意的機會，我們需要的是糧食生產多元化，不論物種、動植物、經濟和決策的多元化，當然飲食多元化也是其中很重要的元素，而本課程的開設就是基於這樣的環境改變，希望教授學生以尊敬土地、惜物旬食的態度出發，藉由連結味覺與食物記憶的過程，來實踐永續食物設計的精神，並開啟生活智慧，學習在這個多變的環境下，怎麼能從食物與人、食物與社會、食物與環境，這三個層面去思考，以開放民主的方式參與設計塑造食物系統。

食物的滋味常與人的記憶有關，用心飲食就是用心生活，本課程也將運用食物科學來探討與思考的食物議題，以食物設計的方式從產品的原料、顏色、造型、氣味、功能及聲音等面向，重新打造食物外觀，營造出令人垂涎的食物意象外，也喚起我們重視食物應有的營養及避免食物浪費的功能。此外，本課程另一個重點在於將食物設計變成是一種心靈環保建置藝術，學習如何以食物設計對我們的思想/身體/精神進行檢視，是否現什麼空缺，並藉由永續食物設計與分享，實踐地球公民應有的食農品格及環境永續素養。

The global climate is abnormal due to the greenhouse effect. Climate change and food crises will affect our diet patterns in the new future. Scientific and technological progress has also changed the methods of food supply and production, but this change also brings us unlimited creative opportunities. What we want is the diversification of food production, regardless of the diversification of species, animals and plants, economy and decision-making, of course, the diversification of diet is also a very important element. This course is based on such environmental changes and will teach students to respect the land and cherish things. Starting from the attitude and through the process of connecting taste and food memory, students can practice the spirit of sustainable food design, open up the wisdom of life. Students can also learn how to distinguish between food and people, food and society, and food and environment, think about these three levels, and participate in the design and shaping of the food system in an open and democratic way.

The taste of food is often related to people's memories. Eating mindfully means living mindfully. This course will use food science to explore and think about food issues as well by using food design methods from the raw materials, color, shape, smell, function and sound of the product. In other aspects, it reshapes the appearance of food and creates a mouth-watering food image. It



also arouses our attention to the nutrition that food should have and the function of avoiding food waste. In addition, another purpose of this course is to turn food design into an art of environmentally friendly construction of the soul. Students will learn how to use food design to examine our mind/body/spirit to see if there are any gaps. Through sustainable food design, they will also share with others to practice the food, agriculture and environmental sustainability qualities that citizens of the earth should have.

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