

111 學年度第 1 學期第 1 次 校課程委員會議

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各系(所)中心新增課程中英文摘要

一、 語言中心

日語會話-廣告篇

2 選

本課程旨在透過廣告學習日語並促進對日本社會文化之理解。

指導學生透過簡短有力且生動活潑的廣告用語，學習日語表達並掌握最新生活資訊。

課程針對所使用之廣告內容編寫教材，指導文字語彙並進行中日文對譯，同時透過廣告影片加強口語表達及聽力練習，促使學生具備所學日語之應用能力。

此外，分析廣告訴求所呈現之表達方式，以及所隱含之社會文化或習俗也是課程重點。

本課程適合具五十音發音基礎，想訓練口語能力同時理解日本社會文化的同學選修，亦歡迎同時選修多門日文課程，以加強對日語口語表達之掌握。

Learn Japanese with Advertisement

2 E

This course is designed for Japanese beginners, and its goal is to help students acquire basic skills in listening and speaking. The course uses supplementary teaching materials such as texts, videos, and folklore to learn vocabulary, phrases, and conversations commonly used in daily life through different topics, as well as basic Japanese grammar.

進階英文商務溝通

3 選

本課程旨在協助同學提升進階英文商務溝通能力，訓練學生將自己的英文能力應用和發揮在日後可能面對的商業情境。課程內容將針對不同商業情況進行分析，協助同學進行有效的溝通和表達。

English Business Communication

3 E

The course aims at enhancing students' business communication skills, assisting them to conduct effective communication in various business settings. Different business contexts are analyzed for learners to achieve successful verbal communication outcome.

二、農學院

(一) 水產養殖系：

水產動物組織學

2 選

組織學是觀察生物體結構的科學，同時是解剖學、生理學、病理學等各學科的基礎。本課程介紹水產動物組織之顯微結構與功能，包括上皮組織、結締組織、肌肉組織、神經組織及消化道組織等等，以及這些組織所形成之各種器官。學生透過課程學習辨認不同器官、組織的顯微構造，從細胞和組織的層次，進而了解生物體的功能，同時培養水產動物解剖學與組織學的基本技能，也為其他學科打下基礎。

Histology of Aquatic Animals

2 E

The histology is the scientific study of the structure of tissue from animals, plants, and other living being. The histology is an essential knowledge of anatomy, physiology and pathology. This lecture introduces the structures and functions of the tissues of the aquatic organisms, and how these tissues are arranged to compose organs. Students are expected to learn the basic knowledge of histology, such as the recognition of the structural characteristics from different tissues, the identification of organs based on their structural features, and the correlation of structures with functions of tissues, organs, or systems. Furthermore, students are expected to learn the dissecting skill and technical experience of anatomy.

水產動物組織學實習

1 選

組織學是觀察生物體結構的科學，同時是解剖學、生理學、病理學等各學科的基礎。本實習課程將進行水產動物組織樣本之處理與製作，並觀察包括上皮組織、結締組織、肌肉組織、神經組織及消化道組織等等的顯微結構，以進一步了解這些組織所形成之各種器官與功能。學生透過課程學習辨認不同器官、組織的顯微構造，從細胞和組織的層次，進而了解生物體的功能，同時培養水產動物解剖學與組織學的基本技能，也為其他學科打下基礎。

Practicum in Histology of Aquatic Animals

1 E

The histology is the scientific study of the structure of tissue from animals, plants, and other living being. Students are expected to perform the procedures in histological technology under direct supervision in this practical lecture, and conduct routine histological procedures, develop their laboratory skills, and apply knowledge gained in the program. Overall, Students are expected to achieve tissue fixation and tissue processing, to use and care of a microtome and a microscope, to focus on cell and tissue morphology, and to identify cell and tissue morphology.

魚類神經內分泌專論

2 選

神經內分泌學研究神經系統和內分泌系統之間的相互作用，透過大腦調節賀爾蒙的作用，進而調控魚類的成長、發育、壓力調適、代謝、生殖等各項生理功能。

本課程使學生瞭解魚類神經內分泌的組成、功能及調節機制，並由演化與比較學之觀點，論述魚類獨特的神經內分泌特徵。

Advance Topics in Fish Neuroendocrinology

2 E

Neuroendocrinology is a study of the interaction between the nervous system and the endocrine system, which focuses on how the brain, particularly the hypothalamus and pituitary, regulates the hormonal activities and further control physiological functions in vertebrates, including fish. The regulations of physiological functions such as development, growth, metabolism, stress, metamorphosis, and reproduction were investigated in the studies of neuroendocrine of fish. Students are expected to learn the compositions, functions and regulation systems of fish neuroendocrinology, and the certain unique neuroendocrine features possessed in fish.

天然機能性物質開發與應用專論 2 選

水產生物，為台灣重要養殖生物，如魚蝦貝類。養殖過程中，生物體易受外來病原的侵擾，導致生物體的致死率增加。透過免疫調節物質，可有效控制疾病的發生，降低養殖風險。學術研究上，已有多種具有免疫調節功能性物質發表；因此本課程主要設計，講解天然物中所具有之機能性物質，及其功能與純化方式。

Development and Application of Natural Functional Materials 2 E

Aquaculture is the most important commercial behavior in Taiwan, such as fish, shrimps and shellfish culture. During the culture process, aquatic organisms are susceptible to foreign pathogens, leading to the lethality of organisms. To the previous research, through immunomodulatory substances, the fish diseases can be effectively under control and the risk of breeding can be reduced. In academic research, a variety of substances with immunomodulatory functions have been published, therefore, this course is mainly designed to understand the immunomodulatory substances contained in natural products, as well as their functions and purification methods.

(二) 生物科技系：

兩生爬行動物學 2 選

脊椎動物可分為具有外溫及內溫生理的二大類群，亦可分為主要適應水域生活的魚類與陸域生活的四足類。具有外溫生理的四足動物是地球上適應多樣性最高的動物類群之一。這些動物包含在一般所謂的兩生爬行動物類群中，但是不包含廣義爬行動物中的鳥類。本課程講授的內容將包括外溫四足動物的形態、生理、生殖、攝食、行為、生態、生物地理與系統分類及多樣性。課程最後將引導學生閱讀相關文獻以將所得知識融會貫通並予以應用。

Herpetology 2 E

Vertebrates can be classified as ectotherms and endotherms, as well as fish and tetrapods. Ectothermic tetrapods exhibit an amazing diversity of adaptations to varied habitats. The herpetology features morphology, physiology, reproduction, feeding, behavior, ecology, biogeography, classification, and diversity of amphibians and reptiles (not including birds). Students will learn and experience the knowledge in the lecture by paper reading processes.

蛇毒科技 2 選 蔡添順、下

蛇毒成分複雜且多樣化，不同蛇毒的毒性、藥理及臨床症狀各有特點，可分成神經毒、血循毒、壞死毒、心臟毒、腎臟毒、肌肉毒及其他類型。蛇毒學研究包含毒理學、基因體

學、轉錄體學、蛋白質體學及抗血清蛋白質體學、以及醣類體學等層面。依據藥理特性，分離純化特殊蛇毒蛋白，再結合分子生物學及結構化學的方法，可應用於製藥、檢驗和抗蛇毒血清的製造。蛇毒成份目前已被應用於治療糖尿病、高血壓、慢性疼痛及腦中風等病症，以及抗凝血與消炎作用。本課程主要介紹蛇毒多樣性以及蛇毒研究方法、成果、發展及蛇毒科技應用，修課學生也會進行文獻研讀與口頭報告。

Snake Venom Technology

2 E

T. S. Tsai , S

Snake venom is complex and diverse in composition and varied in the toxicity, pharmacology, and clinical symptoms, which can be divided into neurotoxin, hemostasis toxin, necrotoxin, cardiotoxin, nephrotoxin, myotoxin, and other types. Snake venom researches include toxicology, genomics, transcriptomics, proteomics, antiveomics, and glycomics. According to the pharmacological properties, the separation and purification of specific venom proteins, combined with the approaches of molecular biology and structural chemistry, can be used in the pharmaceutical, examination, and antivenom manufacture. Snake venom compositions have been used in treating diabetes, hypertension, chronic pain, and stroke, as well as displaying anticoagulant and anti-inflammatory effects. This course mainly aims to present the diversity of snake venoms as well as the method, achievement, development, and application of snake venom technology. Students in the course will also read literatures and make oral presentations.

有機光譜學

3 選

張誌益、下

本課程的目的在介紹決定有機化合物結構的方法，使學生具備決定結構研究所需工具，課程中我們將探討核磁共振光譜、質譜、紅外線光譜與紫外/可見光光譜等技術。

Organic Spectroscopy

3 E

C. I. Chang , S

This course is designed to provide an introduction to the structural elucidation of organic compounds. In the class we will discuss nuclear magnetic resonance spectroscopy (NMR), mass spectroscopy (MS), infrared spectroscopy (IR) and ultraviolet/visible spectroscopy (UV-vis).

(三) 木材科學與設計系：

設計素描

3 選

設計素描課程的主要目的是訓練學生熟練各種設計題材的徒手繪畫技巧，課程內容包含實物寫生與設計概念草圖表達技巧。本課程在設計表達技巧的訓練，包括使用鉛筆、針筆等工具表現各種題材的造形、光影與質感。本課程是學生未來學習設計的基礎。

Design Sketch

3 E

The objective of this course is to familiarize the students with the sketch of design . Course content includes the sketch of different subjects and presentation of design concept. The core of the course is familiarization of the presentation skills of form, light and texture of different subjects. This course is a pre-requisite for students pursuing a career in design.

(四) 動物科學與畜產系：

動物生理基礎監控系統

2 選

李妍樺 下

本課程介紹如何利用感測器或穿戴式裝置偵測體液中的組成份、酸鹼值、壓力內分泌素、

性激素及病原菌，以監控動物健康狀況及預防疾病傳播。以及如何利用體溫感測、聲音分析儀、圖像檢測技術、生物分子檢測技術等方式，將精準畜牧應用於飼養管理。

Basic Physiological-Monitoring System for Animals 2 E Lee, Yen-Hua S

This course introduces how to use sensors or wearable devices to detect the body fluid constituent, pH, stress hormone, sex hormone and the pathogens to monitor the health condition of animals and prevent infectious disease. This course also illustrates how to apply body temperature measurement, sound analyzers, image-detection techniques and molecular biology diagnostic techniques to animal husbandry management and precision livestock farming.

經濟動物生理監控系統設計與開發 2 選 李妍樺 下

本課程首先介紹動物生理監控系統之物理、化學、生物檢測原理，分析國內外最新文獻及生理監控裝置之設計及開發流程。接著以飼養現場可能遇到的問題為例，與學生一起搜集資料，討論可使用的檢測監控技術，培養學生科技化飼養管理研發能力。

Design and Development of Physiological-Monitoring System for Farm Animals 2 E

Lee, Yen-Hua S

In order to help students develop the research and development skill in physiological-monitoring system, this course introduces the physical, chemical and biological principles of physiological-monitoring system first. Next, we search the information about new physiological monitoring devices and the latest research article to discuss the possible application in farm animal to improve the husbandry and management

(五) 食品科學系：

創新油脂加工技術及實作 3 選

本課程針對食品科學系學生，教授油脂加工技術相關知識，並配合部分實作課程，讓學生能夠充分了解台灣食用油脂工業現況以及油脂加工技術。

課程內容包括：脂質化學、食用油脂加工技術、食用油脂及功能性油脂產品介紹、國內外食用油脂相關法規與品質檢測指標，以及食用油脂產品實作等相關課程。

Innovative technology in oil and fat processing and practice 3 E

This course is aimed at students of the department of food science, and teaches the knowledge of oil and fat processing technology. The practice of oil and fat processing is also included in this course. Students can fully understand the current situation of Taiwan's edible oil and fat industry and oil processing technology.

This course contents lipid chemistry, edible oil and fat processing technology, introduction of edible oil and fat and functional products, domestic and foreign edible oil and fat related regulations and quality inspection indicators, and the practice of edible oil and fat processing.

機能性食品評估技術 2 選

機能性食品一般被定義為：在基本的營養素之外，能對特定人群提供增進健康好處的食品或其成分；也就是除了原有基本營養外，具有防止疾病及(或)可促進健康的食品。由於

機能性食品之不同功能訴求，例如調節血糖血脂，改善胃腸功能，或延緩衰老等，如何客觀地評估其所含營養成分，以及這些成分在人體生理活性上的功能，與代謝循環上所扮演的角色，都是了解進而研發機能性食品的重要基礎。課程將介紹機能性食品之評估方法，功能性評估試驗設計與執行，科學實驗結果佐證該產品機能性等內容。課程有助於了解機能性食品特性，降低新產品開發及申請功效認證之成本負擔與風險。

Assessment Technologies for Functional Foods 2 E

Functional food is generally defined as: in addition to basic nutrients, food or its components that can provide health-promoting benefits to specific groups of people; that is, in addition to the original basic nutrients, possessing the ability to prevent disease and/or promote health. Due to the different functional appeals of functional foods, such as regulating blood sugar and blood lipids, improving gastrointestinal function, or delaying aging, etc. How to objectively evaluate the nutritional components contained, as well as the functions of these components in human physiological activity, the role played in metabolic cycles, are important bases for understanding and subsequent researching and developing of functional foods. The course will introduce the evaluation methods of functional foods, the design and implementation of functional evaluation experiments, and the scientific interpretation of functional properties based on experimental finding. It is aimed to facilitate understanding the characteristics of functional foods, hence reduce the cost burden and risk, as developing new products or applying for efficacy certification.

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)生物機電工程系：

MATLAB 工程應用 3 選 下

本課程介紹 MATLAB 基礎知識及應用，基礎知識包含繪圖、內建函數、矩陣、曲線擬合、圖形化介面，工程應用包含振盪運動、化學動力學反應、光束的傳播、一階二階電路等，讓學生以 MATLAB 解決工程問題。

Applications of MATLAB in Engineering 3 E S

This course introduces the knowledge of basic and applications with MATLAB. The basic knowledge includes: graph, built-in functions, matrices, curve fitting, graphical user interface. The engineering applications includes: Oscillatory motion, chemical kinetics and reaction dynamics, propagation of light, first-order and second-order circuits. Provide the students with MATLAB tool to solve engineering problems

(二)先進材料學士學位學程：

材料製程檢測實習 3 選 合授、上

本課程規劃讓學生於校內進行產學案、研究中心或檢測中心實務實習，可有效提升學生對材料科學與工程實務之認識，以及其在材料製程與檢測上的應用。本課程期使學生掌握最新之材料科技與產品應用發展趨勢，強化學生實作能力，協助學生提早瞭解產業運作，結合理論與實務，培養正確工作態度，以及提升就業競爭性。

On-campus Field Practice 3 E Joint teaching, F

This course allows students to conduct practical training on campus, which can effectively enhance their understanding of practical techniques in the material science and engineering fields. This course aims to enable students to: master the cutting edge material technology and related product application development trends, strengthen their practical ability, experience the operation of industry for the combination of theory knowledge and practical techniques, develop their positive work attitude, as well as to enhance their competitive employability.

四、 管理學院

(一)企業管理系：

商業智慧(1) 3 選

本課程目的在使學生了解數據分析的基礎概念與資料庫行銷的應用，以掌握行銷市場預測的有效前測，透過跨產業資料探勘標準流程與模式的建立，進行有效的模式效能評估，提供即時的分析以支援精準的目標行銷，建立預防顧客流失的預測模式，有助於發展與有效行銷。程重點介紹如何從開源（網站）收集，存儲，檢索和分析數據，以便根據綜合數據來做出決策。它包括介紹用於構建數據倉庫的維度數據建模技術以及其他數據分析工具。另外本課程也會教授 Excel 的大數據分析之樞紐分析表，學習大量資料處理與分析的概念，涵括資料的排序、篩選、群組小計、多張工作表的彙整運算，到資料表(Data Table)與傳統報表的分辨與解析，正確的使用報表與資料表。再藉由樞紐分析表與樞紐分析圖工具的學習使用，製作各種目的與需求的交叉分析彙算報表及圖表。研習並操作實務案例，即使完全不熟悉樞紐分析表，也能夠即刻上手，養成摘要報表篩選與資料分析彙算的能力。

Business Intelligence (1) 3 E

The purpose of this course is to help students to understand the basic concepts of data analysis and applications in marketing. In order to get effective marketing forecast, through creating a standard process of data exploration industry and effective assessment method of model, providing real-time analysis to support marketing target, preventing customers' loss, contributing to the developing and effective marketing. The course focuses on how to collect, store, retrieve and analyze data from open source (web site) for making decisions based on integrated data sources. It includes introducing the skills of dimensional data modeling for building data warehouses, and other data analyzing tools. In addition, this course will also teach Excel's pivot analysis for big data analysis. Data processing and analysis concepts are mentioned, including data sorting, screening, group subtotals, multiple worksheets, and operations, data table and the traditional report analysis, the correct use of reports and data tables. The problems can be solved through use of analysis table and pivot analysis chart tool, a cross-analysis of the various purposes and the combination of different reports and charts. By studying and operating practice cases, students can start immediately to develop the ability to filter summary reports and analyze data even if students are completely unfamiliar with the pivot analysis table.

商業智慧(2) 3 選

本課程的目的是幫助學生了解商業資料分析的基本概念以及在商業行銷中的應用。為了獲得有效的行銷預測，通過創建行業資料挖掘的標準流程和模型的有效評估方法，提供實時的業務分析來支持行銷目標，防止客戶流失，促進業務的發展和有效的行銷。因此，課程側重於如何資料關聯、MySQL、資料視覺化、資料挖掘，主要幫助企業做出有效決策

Business Intelligence (2) 3 E

The course is to help students understand the basic concepts of business's data analysis and how to apply in business's marketing. The students can get an effective marketing forecast, through creating a standard process of data exploration industry and effective assessment method of the model. The data and model can provide the real-time business's analysis and prevent customers' loss, contributing to the business's developing and effective marketing. The course will focus on how to relate data, MySQL, data

visualization, data mining, all of which will help enterprises to make effective decisions

大數據分析

3 選

本課程主要在讓學生對大數據有基本應用的概念，說明大數據分析應用在農業、製造業、商業行銷、線上零售業、健康照顧和金融業等不同領域，來說明大數據實際的在各產業運用，以滿足國際學生多樣化的背景。因此本課程的目的是讓學生熟悉大數據的應用和相關分析工具，落實在不同的產業面。首先介紹大數據資料的蒐集方法、應用成果、相關的技術分析的概念、資訊倫理與安全，因大數據易面臨到道德倫理等相關議題。同時以真實的資料庫案例進行深度討論與說明大數據應用的優點及限制。第二部分為介紹幾種演算法應用在不同的實際產業，透過應用軟體 STATISTICA v13 的資料探勘模組，如：購物籃分析、決策樹、分群技術等演算法，讓同學熟悉資料探索之應用。本課程期末將要求參與的同學分組進行實務上產業之調查與分析，針對同學感興趣的個案進行大數據的個案分析，撰寫一份期末專案報告，針對個案提出幾點經營管理的建議。

Big Data Analysis

3 E

This course provides Big Data concept and applications of Big Data analytics in different fields such as agriculture, manufacturing, marketing, online retailing, health care and banking. The objective of this course is to familiarize student with Big Data analysis as a tool for addressing the application in different fields. The course begins with a basic introduction to big data, as well as associated technical, conceptual and ethical challenges. Strengths and limitations of big data research are discussed in depth using real-world examples. The next part is analysis implementation of actual cases by introducing and applying special algorithms in different fields, familiar with applications of data exploration software as STATISTICA (v13) and its data miner. These specific algorithms include association rules, decision tree, clustering, and classification. Students then engage in case study exercises in which small groups of students develop and present a big data concept for a specific real-world case. Attending this course, students will have an opportunity to access to real data from different industries and know how to analysis the data with problem based learning. The goal by the end of this semester is for student to have “analytics portfolio” consisting of data analytics skill that students can use for their future career.

(二)高階經營管理碩士在職專班：

企業參訪

3 選

黃怡詔、陳灯能、洪宗乾

產業環境快速變革導致企業間競爭日益激烈，許多國內外知名企業憑藉其獨特的經營策略得以在高度競爭壓力下存活，非常值得參訪學習。本課程以企業實務參訪取代傳統的課堂講授，帶領學生實際走入國內外知名企業進行深度參訪，並憑藉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，藉此達到學習企業經營管理相關知識之目的。

Company Visits

3 E

Chun-Nan Lin、
Deng-Neng Chen、
Chung-Chien Hong

The rapid changes in the industries have led to increasing competition among enterprises. With their unique business strategies, many well-known domestic and foreign enterprises have survived under high competition pressure. These competitive companies are worth visiting and learning. This course replaces

traditional classroom lectures with business practice visits, leading students to visit well-known domestic and foreign companies for in-depth visits. Relying on the practical work experience of the students themselves, under the guidance of the teachers, they can communicate with the managers of the visited enterprises. This approach can achieve the purpose of learning relevant knowledge of business management.

在地資源開發與行銷管理

3 選

蔡展維、林俊男、廖曼利

周遭的事物容易被忽略或是沒有深入探究，也因此可能失掉它可以對自身或是工作上產生的價值或正向影響，這可視為環境資源的無形浪費。

本課程以介紹屏東在地的人文及在地產業的歷史、現況及未來期望發展為主，並會安排現代的行銷管理模式，由不同的面相來進一步觀察與了解屏東或鄰近地區的人文與產業的特色與開發的潛力。

本課程由縱向與橫向的兩個方面來展開，縱向為屏東或鄰近地區的人文及產業發展過程及歷史，由其中來了解周遭事物及接觸產業發展的典故，以加強對在地的資源的瞭解，及對自身生活環境的親切感與認同感；同時也橫向的介紹彼此的關係與連結脈絡，接著就可進一步探討未來可能結合與發展的契機。

最後，本課程更導入現代行銷管理的概念，由新的行銷策略帶入觀察的在地事物的角度，思考如何創造更有深度與市場的新品項與契機。

Local resource development and marketing management

3 E

Tsai, Chan-wei、
Chun-Nan Lin、
Man-Li Liao

Things around you are easily overlooked or not explored in depth. Therefore, their value or positive impact may be wasted and can be seen as an invisible waste of environmental resources.

This course mainly introduces the local humanities in Pingtung and the history, current situation and future development of industry in Pingtung. The course also introduces modern marketing management skills, allowing students to further observe and understand the humanities of Pingtung or surrounding areas from different perspectives. From different aspects to further observe and understand the development potential.

This course is developed from two directions: vertical and horizontal. The vertical is the process and history of humanities and industrial development. It is used to understand the surrounding things and the allusions of industrial development, so as to strengthen the understanding of local resources and a sense of identification with their own living environment. At the same time, they also introduced each other's relationship and connections horizontally, so that they can further explore possible opportunities for future integration and development.

Finally, the course introduces the concept of modern marketing management skills to inspire students to look at local things in new ways and, therefore, to think about how to create more marketable new products and business opportunities.

(三)餐旅管理系：

菜單規劃分析及實習

3 選

黃靖淑

本課程在協助學生瞭解菜單設計者應具備的食材、管理、財務與永續美食設計之相關基本知識。課程中除了使用多種菜單實例、圖表及格式，來引導學生在菜單規劃設計、成本、行銷、廣告推銷、分析菜單及選擇餐飲設備之相關領域進行瞭解以外，也讓學生了解

永續美食的內容及永續美食菜單設計的技巧。課程將透過實作的方式，讓同學實踐學用合一的學習精神，體驗菜單設計及永續菜單規劃精神。課程內容包括：非商業性及商業性菜單設計、目標市場調查、營養菜單設計、餐飲菜單的特色、標準食譜、菜單定價策略、食譜成本、菜單的行銷特性、菜單工程法、菜單廣告推銷及永續美食菜單之規劃。

Menu Planning, Analysis and Practice 3 E

C. H. Huang

The main purposes of this course are to help students understand the basic knowledge of ingredients, management, finance and sustainable food design that menu designers should have. In addition to using a variety of menu examples, charts and formats to guide students in menu planning and design, cost, marketing, advertising sales, menu analysis and selection of catering equipment, the course also allows students to understand the content of sustainable food and tips for sustainable food menu design. The course will allow students to practice the learning spirit of the unity of learning and use, and experience the spirit of menu design and sustainable menu planning through practical methods. The contents of this course include: non-commercial and commercial menu design, target market research, nutrition menu design, catering menu features, standard recipes, menu pricing strategies, recipe cost, menu marketing features, menu engineering, menu advertising and menu design and planning of sustainable gastronomy.

五、 人文暨社會科學院

(一)社會工作系：

社工實務與科技運用

2 選

資訊科技的發展，改變了人們的生活方式、社會關係與互動模式。尤其在後疫情時代下，科技的運用更快速地展現在社會工作的實務運用中，正式開啟了翻轉傳統服務模式與結合數位時代下的操作及思維轉換的挑戰與創新作法。本課程將著重於數位發展趨勢下形成的社會工作樣貌，透過大量的實務案例及運用各種討論方法，帶領同學一起進入數位社會工作的時代。

Social work and Technology

2 E

Technology development has changed our lifestyle, , social relationships and interact. Especially in the post-epidemic era, technology has changed the traditional service mode and thinking of social work. This course will focus on what social work looks like under the digital development trend, and through a large number of practical cases and various discussion methods to lead students into the era of digital social work.

(二)幼兒保育系：

兒童英語發音與拼字教學

2 選

石儒居、李俊逸，上

本課程著重於運用英語兒童繪本與童謠協助同學養成發音上的基礎能力，並且學習英語發音與拼字概念與教學方式，同時熟悉發音標記符號與自然發音運用。此外，熟悉發音與拼字能力養成之字母與拼字遊戲，建立遊戲中學習英語課程設計方式。

Phonics and Spelling for Kids

2 E

Ru-Chu Shih、Chun-Yi Lee, F

This course focuses on how to guide young learners to learn phonics and spelling through picture books and nursery songs. Students will be learning how to use picture books and nursery songs to help young English learners to be aware of phonics and acquire spelling ability. The students will also learn word games for helping phonics and spelling acquisition for you learners.

(三)休閒運動健康系：

特殊需求族群健康促進專題研究

3 選

本課程旨在針對特殊需求族群之健康需求，分析其健康促進相關議題的專題討論。特殊需求群體包括高齡者、身心障礙者、慢性病及其他有特殊需求者。授課主軸包含特殊族群之健身運動需求評估、相關研究文獻導讀、不同健康促進模式的優缺點及適用性比較。

Special Topics on The Research

3 E

This course is designed to guide students to discuss the health promotion topic related to the special needed group. The content includes the assessment the requirement of the special needed group including aging, disable and pregnancy person, reviewing related worldwide literatures, and comparing the advantage and disadvantage of different health promotion models implementing for special needed group.

(四)客家文化產業研究所：**飲食文化與餐飲創新****3 選****曾純純、陳文東，上**

為提升本校研究生對客家餐飲產業的實務經驗，並掌握餐飲國際化發展趨勢，以增進個人對於客家餐飲產業發展趨勢之了解及提升客家菜國際化製作之水平。本課程重點有二：一是飲食文化與文化傳播，二是餐飲廚藝與創新研發，主要目標為培育出對客家餐飲產業具有餐飲廚藝創新研發、飲食文化傳播及專案管理能力之人才。

Food Culture and Innovation**3 E****Cheng Chun-Chun ， F**

This course has two key points: the first is food culture and cultural communication, and the second is food and beverage culinary arts and innovative R&D. The main purpose is to cultivate the ability to develop food and beverage innovation, food culture communication and project management for the Hakka catering industry.

台日傳統技藝比較**2 選****彭瓊慧，上**

台灣與日本在傳統工藝文化中有許多極為相似之技藝，本課程針對醬菜、藍染、紙傘三種涵蓋飲食穿著及生活應用的傳統工藝，探討其在台日兩國發展的歷史背景與發展現況、製作方式，及對居民的影響，以進一步比較台日兩國在工藝發展與傳承之異同，藉以探索未來發展之方向。

Comparison of Taiwanese and Japanese traditional skills**2 E****Peng Chiung-Hui ， F**

Taiwan and Japan have great similarities in traditional arts and crafts.

This course is aimed at three kinds of traditional techniques, including pickle, blue dye and paper umbrella. Discussing its historical background and development status, production mode and impact on residents in Taiwan and Japan, To further compare the similarities and differences between Taiwan and Japan in technological development and inheritance, so as to explore the direction of future development.

六、國際學院

(一)食品科學國際碩士學位學程：

進階食品工廠設計

3 選

高莫森

食品工廠設計涵蓋化學工程，工業設計，經濟學和食品加工等領域相關知識。經適當設計的食品加工廠可大幅提升生產流程效率，並節省生產成本、運輸成本，倉儲成本以及減少浪費等，為食品產業永續經營的關鍵要素之一。課程結束，學生應能具備以下能力：

- 1.分析食品工廠位址選擇之適切性。
- 2.分析食品工廠中各種建築物與空間配置
- 3.了解物料流和輸送系統的常見類型及其優缺點
- 4.了解適合用於食品加工設備的材質。
- 5.為食品工廠設置適當的照明系統
- 6.了解清潔食品工廠的相關注意事項
- 7.解決食品加工廠設計上的問題，提出改進方案。

課程大綱：

- 1.其他國內外相關標準及規範
- 2.食品工廠設計之重要性
- 3.廠房土地和建築物之規劃
- 4.生產線配置，動線規劃，物料流和輸送系統
- 5.食品加工設備材質特性
- 6.照明設備在食品工廠設計中之應用
- 7.食品工廠之清潔。

Advanced Food Plant Design

3 E

Mohsen Gavahian

Food factory design covers knowledge in the fields of chemical engineering, industrial design, economics, and food processing. A properly designed food processing plant can greatly improve the production efficiency and reduce the costs related to production, transportation, storage, and waste disposal. It is one of the key elements of sustainable food industry operations.

Course Outline:

1. Some of the relevant national and international standards and regulations
2. The importance of food plant design
3. Considerations for the land and buildings of the food factory
4. The importance of appropriate material flow and conveyor systems
5. Characteristics of materials used in the construction of food processing equipment
6. The applications of lighting engineering in designing a food factory
7. Cleaning of food factories

免疫學特論

3 選

李嘉偉

本課程主要目的提供學生一個對免疫學的基本概念。隨著農場管理技術的進步，家畜的飼養密度和生長表現都持續的在提升。在這種情況下，動物更容易受到傳染病的危害而對產業造成嚴重的經濟損失。動物本身的免疫力在抵抗外來病原菌和病毒上扮演著重要的角色。本課程是著重在介紹免疫系統、各種免疫反應、宿主及病原交互作用、及疫苗，獲得這方面的知識能讓學生了解農場的疾病防治。

Special Topics on Immunology**3 E****Lee Jai-Wei**

The objective of this course is to provide the students a basic background of immunology. The housing density and the growth performance of domestic animals keep increasing as the consequence of advanced farm management. Under this circumstance, animals are more susceptible to infectious diseases which lead to significant economic losses to the industry. The immunity plays a pivotal role in protecting the animals from invading pathogens and viruses. This course is focused on the introduction of immune system, different types of immune responses, host-pathogen interaction, and vaccination. Acquisition of such knowledge is fundamental for the students to understand disease-controlling strategies of animal husbandry

統計方法與資料分析**3 選****廖世義**

本課程主要目的，在介紹學生有關學術研究中最常使用的統計方法與資料分析策略，經由課程內容的講授，將使學生更加了解有關科學領域中有關研究的基本技能。

Statistical Methods and Data Analysis**3 E****Liaw Shu-Yi**

The main purpose of this course is to introduce basic knowledge and skill about research. The scope includes theoretical field and practical application of statistics and strategy. Through this course, the students will have more clear understanding and skill to conduct a research design..

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)獸醫學系：

禽畜營養學

2 選

潘昱儀

本課程主要討論家畜禽營養的基本概念以及如何運用於動物飼養。主要內容包括:1.各種營養素，包括水、碳水化合物、脂肪、蛋白質、礦物質及微生物的代謝利用。2.營養缺乏或不平衡引發的疾病。3.營養資料的應用。

Avian and Domestic Animal Nutrition

2 E

Yu-I Pan

The course is designed to discuss the basic concept of nutrition for all livestock animals and to apply the knowledge of nutrition into the feeding of animals. The contents include: 1. The metabolism of all nutrients, water, carbohydrates, fats, proteins, minerals, and vitamins; 2. The disease and syndrome due to nutritional deficiency and imbalance; 4. Application of collected nutritional data and information.

基因表現系統

2 選

吳弘毅

本課程內容介紹原核與真核細胞基因表現系統及生體內與生體外之基因調控機轉與順式及反式調控因子，並介紹細胞基因表達之相關訊息傳遞路徑。

Genetic Expression System

2 E

Hung-Yi Wu

This objective of this course is to introduce the concepts on the gene expression systems and gene regulation mechanisms in prokaryotes and eukaryotes. Important topics also include the related signal transductions, and cis-/trans-transcription elements on regulating the gene expressions in three different systems including in vivo, ex vivo and in vitro systems..

(二)動物疫苗科技研究所：

免疫再生醫學

3 選

莊國賓、業界專家等合授

免疫再生醫學是一個新興的醫學領域，有望替代或再生衰竭的器官或組織。它指的是一組可能涉及使用幹細胞的臨床治療的生物醫學方法。例子包括涉及注射幹細胞或相關物質的療法；使用單獨施用的生物活性分子或作為注入細胞的分泌產物進行再生（免疫調節療法）；以及體外生長的器官和組織的移植（組織工程）。這門 3 學分的課程將使學生了解該領域的各個重要方面，從基礎科學到免疫再生醫學廣泛領域的當前臨床試驗。本課程將為對人類和動物分子和轉化醫學的基礎科學方面感興趣的學生提供選修課。

Immunology Regenerative Medicine

3 E

Kuo Pin Chuang etc.

Regenerative medicine is an emerging field in medicine that holds promise for replacement or regeneration of failing organs or tissues. It refers to a group of biomedical approaches to clinical therapies that may involve the use of stem cells. Examples include cellular therapies involving injection of stem cells or progenitor cells; regeneration using biologically active molecules administered alone or as secreted products by infused cells (immunomodulation therapy); and transplantation of in vitro grown organs and tissues (Tissue engineering). This 3 credits course will expose students to various important aspects of this field from basic science to current clinical trials in the broad area of regenerative medicine.

This course will provide an elective choice for students interested in basic science aspects of molecular and translational medicine in the human and animals.

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

自動化工程

3 選

陳智勇

自動工程的設計所包含的技術層面很廣闊，例如微電子學、機械學、光學和電腦工程學。透過這個有效的訓練，能夠使得學生們在工業的領域裡，對於系統設計方面擁有專業的能力。這個訓練將舉一些實務的例子來深入了解設計的概念。這個課程將會要求提升設計發展及實務練習的能力。

Automation Engineering

3 E

C. Y. Chen

The contents of automatic Engineering course include broad techniques such as microelectronics, mechanics, optical and computer engineering. Through this effective training, the students will be capable of the special abilities of system design applied in industry field. This course will illustrate some practical examples to deep the concepts of design. The practical exercises in this course should be requested to enhanced the abilities of design and development in automatic engineering.

數位通訊技術

3 選

龔志賢

數位通訊是現代通訊系統的關鍵技術，本課程將介紹數位通訊系統基本架構，數位與類比系統比較，數位訊號轉換與編碼，基頻通訊原理，載波通訊原理。1.瞭解數位通訊系統基本架構及功能；2.瞭解數位與類比系統之優劣；3.熟悉數位訊號轉換與編碼技術；4.熟悉基頻通訊基本原理；5.熟悉載波通訊基本原理。

Digital Communication Technology

3 E

C. H. Kung

Digital communication is the key technology for modern day's communication systems. This course aims to familiarize students with the basic techniques of digital communications, including 1. System architecture of digital communication systems 2. Comparisons of analog and digital communications 3. A/D conversion and coding 4. Base-band digital communication 5. Carrier-modulated digital communication.

行銷設計學堂新開課程中英文課綱

市場調查與分析

0 · 3 選

趙雨潔

本課程透過講授與實作，讓學生熟悉市場調查基礎概念、方法與工具應用，並進行資料蒐集與分析，完成市場調查報告。

Market Survey and Analysis

0 · 3 E

Y. C. Chao

Through lecture and practice, this course enables students to be familiar with the basic concepts, methods and tools of market survey, collect and analyze data, and complete market research reports.

行銷創新與藍海策略

0 · 3 選

陳佳誼

1. 行銷創新的重要性
2. 創新的核心意義
3. 藍海策略與價值創新
4. 六大途徑與買家效用地圖
5. 四項行動架構
6. 策略草圖

Marketing Innovation and Blue Ocean Strategy

0 · 3 E

C. Y. Chen

1. The importance of marketing innovation
2. The core meaning of innovation
3. Blue ocean strategy and value innovation

- 4.Six paths framework and buyer utility map
- 5.Four action framework
- 6.Strategy canvas

職能培力學堂新開課程中英文課綱

創意思考與實作(2)	0 · 3 選	陳秀足
<ol style="list-style-type: none"> 1.多維思考與創意激發 2.創意技法-心智圖與九宮格 3.創意評估-六頂思考帽 4.執行策略-六雙行動鞋 5.創意發想演練 		
Creative thinking and implement (2)	0 · 3 E	H. T. Chen
<ol style="list-style-type: none"> 1.Multi-dimension thinking and creative inspiration. 2.Creative techniques : Using Mind-map in both western and eastern culture. 3.Creative evaluation : Six thinking hats. 4.Executive strategy : Six action shoes. 5.Put into practice. 		

創新創業學堂新開課程中英文課綱

專案型外語(英文)競賽輔導課程	1 選	許耿誌
<p>本課程旨在培養學生提升英語口語表達和寫作能力，以取得理想英語競賽成績。課程內容將針對英語簡報和翻譯寫作部份，進行能力培養，協助同學掌握常見溝通技巧。每週針對不同單元進行演練與檢討。</p>		
Consultation and training for English competition	1 E	K. C. Hsu
<p>This course is aimed at cultivating students' English oral and written communication skills. Students are encouraged to participate in English competitions for future career development.</p>		
創業基礎與實務(4)	0 · 3 選	陳又嘉
<p>著作權保護與應用案例分享。</p>		
Foundation and practice of entrepreneurship (4)	0 · 3 E	Y. C. Chen
<p>Copyright protection and application practice cases</p>		
SDGs 創意發想	1 選	顏嘉宏
<p>利用創意創新工具實作方式以「永續發展目標(SDGs)」為主軸，來創意發想出可行的產品或服務雛型(prototype)。</p>		
Creative ideas developing in Sustainable Development Goals (SDGs)	1 E	C. H. Yen
<p>Taking "Sustainable Development Goals (SDGs)" as the target and using creative innovation tools to develop the SDGs-related product or service (prototype).</p>		

產業增能學堂新開課程中英文課綱

學生校外實務增能課程(台南大員皇冠國際酒店)	1 選	趙偉廷
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本課程以授課教師和業師協同授課，課程會以飯店各部門主管為業師，並在課程中帶領學生前往飯店移地教學，讓學生在上課中了解產業與授課新體驗。

The Course of Students Actual Practice at Tainan Crowne Plaza 1 E W. T. Chao

This course is include teacher and some department heads in Hotel. We will take student to Hotel, it could let them more understand hotel industry and have new experience.

永續發展學堂新開課程中英文課綱

林下經濟六級化產業

1 選

陳美惠

- 1.認識里山倡議精神
- 2.認識生態旅遊與林下經濟雙策略
- 3.認識霧台林下六級化產業發展

The Under-forest Economy Six-grade Industry

1 E

M. H. Chen

- 1.To know the spirit of Satoyama Initiative.
- 2.To know dual strategy of Ecotourism and Under-forest Economy.
- 3.To know Six-grade Industry development of Under-forest Economy in Wutai Township, Pintung.

健檢概論與預防醫學(1)

1 選

王仁星

- 1.常規血液及生化檢查
- 2.一般影像檢查及特殊影像檢查
- 3.常見慢性疾病介紹
- 4.常見症狀的鑑別與處置
- 5.正確的預防保健觀念與具體作為

Health Examination and Preventive Health Care (1)

1 E

J. S. Wang

- 1.Blood routine and chemistry routine
- 2.Common image examination and special image examination
- 3.Common chronic disease interpretation
- 4.Common symptoms different diagnosis and management
- 5.Correct concepts and concrete actions of preventive health care

傳閱附件 2---科技農業學士學位學程課程大綱

科技農業學士學位學程中英文課程摘要

課程名稱 (中文): 智慧農場實務

課程名稱 (英文): Applied Smart Farm

學分數: 1 (科技農業學士學位學程大一開設)

授課老師: 班級導師

開課學期: 上、下學期

課程中文摘要:

訓練學生於智慧農場相關現場實作。本課程讓學生實際操作，以了解農業之應用。

課程英文摘要:

The purpose of this course is to train students to learn the technique in the smart farm. Through this course, let students familiar with the applications towards agriculture husbandry.

課程名稱 (中文): 農場實務

課程名稱 (英文): Applied Agribusiness Management

學分數: 1 (科技農業學士學位學程大三開設)

授課老師: 主任、班級導師及專任教師

開課學期: 上學期

課程中文摘要:

訓練學生於農場與牧場相關現場實作，包括 1. 農牧場選址，2. 建置，3. 農作物種植與動物飼養技術等主題。本課程讓學生實際操作，以了解農業與畜牧產業之技術。

課程英文摘要:

The purpose of this course is to train students to learn the technique in the farm, which are inclusive of 1. farm location selection, 2. farm building, 3. crop planting and animal feeding technology. Through this course, let students familiar with the technology of agriculture and animal husbandry.

課程名稱 (中文): 財務報表分析

課程名稱 (英文): Financial Report Analysis

學分數: 2 (科技農業學士學位學程大三開設)

授課老師: 陳韻珊

開課學期: 上學期

課程中文摘要:

本課程之目的在使學生具備利用財務報表及相關成本資訊進行農企業財務分析與診斷的基本能力。內容包括利用財務報表與成本資料進行農企業現金流量分析、流動性分析、長期償債能力、獲利能力分析、資產運用效率分析及診斷等。

課程英文摘要：

This course aims to provide students with basic abilities of using financial statements and cost information to conduct analysis and diagnosis for agribusiness. The contents include using financial statements and cost information to conduct cash flow analysis, liquidity analysis, long term solvency analysis, profitability analysis, and asset management analysis etc.

課程名稱 (中文)：農業經營管理實務

課程名稱 (英文)：Agricultural Management and Applications

學分數：1 (科技農業學士學位學程大三開設)

授課老師：主任、班級導師及專任教師

開課學期：下學期

課程中文摘要：

本課程讓學生實際操作，了解農業與畜牧產業之應用，訓練學生於農場與牧場相關現場實作及經營管理，同時藉由分組教學，培養學生團隊合作能力。

課程英文摘要：

Through this course, let students familiar with the applications towards agriculture and animal husbandry. The purpose of this course is to train students to learn the technique and management in the farm. Build teamwork skills through grouping instruction.

課程名稱 (中文)：農企業管理

課程名稱 (英文)：Agribusiness Management

學分數：2 (科技農業學士學位學程大二開設)

授課老師：彭克仲

開課學期：下學期

課程中文摘要：

本課程乃系統性地介紹一個農企業經理人應具備之技能，包括：(1)農企業管理學內涵(2)農企業經營規劃與決策(3)消息收集與分析(4)預測方法(5)農企業產品與生產規劃(6)農企業資金與預算(7)農企業成本與收益觀念(8)不同評價之成本項目與效益分析(9)農企業行銷(10)農業政策與環保問題(11)農企業組織(12)人力資源(13)農企業控制原則(14)農企業經營目標之設計。

課程英文摘要：

The course gives a systematic knowledge for agribusiness manager includes as follows: (1)The contents of Agribusiness; (2)Planning and Decision; (3)Information collection and Analysis; (4)Forecasting; (5)Products and Production planning; (6)Capital and Budget; (7)Cost and Revenue; (8)Cost evaluation and Benefit analysis; (9)Agribusiness marketing;(10)Agricultural policy and Ecosystem protection; (11)Agribusiness Organization; (12)Manpower Resources; (13)Controlling; (14) Management Indicators.

課程名稱 (中文): 農場會計實務

課程名稱 (英文): Applied Farm Accounting

學分數: 2 (科技農業學士學位學程大一開設)

授課老師: 黃正宜

開課學期: 下學期

課程中文摘要:

本課程之目的在使學生具備農企業記帳能力。內容包括單式簿記與雙式簿記之差異、農場及其他農企業會計科目、會計事項與會計憑證、序時簿、現金日記簿及分類帳、試算表、結算、調整以及財務報表編制等。

課程英文摘要:

This course aims to provide students with basic abilities of using bookkeeping for agribusiness. The contents include the different kinds of bookkeeping, accounting accounts for agribusiness, accounting certificates, journal and ledger, settlement, trial balance, adjustment and preparing of financial statements for agribusiness.

課程名稱 (中文): 家畜衛生及保健

課程名稱 (英文): Domestic animal hygiene and healthcare

學分數: 2 (科技農業學士學位學程大二開設)

授課老師: 潘昱儀

開課學期: 下學期

課程中文摘要:

本課程的目的在使學生了解家畜重要疾病理論與牧場衛生管理之專業知識。課程內容包括傳染性及營養代謝性疾病之介紹、家畜健康監測、生物安全管理及環境消毒等。期待能使學生瞭解疾病之發生、處理及預防方法。

課程英文摘要:

This course is designed to introduce the theory of important domestic animal diseases and hygiene management of the farm. This course briefly describes infectious and nutritional metabolic diseases in domestic animals, health surveillance, biosecurity management, and environmental disinfection. Students are expected to understand the knowledge of diseases occurrence, and the methods of medical treatment and disease prevention.

傳閱附件 3-----111 學年度第 1 學期教師申請開授通識課程大綱

111 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. 微觀世界 The Microscopic World

中、英文課程綱要：

Microbes may be invisible to the naked eye, but they dominate nearly every environment on Earth. This course is designed as general introduction for students to explore the amazing world of microbial life. Students will learn about what microbes are and the significant roles microbes play in agricultural, health, and the environment.

2. 民用航空概論 Introduction to Civil Aviation

中、英文課程綱要：

本課程將有系統的介紹航空運輸的主要內容與基本概念，使學生了解民航產業的管制、法律限制、民航政策及航空業的發展，並進而探討台灣的各项航空運輸課題。課程主題包括：航空客運系統、航空貨運系統、航空安全、失事調查、航空政策、航空運輸業發展、機場管理等目前發展趨勢等領域之研究與探討。

This course introduces the main content and basic concepts of air transportation, so that students understand the civil aviation industry's control, legal restrictions, and the development of the civil aviation industry, combined with air transportation policies and aviation experts' specific transportation courses. Course topics include: air passenger transportation system, air cargo system, aviation safety, crash investigation, aviation policy, air transportation development, airport management and other development trends and research and aviation industry.

3. 綠色能源科技概論 Introduction to Green Energy Technology

中、英文課程綱要：

本課程將有系統的介紹能源科技的主要內容與基本概念，使學生了解能源科技的發展，並進而探討台灣的各项能源科技課題。從目前全球使用最多之化石燃料與核能談起，對地球環境之衝擊，導入綠能開發之必要性，將由全球發展最快速之太陽能與風力能開始介紹，接續水力能、海洋能等。課程主題包括：能源科技概論、汽電共生、太陽能發電系統、風力發電系統、燃料電池、生質能、水力發電、地熱能、海洋能、節能技術、儲能概論與應用等內容。

This course introduces the main content and basic concepts of energy technology, so that students understand the development of the energy technology, and explore various energy technology topics in Taiwan. Course topics include: Introduction to energy technology, steam-electricity symbiosis, solar power generation system, wind power generation system, fuel cell, biomass energy, hydroelectric power generation, geothermal energy, ocean energy, energy saving technology, introduction and application of energy storage.