112 學年度第 2 學期第 1 次 校課程委員會議

提案傳閱附件　　目錄

一、 語言中心

履歷與面試自我行銷術　　　　　　2　選

　　本課程旨在訓練學生求職和升學申請技巧之實務應用，例如針對徵才和招生廣告撰寫申請文件，以及面試常見問答等。藉由提供各領域申請文件範本和模擬面試演練，各系所不同領域的學生皆能從遣詞用字和整體架構等基礎出發，進而運用所學知識和策略，構思有效申請文件和面試問答內容，成功行銷自身優勢。

Resume Writing and Interview Strategies for Success　2　E

This course aims to familiarize students with the process of and strategies for applying for a job and graduate program, from analyzing postings and recognizing common terminology used, to writing effective application documents, all the way to applying practical interview skills to a range of commonly asked interview questions. 1. Students will become familiarized with the important process and required documents for job and graduate study applications, and they will gain a considerable amount of knowledge of interview FAQs and strategies. 2. Students will be able to write a well-structured CV/resume, cover letter, and statement of purpose by following good examples for different fields, and through mock interviews, be able to apply and interview for a job and graduate school successfully.

旅遊新聞與書寫　　　　　　　　2　選

　　本課程引領學生參與國際場合/活動和接觸不同文化。學生透過聚焦現代旅遊寫作和運用各式媒介（包含評論、部落格、導覽手冊、旅遊小說）習得如何理解和產出批判性、描述性文本。學生能從全球各式正式和非正式文章、音檔和影片，提升英語單字量和聽讀能力，並認識不同寫作風格和技巧。

Travel Writing and Journalism　　2　E

This course prepares students to use English to actively and critically engage with international places, events, and cultures. With a specific focus on contemporary travel writing, students will utilise a variety of mediums, including: reviews, blogs, tourist guides, and travel fiction, to learn the skills to understand and produce critical and descriptive works. Students are required to engage with formal and informal texts, as well as audio and video resources from around the world to build a wider vocabulary, improve reading and listening comprehension, and develop an appreciation for different writing styles and technique.

國際新聞導讀　　　　　　　　　2　選

　　本課程的目標為使學生熟悉新聞英文的結構與風格特色。幫助學生了解新聞英文標題、分析新聞首段、發展批判性閱讀，以及從閱讀中擴大字彙量。學生將學習如何閱讀不同主題的英文新聞，並學習如何藉由閱讀英文新聞改善英語能力。學生必須要完成指定的閱讀，並在課堂外閱讀網路英文新聞文章。

International News　　　　　　　2　E

This course aims to familiarize students with the structural and stylistic features of journalistic English. The course focuses on key aspects of media literacy, including; critical reading, awareness of journalistic bias, evaluation of data and news sources, and reflective discussion of articles. Additionally, it aims to strengthen students' basic understanding of headlines and newspaper leads, and develop a wider vocabulary. Students will learn how to critically read English news on a variety of topics and improve their command of English by reading newspapers. Students are required to read assigned texts and look for online news articles on their own outside of the classroom, produce group presentations, and written reflections on contemporary news.

二、 農學院

　(一) 農學院：

食農永續教育　　　　　　　　　　　2　　選

　　　本課程規劃以一個學期、結合多位教師與實務業師共同授課，讓學生瞭解農作物變成餐桌上食物、飲食工作者、農民、自然環境和相關行動者互動之體驗過程，認識在地的農業、正確的飲食生活方式和其所形成的文化，以及農業和飲食方式對生態環境造成的影響。修課學生將可結合本課程與生物產業專業知識，學習食農教育的創新、規劃、設計能力。

Sustainable Food and Agriculture Education　　2　 E

　　　This course is designed for one semester, integrating multiple instructors and industry professionals to provide students with an experiential understanding of the process by which crops become food on the table. Through interactions with professionals in the fields of dietary practices, farmers, the natural environment, and related stakeholders, students will gain insights into local agriculture, adopt proper dietary lifestyles, and comprehend the cultural aspects formed by these practices. Additionally, the course aims to illuminate the impacts of agricultural and dietary practices on the ecological environment. Enrolled students will have the opportunity to combine the knowledge gained in this course with expertise in the biological industry, fostering innovative thinking and the ability to plan and design food and agriculture education..

可可加工與行銷　　　　　　　　　　2　　選　　邱秋霞、劉展問、許祥純

學生專業核心能力之養成與學習目標：

1教授學生可可加工流程建立之基礎概念

2.教授巧克力製作之技術

3.誘導學生了解可可加工產業

4.推廣可可產業之加工及培育發酵技術知識

5.巧克力產品品牌建立與行銷。

Establishing Partnerships and Communications on Cocoa Industry　　2　 E

Chiu-Hsia Chiu, Chan-Chiung Liu, Shyang-Chwen Sheu

Development of Students' Professional Core Competencies and Learning Objectives:

1. Teaching and establish students the basic concepts of cocoa processing process

2. Training chocolate processing techniques

3. Inducing students to understand in the cocoa industry

4. Promote the processing and cultivation of fermentation technology knowledge in the cocoa industry

5. Establishment chocolate brand and marketing

高齡照護與食農創新整合管理　　2　　選　　　　羅之綱、鍾興穎

　　　因應臺灣即將在 2025 年邁入超高齡社會，推動高齡普惠科技的發展勢在必行，本課程以高齡為主軸探討科技與食農的發展，從高齡者的角度出發，在產業發展、社會參與、智慧科技、友善生活等面向規畫課程並培訓相關人才，以期未來能打造銀髮族健康、宜居及樂活的生活日常。

Holistic Management of Elderly Care and Agri-Food Innovation　　2　 E

Chih-Kang Lo, Hsing-Ying Chung

　　　In anticipation of Taiwan's imminent shift to a super-aged society by 2025, it is crucial to advance

the development of inclusive technology for the elderly. This course centers on the aging population, exploring the interconnected progress of technology and agro-industry. Commencing from the elderly's viewpoint, the curriculum strategically designs courses and provides training for professionals in key areas, including industrial development, societal engagement, smart technology, and enhancing quality of life. The overarching goal is to shape a future where the elderly can experience a daily life that is not only healthy and livable but also filled with joy

智慧食品供應鏈與永續管理　　　　2　選　　　　　劉展悶

　　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　　Chan-Chiung Liu

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.

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　　Chih-Kang Lo

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.

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　　Chiu Hsia, Chiu

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.

精準農園在高齡產業之發展　　　2　選　　　　　　　　鍾興穎

　　本課程介紹如何利用農園藝作物的栽培與育種技術，開發高齡者在飲食、保健與休閒的需求，並將有研發實例的分享。最後將介紹如何整合相關研發成果於高齡者休閒農莊與農業活動。

The Development of Precision Farms in The Elderly Industry　2　E　Hsing-Ying Chung

This course introduces how to use the cultivation and breeding techniques on the agricultural and horticultural crops for the needs of the elderly in diet, health care and leisure, and will share research and development examples. Finally, we will introduce how to integrate the relevant R&D results into leisure agriculture activities

科技農業全球化實務(全英授課)　　2　選　　　　　蔡尚翰

　　本課程為執行教育部「精準健康產業跨領域人才培育計畫」之「精準農業」夥伴學校計畫案而開設之實作課程。

　　本課程提供農業栽培過程相關知識與田間實作之訓練，包括：病蟲害管理、國際援助、經營管理等並著重於現代化、科計畫之作物生產之技術，使學生在實習中了解全球農業現況與發展趨勢。

The Practice of Agricultural Science & Technology Globalization　2　E　Tsai-Shang Han

The course is designed for field practices training of the modern agriculture technology operating and managment. This course places pest and diease management, technology development, farm management, international assistance et al., especially focus on modernization and technicalization agricultural production that will promote students to understand the present and furture trend.

(二) 水產養殖系：

生物資訊在水族研究的應用　　　　2　選　　　　　　林倩如，下

　　生物資訊是一門結合生物學與資訊學的跨學科領域，主要用於研究生物資料的收集、分析和應用。本課程介紹生物資訊學的基本概念及其在水族生物相關研究中的實際應用，涵蓋生物資訊學原理、數據分析技術以及水族研究的應用範疇，學習如何應用生物資訊工具和技術，並探索在水族研究中的實際應用。

Fundamentals and Applications of Bioinformatics in Aquatic Research　　2　E　　，S

This course "Fundamentals and Applications of Bioinformatics in Aquatic Research" aims to introduce students to the basic concepts of bioinformatics and its practical applications in the field of aquatic research. The course will cover principles of bioinformatics, data analysis techniques, and the scope of applications in aquatic research. Students will learn how to apply bioinformatics tools and techniques, exploring their practical applications in aquatic research.

甲殼類生態學專論　　　　　　　　2　選　　　　　　　　陳煦森，下

　　本課程旨在介紹甲殼類動物的生態學，涵蓋個體行為到族群動態以及棲地與生態系統的相互作用。學生將深入了解甲殼類生物在不同環境中的生活習性、適應策略、生態功能以及對環境變化的反應。課程將結合理論和實踐，通過案例研究和實地觀察，培養學生的觀察力、問題解決能力和科學研究技巧。期望學生將能夠應用所學知識解決實際問題，並

對生態學研究做出貢獻。

Specialized Discourse of The Crustaceans Ecology 2 E ，S

This course aims to introduce the ecology of crustaceans, covering individual behaviors, population dynamics, and the interactions between habitats and ecosystems. Students will gain an in-depth understanding of life habits, adaptation strategies, ecological functions, and responses to environmental changes in crustaceans across different environments. The course will combine theory and practice, fostering students' observational skills, problem-solving abilities, and scientific research techniques through case studies and field observations. It is expected that students will be able to apply the knowledge acquired to solve real problems and contribute to ecological research.

(三) 動物科學與畜產系：

豬場精實管理 1 選 游國政，上

精實管理的核心在於減少生產流程中的浪費，並通過增加價值來不斷改進生產流程。本門課將教育學生何謂精實管理及其核心原則、並建立目視白板管理、精實會議、如何建立工作流程圖、拉式生產管理與持續優化之精神。

Pig Farm Lean Management 1 E K. C. Yu，F

The core of lean management is to reduce waste in the production process and continuously improve the production process by adding value. This course will educate students about what lean management is and its core principles, and establish the spirit of visual whiteboard management, lean meetings, how to establish work flow charts, pull production management, and continuous optimization.

豬場精實管理實習 1 選 游國政，上

這門課程旨在培養學生掌握現代豬場管理的核心技能，包括精實生產的理念和方法，如減少浪費、提高效率、確保動物健康福利、以及環境可持續性等。透過實地實習和案例分析，學生將學習如何在實際操作中應用精實管理工具和技術，比如數據分析、流程優化、品質控制等，以提升豬場的經濟效益和競爭力。此外，課程還將涵蓋先進的飼養管理技術、疾病預防與控制策略，以及市場趨勢分析，幫助學生建立全面的行業視角。

Pig Farm Lean Management Internship 1 E K. C. Yu，F

This course is designed to equip students with the core skills of modern pig farm management, including the principles and methods of lean production, such as reducing waste, improving efficiency, ensuring animal health and welfare, and environmental sustainability. Through hands-on internships and case studies, students will learn how to apply lean management tools and techniques in practical operations, such as data analysis, process optimization, and quality control, to enhance the economic benefits and competitiveness of pig farms. Additionally, the course will cover advanced feeding management techniques, disease prevention and control strategies, and market trend analysis, helping students to develop a comprehensive industry perspective..

豬隻生產醫學 1 選 游國政，下

豬隻生產醫學是關於豬隻繁殖和生產過程的醫學領域。包含豬隻的生殖生理、生殖健康、繁殖管理和生產技術等方面的研究和實踐。豬隻生產醫學的目標是透過正確的飼養管理來確保豬隻的健康、增加生產效益，以及提高豬隻的繁殖率和生產成果。

Pig Production Medicine　　　　　　　　１　**E**　　　　　　　**K. C. Yu，**S

　　Pig production medicine is the medical field concerned with pig reproduction and production processes. It includes research and practice on pig reproductive physiology, reproductive health, reproductive management and production technology. The goal of pig production medicine is to ensure the health of pigs, increase production efficiency, and improve pig reproduction rates and production results through correct feeding and management.

豬隻生產醫學實習　　　　　　　　　　　１　選　　　　　　　游國政，下

　　培養學生掌握關於豬隻繁殖和生產過程的醫學領域。包含豬隻的生殖生理、生殖健康、繁殖管理和生產技術等方面的研究和實踐。通過理論學習與實地實習相結合的方式，學生將能夠深入了解豬隻的生理特性、常見疾病及其防控方法，並學會如何應用現代正確的飼養管理技術和方法來提升豬隻生產的整體效率和質量。

Pig Production Medicine Internship　　　１　**E**　　　　　　　**K. C. Yu，**S

　　The program aims to equip students with expertise in the medical field related to swine reproduction and production processes. This includes the study and practice of swine reproductive physiology, reproductive health, breeding management, and production techniques. By combining theoretical learning with hands-on internships, students will gain an in-depth understanding of the physiological characteristics of swine, common diseases and their prevention and control methods, and learn how to apply modern and correct feeding management techniques and methods to improve the overall efficiency and quality of swine production.

試驗設計　　　　　　　　　　　　　　　１　選　　　　　　　姜中鳳，上

　　本課程介紹試驗設計基礎理論及要點，並結合統計分析方法，教導學生進行畜產領域常見之動物試驗設計及結果判讀。

Experimental Design　　　　　　　　　　１　**E**　　　　　　　**C. F. Chiang，**F

　　This course introduces the basic theories and key points of experimental design, and combines statistical analysis methods to teach students to design and interpret animal trial results commonly used in the field of animal production.

試驗設計實習　　　　　　　　　　　　　１　選　　　　　　　姜中鳳，上

　　本課程搭配試驗設計課程，教導學生操作 EXCEL 套裝軟體內建之統計分析工具以及用 R 語言撰寫之統計分析程式進行所設計之動物試驗結果分析及解讀。

Practice of Experimental Design　　　　　１　**E**　　　　　　　**C. F. Chiang，**F

　　This course is paired with the Experimental Design course to teach students to use the statistical analysis tools built into the EXCEL software and the statistical analysis program written in R language to analyze and interpret the designed animal test results.

（四）生物科技系：

USR 專題研究　　　　　　　　　　　　　１　選　　　　　　　施玟玲，下

　　為培育具備專業知識技能、有自主行動力及人文素養的大學生，規劃「馬卡道健康農

產業大學社會責任實踐學程」，其中「USR 專題研究」會由團隊教師協助，引導學生發想問題，收集資料，回應與解決問題並做成客觀論述；參與學程的學生除了學習專業知識，也藉課程與場域及業界共同安排之培力課程、參訪活動，進而養成主動、良善，尊重多元文化的意識。

USR Independent Study   1   **E**   **W. L. Shih，S**

      In order to cultivate college students with professional knowledge and skills, independent action and humanistic qualities, the " Makatao Health and Agriculture Industry-University Social Responsibility Program " is planned. The "USR Independent Study" will be assisted by team teachers to guide students to think about problems, collect information, respond and solve problems, and formulate objective discussions; in addition to learning professional knowledge, students participating in the program also develop initiative and kindness through training courses and visit activities jointly arranged by the course, the field, and the industry; and then develop a sense of initiative, kindness, and respect for multiculturalism.

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三、 工學院
(一)環境工程與科學系：

環境碳永續產業論壇　　　　　　　　1　選　　　　　　趙浩然，下

　　　　本課程欲先對環境碳永續產業發展現況和趨勢去做介紹，再透過案例分享讓學生彼此進行討論，並透過互動課程讓學生於思考過程中獲得不同發想，分享不同觀點，了解現今環境碳永續產業的機會及面臨的挑戰。

Environmental Carbon Sustainability Industry Forum　1　E　　**H.R. Chao,**　S

This course provides students with an understanding of what indoor air pollutants are and their definitions, introduces the types of indoor air pollutants and their impact on the environment and then matches them with relevant regulations and standards, and finally allows students to practice the detection and control of indoor air pollutants, so that students are not confined to textbooks, but are able to practically operate the course in order to increase students' interest, concentration, and enhance the effectiveness of the learning process..

電工學實務　　　　　　　　　　　1　選　　　　　趙浩然/陳冠中，下

　　電力是生活中不可或缺的部分，本課程於前述課程奠定基礎後，在融入生活密不可分的電力系統及產業的碳排放、碳減排技術、碳管理和減排策略。

Electrical Engineering Practices　　　1　E　　　**H.R. Chao/ K.C. Chen ,**　S

Electricity is an integral part of life. This course builds on the foundation laid by the previous courses and integrates carbon emissions, carbon reduction technologies, carbon management and reduction strategies for power systems and industries that are integral to life..

室內空氣污染物管制與控制(含實作)　1　選　　　　　　蔡仁雄/林志忠 ，下

　　本課程讓學生對了解何謂室內空氣污染物及其定義後，並介紹室內空氣污染物的種類和及其對環境的影響再搭配相關法規與標準，最後再讓學生實作室內空氣污染物的檢測和控制，讓學生對課程不局限於課本上，更能實際操作，藉以提高學生興趣、專注力及加強學習之效果。

Control of Indoor Air Pollutants (with practical work)　1　E　**J. H. Tsai/ C.C. Lin,**　S

This course provides students with an understanding of what indoor air pollutants are and their definitions, introduces the types of indoor air pollutants and their impact on the environment and then matches them with relevant regulations and standards, and finally allows students to practice the detection and control of indoor air pollutants, so that students are not confined to textbooks, but are able to practically operate the course in order to increase students' interest, concentration, and enhance the effectiveness of the learning process..

(二)土木工程系：

渠道水力學　　　　　　　　　　　　2　選　　　　，下

　　　水可依管路系統或渠道系統輸送。本課程主要依講述水在渠道中流動時之各種渠流類型及其水理以作為渠道輸水系統水理設計之基礎。內容包括：渠道分類及性質，能量與動

量原理及其應用，臨界渠流之計算與應用，等速渠流，定量續變速渠流等。

Open-Channel Hydraulics 2 E , S

    This course contents the following subjects：Basic concepts of open channel flow; The energy principle in open channel flow; The momentum principle in open channel flow; Flow resistance; Channel controls; Channel transitions; Unsteady flow; The dam-break problems..

四、 管理學院

(一)時尚設計與管理系：

服裝構成概論   1   選   賴焗容，下

    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。

Creativity and Design Thinking   1   E   **CHAO-JUNG LAI** ，S

The course aims to introduce students to the fundamental concepts of garment construction, cultivating their understanding and skills in fashion design and production. It serves as a solid foundation, providing a gateway for further exploration in the field of fashion.

The course structure encompasses theoretical and practical components, including fundamental concepts of garment construction, garment materials and fabrics, basic garment production techniques, and more.

(二)財務金融國際學士學位學程：

商業智慧   3   選   張慈玲，下

    本課程旨在介紹如何利用資料探勘、雲端計算、數據分析等技術，將銷售數據、營業成本、以及銷貨收入等數據，轉換成能提供給管理階層做為決策判斷的參考資訊。商業智慧能揭露資料中的重要模式和趨勢，有助於深入檢視企業流程、消費者行為和內部生產力等。課程內容涵蓋資料視覺化、預測分析、企業績效管理等。

Business intelligence   3   E   **T.L.Chang**，S

This course aims to introduce how to use data mining, cloud computing, data analysis and other technologies to convert sales data, operating costs, and sales revenue into reference information that can be provided to management for decision-making. Business intelligence can reveal important patterns and trends in data, allowing for in-depth examination of corporate processes, consumer behavior, and internal productivity. The course content includes data visualization, predictive analysis, enterprise performance management, etc.

(三)資訊管理系：

財務資訊系統   3   選   張慈玲，上

    本課程旨在介紹財務資訊系統的財務基本觀念、系統建置與導入、系統安全與內部控制，並深入探討交易循環程序、企業資訊需求與新興議題，例如電子商務、程式交易、投資系統、技術分析、商業智慧、企業資源規劃與電子化財務報導等。目標在為企業改善經營管理，是企業管理資訊系統中「決策支援系統」 的重要組成部分。

Financial Information Systems   3   E   **T.L.Chang**，F

This course aims to introduce the basic financial concepts of financial information systems, system construction and introduction, system security and internal control, and deeply explore the transaction cycle process, corporate information needs and emerging issues, such as e-commerce, program trading, investment systems, technology analysis, business intelligence, enterprise resource planning and electronic financial reporting, etc. The goal is to improve business management for enterprises and is an important part of the "decision support system" in the enterprise management information system.

五、 人文暨社會科學院

(一)幼兒保育系：

嬰幼兒音樂欣賞　　　　　　　　　　2 選　　　鄭伊恬，下

　　本課程旨在增進學生對於嬰幼兒音樂賞析能力及音樂欣賞教案設計之專業知能。授課內容包含認識音樂欣賞中的音樂元素、音樂欣賞活動設計與帶領技巧及樂曲之曲式分析，提升其美感領域之聽覺藝術活動設計能力。

Music Appreciation for Infants & Young Children　　2 E　　**Yi-Tien Cheng, S**

This course is designed to enhance students' professional knowledge in the appreciation of music for infants and young children, and the design of music appreciation lesson plans for infants and young children. The course content includes understanding musical elements, designing and leading music appreciation activities, and analyzing musical forms. The goal is to elevate students' ability to design auditory artistic activities in the realm of aesthetic perception.

STEM 智慧科技與創客實作(核心課程)　　　2 選　　許衷源、鄭博元，下

　　本課程的目標在於培養學生的運算思維、問題解決和跨領域整合能力。透過學習物聯網相關的新興科技知識和技術，以及創客工具如 3D 列印和雷射切割等技術，學生將能夠應用這些技能來解決日常生活中的問題。

STEM Smart Technology and Maker Implementation (core course)　　2 E

Chung-Yuan Hsu、Bo-Yuan Zheng, S

The goal of this course is to cultivate students' computational thinking, problem-solving, and cross-disciplinary integration abilities. By learning about emerging technologies and techniques related to the Internet of Things, as well as maker tools like 3D printing and laser cutting, students will be able to apply these skills to solve problems in everyday life..

STEM 智慧科技與創客實作(深碗課程)　　　1 選　　許衷源、鄭博元，下

　　本課程的目標主要為配合 STEM 智慧科技與創客實作(核心課程)，提供更多實作機會給予學生練習。修習本深碗課程的學生必需選修 STEM 智慧科技與創客實作(核心課程)。

STEM Smart Technology and Maker Implementation (in-depth course)　　E

Chung-Yuan Hsu、Bo-Yuan Zheng, S

The main objective of this course is to align with the core curriculum of STEM Smart Technology and Maker Practice, providing students with more practical opportunities for practice. Students who take this in-depth course must also enroll in the STEM Smart Technology and Maker Practice (core course).

奧福與達克羅士教學法　　　　　　　　2 選　　　鄭伊恬，下

　　本課程旨在學習奧福與達克羅士音樂教學法的方法、教育理念、教學素材、步驟以及教學的內容與方法。內容包括歌唱、說白節奏、曲式分析、遊戲、舞蹈、即興、樂器、克

難樂器合奏。讓學生將所學的各種音樂教學方法統整於課程設計中，並於本校附設幼兒園進行實際教學與省思討論。

Orff and Dalcroze Method   2 E   **Yi-Tien Cheng, S**

This course is designed to explore the methods, educational philosophy, teaching materials, steps, and content of Orff Schulwerk and Dalcroze Eurhythmics. The content includes singing, narrating rhythm, play, dance, improvisation, musical instruments, chorus of percussion instruments. Students will integrate various music teaching methods learned into curriculum design and engage in practical teaching and reflective discussions at kindergarten.

幼兒園教保課程與教學實務   2 選   **陳俐君，下**

本課程旨在培育學生以符合幼兒園現場 2-6 歲幼兒的需求，依據「幼兒園教保活動課程大綱」其幼教理念與法規來擬定符合幼兒園現場課程的規劃與設計，規劃出符合幼兒發展、園所教學需求的教案，讓幼兒獲得豐富成功經驗的學習環境和活動。且讓學生能藉由實際參與活動、經驗分享，從做中學，以預備畢業後現場實務經驗為目標，提升學生對課程的理解，提供符合現場實務的經驗，為畢業就業前的先前預備，提升學與用、增進學生畢業後就業能力。

Preschool Curriculum and Practices   2 E   **Li-Chun Chen , S**

This course aims to train students to meet the needs of 2-6-year-old children in the kindergarten. Based on the "Kindergarten Education and Protection Activities Curriculum" and its early childhood education concepts and regulations, we will formulate the planning and design of the curriculum that meets the needs of children in the kindergarten. Development and kindergarten teaching needs lesson plans, providing a learning environment and activities for children to gain rich and successful experiences. It also allows students to learn by doing through actual participation in activities and experience sharing, with the goal of preparing for on-site practical experience after graduation, improving students' understanding of the course, providing experience that is consistent with on-site practice, and making prior preparations before graduation and employment. Improve learning and application, and enhance students' employability after graduation.

人際關係與溝通   2 選   **，下**

這門課程的目標是教授學習者有關人際關係的意義、功能、特性和理論，並提供溝通訓練。我們希望學習者能夠了解促成良好人際關係的因素，並學會克服關係障礙，促進良好的溝通，從而在幼兒園階段建立良好的互動關係，包括與家長和同事之間的關係。
本課程涵蓋了與人際關係相關的議題，包括人際吸引的因素、知覺、自我概念、溝通的特性和障礙、有效溝通的方法、非語言溝通和衝突處理等。通過實際參與活動，我們希望學生能夠在實踐中學習，從而更好地理解課程內容。

Music and Art Activities for Infants and Toddlers   2 E   **, S**

This course aims to introduce the meaning, functions, characteristics, and theories of interpersonal relationships, and provide communication training. The goal is to help learners understand the factors that contribute to healthy interpersonal relationships, and overcome relationship barriers to promote effective communication. This is particularly beneficial for establishing positive interaction among parents and colleagues in the kindergarten stage. The course covers various topics related to interpersonal

relationships, including factors of interpersonal attraction, perception, self-concept, characteristics and barriers of communication, effective communication methods, nonverbal communication, and conflict resolution. Through hands-on activities, learners will have the opportunity to learn by doing, facilitating a better understanding of the course content.

嬰幼兒音樂與藝術活動　　　　　　　　　2　　選　　　　，下

　　本課程旨在增進學生對於嬰幼兒音樂和藝術活動之專業知能。授課內容包含說明嬰幼兒音樂和藝術活動之內涵，結合音樂和藝術進行五感體驗活動設計，並讓學生到親子館實際演練操作來體驗教學過程。

Monographic Study of Music Education for Infants and Young Children　2　　E　　, S

This course is designed to enhance students' professional knowledge and skills in infant and toddler music and art activities. The curriculum includes an explanation of the content of infant and toddler music and art activities, designing sensory experiences through the integration of music and art, and providing students with practical teaching experience by conducting hands-on activities at childcare resource centers..

(二)應用外語系：

運動與體適能英文　　　　　　　　　2　　選　　　　　李俊忠，下

　　本課程旨在介紹常見運動與體適能之英文術語及基本知識。課程內容涵蓋棒壘球、籃球、羽球、網球、田徑、高爾夫球、足球、鐵人三項、競技體操、水上運動、重量訓練以及建構良好體適能所須具備之基本知識如均衡飲食、良好睡眠和運動訓練等等。課程設計以英文閱讀為主，搭配簡易體適能操作為輔，以期能提高學生欣賞英文運動賽事之能力，並而將英文融入運動，同時鼓勵學生透過均衡飲食、良好作息及運動習慣以建立健康的生活型態。

English for Sports and Fitness　　　　2　　E　　　　**Andy Lee , S**

This course is designed to introduce the English terminology and basic knowledge of popular sports including baseball, softball, badminton, tennis, track & field, golf, soccer, triathlon, artistic gymnastics, water sports and weight training. What to eat and how to sleep and train for physical fitness will be another chief focus. Through extensive reading with complementary hands-on practice, students are equipped for better enjoying English sports games and are encouraged to develop a healthy lifestyle by following a balanced diet and a regular daily routine and cultivating good exercise habits.

美國文化探索　　　　　　　　　　2　　選　　　龔育緯，上

　　學生透過課前閱讀與課堂影片欣賞與討論的方式針對美國生活文化進行探索。此 外其他英語系國家以及世界其他主流文化也將被提出以茲比較並了解美國文化在世界上所扮演之角色與其價值，以增進學習者之文化認知與世界觀。

Introduction to American Culture　　　2　　E　　　**Samuel Kung , F**

Students explore American life and culture through pre-class reading and classroom video appreciation and discussion. In addition, other English-speaking countries and other mainstream cultures

in the world will also be mentioned to compare and understand the role and value of American culture in the world and to enhance learners' cultural cognition and worldview.

(三)休閒運動健康系

運動設施規劃與管理　　　　　　　　　2　　選　　　　，下

　　國內現有休閒運動設施普遍存有功能性不佳及管理困難等現象，而一般慣例是設施興建完成後才交由管理單位經營，管理單位常抱怨空間規劃設計不當或缺乏相關服務及管理設施。

　　　本課程有鑒於上述原因及國內休閒運動設施成長迅速，及對於相關領域人才需求也逐步提升，期望能培養專業休閒運動設施規劃及管理人才。授課內容包括：休閒運動設施的分類、休閒運動設施規劃與設計、各類型場地維護與管理及促參法有關休閒運動設施之制度等內容。

Planning and Management of Recreational Sport Facilities　　2　　E　　，S

In Taiwan, existing recreational sport facilities commonly exhibit issues such as poor functionality and management difficulties. The conventional practice involves handing over the facilities to management units for operation only after their construction is completed. Management units often complain about inadequate spatial planning and design, as well as a lack of relevant services and facility management.

In light of the above reasons and the rapid growth of recreational sports facilities in the country, coupled with an increasing demand for talent in related fields, this course aims to cultivate professionals in the planning and management of recreational sports facilities. The course content includes the classification of recreational sports facilities, planning and design of such facilities, maintenance and management of various types of venues, and the legal framework related to the Act for Promotion of Private Participation in recreational sports infrastructure projects.

社區健康營造　　　　　　　　　　　　2　　選　　　　　，下

　　本課程主要在介紹、導讀及分享健康營造的基礎概念與立論，並以世界衛生組織對健康營造的相關案例為範圍，以教導學生在社區健康營造上專業知識與技能。因應本系學生畢業職場所需，課程中將特別著重社區中健身運動之推廣與應用。

Community Health Building　　　　　　2　　E　　　　　　，S

Through the process of reading, presentation, discussion and sharing, students will familiarize the theories and skills related to community health building. The purpose of this course is to provide the whole concept of community health building under the structure of World Health Origination, additionally, to provide the opportunity for practical training on related domains. In addition, how to design and promote physical activity in the community setting.

幼兒體適能概論與實務　　　　　　　　2　　選　　　　，下

　　課程旨在探討運動遊戲對幼兒發展的重要性及其功能。課程內容包含：幼兒的動作發展及運動能力；介紹與企劃幼兒體適能課程、運動能力及親子活動；創作幼兒體操、律動、

音樂遊戲、帶動唱、親子律動、幼兒運動機能及運動能力的發展，幼兒身體動作要點和指導方法及幼兒體能活動的計劃。

Introduction and Practice of Physical Fitness for Children　2　　E　, S

This course explores the significance and contribution of movement play to child development. The development of introducing and designing be to course of physical education, games, and activities; and it creates youngster's gymnastics, dance movement, to follow and play of music by youngsters. movement function and ability, factors regarding physical movement, and instructions of fitness activities are included..

六、 國際學院

(一)熱帶農業暨國際合作系：

熱帶畜牧實務　　　　　　　　　　　1　選　　　　　　　　　　，下

　　本課程旨在提升學生之熱帶畜牧知識、技術與技能，以及增加學生的國際互動、觀點、經驗和信心。內容包含畜牧生產之重要性、畜產品供需與管理，以及探討肉牛、乳牛、蛋雞、肉雞之生產管理實務，激發學生探討如何以最佳策略或技術提升家畜禽生產，以及分享家畜禽在各地傳統上與文化上之應用。同時，本課程將以台灣、印尼、泰國等不同國家為背景，鼓勵學生進行討論和發想。

Best Practices of Tropical Livestock Production　　　1　E　　　　，S

　　The objective of the course is to improve students' competence (knowledge, technology, and skills) related to their field especially best practices of livestock production in the tropics, and improve the students' international interactions, views, experience, and confidence. Contents of the course include the importance of livestock, supply and demand for livestock products, management, and best management practices in beef cattle, dairy cattle, layer, and broiler production. It encourages students to discuss what and how best practices have been and should be practiced on the farm, as well as traditions and cultures related to livestock production in Taiwan, Thailand, and Indonesia.

熱帶畜牧實務實習　　　　　　　　　1　選　　　　　　　　　，上

　　本課程旨在提升學生之熱帶畜牧知識、技術與技能，以及增加學生的國際互動、觀點、經驗和信心。學生至泰國湄州大學、印尼布勞爪哇大學各實習一個月，內容包含畜牧現場之各項技術與技能，激發學生探討如何以最佳策略或技術提升家畜禽生產。

Practical Internship of Tropical Livestock Production　　　1　E

　　The objective of the course is to improve students' competence (knowledge, technology, and skills) related to their field especially best practices of livestock production in the tropics, and improve the students' international interactions, views, experience, and confidence. Students will conduct a practical internship in Maejo University University and Universitas Brawijaya Indonesia for one month in each place. Contents of the internship include the related technology and skills on the farm. It encourages students to improve their competence in livestock production.

智慧農業　　　　　　　　　　　　　2　選　　　　　　　　　，上

　　農業已從傳統農業轉型成智慧農業，學生必須要了解智慧農業栽培技術。本課程是讓學生了解智慧農業應用與範圍。授課內容包含智慧化設備、AI預測病蟲害及產量、智能監測、產銷等相關介紹。此外，課程中會邀請業界講師說明智慧農業技術應用於產業的現況及如何精準生產。

Smart Agriculture　　　　　　　　　　　2　E　　　　　　，F

　　With the advance of AI, computational algorithm and drone, the agriculture is now upgrade to the "smart agriculture". The course aims to introduce the application and field of smart agriculture with advanced on production monitoring, pathogens monitoring and logistics. Also, the invited speakers will show students with their practical experience on the smart agriculture..

生物學　　　　　　　　　　　　　　2　選　　　　　，上

　　生物學為研究有生命的科學，教學的目的在於讓所有學生了解生命的複雜性與生命各階層的功能和構造，包含各自分離和合併的功能。這課程主要介紹基礎的理論，讓學生了解生物的基礎知識，進而教導學生瞭解地球上的生物與研究生物的方法。

Biology 2　E　　　　，F

　　Biology is the Study of all Living Things. The teaching goal in Biology is to instill in all students a deeper appreciation for the complexity of living organisms and an understanding of how they function together and separately. This course will provide students with an introduction to the basic principles of biology and how they are applied to the search for the origins of life on Earth.

蜜蜂產物之化學與生物特性特論 3　選　　　　，上

　　本課程主要在提供研究生有關蜜蜂產物如蜂蜜、蜂王漿、蜂膠、蜂花粉和蜂毒等主要化學成分及生物特性的最新資訊。課程將深入最新科學研究發現，教學關於蜜蜂產物的化學成分及生物特性對人體健康的正面影響。蜜蜂產物含有豐富營養素，包含果糖、葡萄糖、礦物質、蛋白質、游離氨基酸、維生素、酵素(酶)和多酚等，這些營養物質和其它生物功能作用密切相關。課程除了討論這些蜜蜂產品的營養益處，還討論其健康益處的影響。

Special Topics on the Chemical and Biological Properties of Bee Products 3 E 　，F

　　This course is designed to provide graduate students with the latest information on the chemical composition and biological properties of major bee products, such as honey, royal jelly, propolis, pollen, and venom. These classes will provide an in-depth explanation of the latest scientific findings regarding the chemical and biological properties of bee products and their positive effects on human health. There are several nutrients that are found in bee products, including sugar, minerals, proteins, free amino acids, vitamins, enzymes, and polyphenols that appear to have a close connection to their biological functions. In addition to the benefits of these products regarding nutrition, other health benefits will also be discussed.

產業昆蟲學特論 3　選　　　　，上

　　就數量和物種多樣性來討論，昆蟲是世界上最常見的動物。儘管環境多樣化，昆蟲仍然能夠輕易在各種環境中生存和繁殖。人類與昆蟲的關聯已有數百萬年之久，最近的發展到飼養和繁殖昆蟲作為微型家畜（亦稱「小型家畜」）的養殖增加。昆蟲養殖是作為生產人類食物、動物飼料、藥物、衣料、染料、寵物及其他用途。本課程旨在提供學生瞭解產業用昆蟲（如蜜蜂、桑蠶、紫膠蟲、麵包蟲、水牛蠕蟲、胭脂蟲、蟋蟀、蠟蟲、水虻、甲蟲等）的生物學與產業特性的最新研究。本課程也將討論產業昆蟲在社會、環境以及經濟層面的研究。

Special Topics on the Industrial Entomology 3　E　　　　，F

　　Insects are the most common animals in the world in terms of abundance and species diversity. Despite diverse environmental conditions, insects are easily able to survive and thrive. Humans have been associated with insects for millions of years. Recent developments have led to an increase in the practice of raising and breeding insects as miniature livestock, also known as mini livestock. Farming of insects is conducted for the production of food for humans, animal feed, medicine, clothing, dyes, pets, and many other purposes. The purpose of this course is to expose students to the latest research in the biology and industrial applications of industrial insects (such as bees, silkworms, lac insects, mealworms, buffalo worms, cochineal, crickets, waxworms, crickets, soldier flies, and beetles). In this course, we will discuss the social, environmental, and economic aspects of industrial insects..

(二)觀賞魚科技及水生動物健康國際學位專班：

生物資訊學應用   3   選   ，下

　　本課程的目標是指導學生使用生物資訊學工具解決生物學和水產養殖問題。課程中的學生將學習相關的生物資訊原理以及如何使用各種應用程式進行生物資訊分析。我們將討論使用生物數據進行細菌基因組學、宏基因組學、轉錄組學和物種鑑定的工具和技術。本課程使用基於網路的分析工具，將學術講座與實踐任務結合。學生將可以使用用於分析和解釋分子數據的線上工具。

Application of bioinformatics   3   E   ，S

The goal of this course is to instruct students in the use of bioinformatics tools for biology and aquaculture problem-solving. Students in the course will learn about relevant bioinformatic principles as well as how to use a variety of applications for bioinformatic analysis. We will discuss tools and techniques using biological data for bacterial genomics, metagenomics, transcriptomics, and species identification. Using a web-based analytical tool, the course will mix academic lectures with practical tasks. Online tools for analyzing and interpreting molecular data will be available to the students.

水生動物細胞培養及實習   2   選   ，下

　　水生動物相關的研究領域包羅萬象，並於近年發展猛迅，舉凡營養、代謝、疾病、環境汙染等議題皆能利用以水生動物為對象的模式進行研究與探討。而因設施、經費、動物來源及動物福利的議題卻限制了科研人員進行水生動物活體試驗的普及度，因此以細胞為主體的體外研究模式成為科研人員一個繞不開的優良選擇。本細胞培養學課程的內容從細胞營養生理到技術應用的知識傳遞；從培養系統的建立消毒、初代細胞的分離培養到細胞株的低溫保存一系列實作課程，希望帶給學生整套完整的水生動物細胞培養知識與實作技能，在未來的研究路上可以多掌握一套強大的作戰工具。

Aquatic Animal Cell Culture and Practice   2   E   ，S

The research related to aquatic animals are very diverse and have developed rapidly in the decades. The aquatic animal research models could be applied on research topics such as nutrition, metabolism, diseases, and environmental pollutions etc.. However, because of the issue such as availability of facilities, funding, animal sources, and animal welfare etc., the accessibility for researchers to conduct in vivo research on aquatic animals is limited. Therefore, in vitro research models based on cells have become an unavoidable and high-quality choice for researchers. The content of this cell culture course ranges from the knowledge about cell nutrition, physiology to technical applications as well as practical series from establish and disinfect a culture system, isolate and culture primary cell to the cryopreservation of cell lines. We hope to provide the students with a comprehensive set of knowledge and practical skills about aquatic animal cell culture which could provide you with a set of powerful tools in future research.

七、 達人學院中英文課綱

經濟果樹管理與市場行銷　　2　　選　　李俊逸、蔡尚翰

1.經濟果樹於台灣及世界之生產與問題及展望

2.柑橘類、荔枝、龍眼及其他無患子科、芒果等漆樹科、番石榴、蓮霧等姚金孃科、番荔枝科、木瓜、百香果、香蕉、稀有及新興與其他常綠果樹、梨、蘋果等仁果類果樹、桃、李、梅等核果類果樹、葡萄、柿、其他落葉果樹現況、品種、栽培管理及未來(含經濟果類病蟲害與行銷)

Management and marketing for economic fruit trees

2　　E　　C. Y. Lee, S. H. Tsai

1.Production, issues, and prospects of economic fruit trees in Taiwan

2.Current status, varieties, cultivation management, and future of citrus, lychee, longan, and other sapindaceae, mango, anacardiaceae, guava, myrtaceae, wx apple, and other fruit trees.(Diseases of economic fruit trees (I) (II)、Pests affecting economic fruit trees (I) (II)、Marketing of economic fruit trees)

創新創業學堂課程(1 學分以下微型課程)

SDGs 創意發想(2)　　　1　　選　　顏嘉宏

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)。

Creative ideas developing in Sustainable Development Goals (SDGs) (2)

1　　E　　C. H. Yen

Taking "Sustainable Development Goals (SDGs)" as the target and using creative innovation tools to develop the SDGs-related product or service (prototype).

創業引導課-斜槓的意義　　　0.2　　選　　陳又嘉

1.什麼是斜槓?零接觸經濟

2.成功者永遠知道下一步要做什麼

3.妨礙成功三大障礙

4.邁向成功四化原則

5.品牌建立與互動遊戲體驗

Entrepreneurship Guidance Course-Slash　　0.2　　E　　Y. C. Chen

1.What is a slash? Zero-touch economy

2.Winners always kno

3.Three barriers to success

4.Towards the Four Principles of Success

5.Brand building and interactive gaming experience

產品開發與設計　　　1　　選　　白貿元

本課程旨在教導學生如何運用設計思考方法來解決實際問題，並創造創新的產品和服務。學生將掌握設計思考的核心原則和過程，並學會用戶中心的設計方法。課程將包括實際案例分析和專案實作，以幫助學生應用所學知識。

Product development and Design　　1　　E　　M. Y. Pai

This course aims to teach students how to apply the principles of design thinking to solve real-world problems and create innovative products and services. Students will master the core principles and processes of design thinking and learn user-centered design methods. The course will include practical case studies and project work to help students apply the knowledge they have gained.

消費者需求分析　　　1　　選　　白貿元

本課程旨在教導學生如何深入瞭解消費者需求，以制定有效的產品設計和行銷策略。學生將學習消費者研究方法、分析消費者痛點、瞭解消費者行為，並掌握市場分析工具。課程將涵蓋實際案例分析，以幫助學生應用所學知識。

Consumer Demand Analysis　　1　　E　　M. Y. Pai

This course aims to teach students how to gain a deep understanding of consumer needs in order to develop effective product design and marketing strategies. Students will learn consumer research methods, analyze consumer pain points, understand consumer behavior, and master market analysis tools. The course will include practical case studies to assist students in applying the knowledge they have acquired.

雷射雕刻技能培訓與應用發想　　0.4　　選　　王采蕎

雷射雕刻簡介與應用介紹、繪圖軟體、機具控制軟體、參數設定、雷射切割與組裝。

Laser Engraving Skill Training and Application Ideation　　0.4　　E　　T. C. Wang

Introduction and application of laser cutting, drawing software, software for using equipment, parameter setting, laser cutting operation and assembly.

創新創意發想-以永續目標主題為例　　0.2　　選　　簡赫琳

了解永續發展目標與確保及促進各年齡層健康生活與福祉。

Innovative Creative Ideation - Using Sustainable Goals as an Example　　0.2　　E　　H. L. Chien

Learn about the Sustainable development goals; Ensure healthy lives and promote well-being for all at all ages

模型製作技術培訓與應用發想　　0.4　　選　　侯博倫

創意激盪與團隊創意激發與模型製作。

Model Making Technique Training and Application Ideation　　0.4　　E　　P. L. Hou

Creative thinking and brainstorming and inspiring team creativity and model making.

永續概念培育-現況與改善發想　　0.2　　選　　蔡燿宇

了解現階段發展永續的能源現行做法，並討論、思考未來可採用的永續、綠能的能源或技術。

Sustainable Concept Cultivation - Current Status and Improvement Ideas
0.2　　E　　S. Y. Tsai

Understanding Current Practices in Sustainable Energy Development and Discussing, Reflecting on Future Sustainable and Green Energy Sources or Technologies.

數位時代智慧財產權管理與應用　　0.3　　選　　王采蕎

本課程旨在深度研究人工智慧對著作權、學術倫理和創新的影響。透過案例分析，學生將掌握 AI 在文創領域的應用與法律挑戰。課程強調學術倫理，引導學生正確處理 AI 研究的倫理議題。最後，透過智慧財產權管理策略，學生將學會應對 AI 時代的法律挑戰，並深入了解未來 AI 對著作權和創新的趨勢。

Intellectual Property Management and Applications in the Digital Era
0.3　　E　　T. C. Wang

This course delves into the profound impact of intelligent creation, focusing specifically on copyright, academic ethics, and challenges in innovation. Through case analyses, students will discern the application of AI in creative domains and comprehend legal challenges in copyright regulations for AI-generated content. Emphasis on academic ethics will guide students in navigating ethical concerns related to AI research. Finally, by exploring intellectual property management strategies, students will learn to address legal challenges in the AI era and gain a comprehensive understanding of future trends in AI's impact on copyright and innovation.

品牌行銷策略與全球競爭力　　0.6　　選　　王采蕎

本課程深入探討行銷策略、品牌建立、智慧財產權保護，以及國際市場與跨文化經營。透過理論與實務結合，學生將學會選擇與實施不同行銷策略，重視品牌價值的建立，掌握智慧財產權的基本原

則，並瞭解進入國際市場的關鍵挑戰。課程結合案例分析與實作，培養學生的行銷專業素養，使其能夠在全球商業環境中脫穎而出。

Brand Marketing Strategy and Global Competitiveness　　0.6　　E　　T. C. Wang
This course delves into marketing strategy, brand extablishment, intellectual property protection, and international market entry with a focus on cross-cultural management. Through a blend of theory and practical application, students will learn to select and implement diverse marketing strategies, prioritize brand value creation, understand the fundamentals of intellectual property protection, and grasp key challenges in entering international markets. The course integrates case studies and hands-on progects to cultivate students' professional competence in marketing, empowering them to stand out in the global business environment.

創業實務及市場分析　　0.4　　選　　王采蕎

本課程旨透過理解創業的核心概念和動機，激發學生對多元創業機會的認識，強調創新思考。接著，透過學習計畫書結構和市場分析技巧，學生不僅能夠具備撰寫計畫書的實務能力，也能深入了解競爭環境。課程旨在提供實用工具，引導學生走向創業之路，並啟發他們充分發揮創意和創新力。

Entrepreneurship Practice and Market Analysis　　0.4　　E　　T. C. Wand
This course aims to inspire students by fostering an understanding of the core concepts and motivations behind entrepreneurship, emphasizing innovative thinking. Subsequently, through learning the structure of business plans and market analysis techniques, students not only develop practical skills in plan writing but also gain insights into the competitive landscape. These two sessions are designed to provide practical tools, guiding students on the path to entrepreneurship and encouraging them to unleash their creativity and innovation.

永續發展學堂課程(1 學分以下微型課程)

物聯網概論　　1　　選　　吳宗哲

本課程主要是從認識物聯網基本架構開始，介紹感測元件種類、嵌入式系統製作基礎、雲端資料庫功能與類型、大數據資料收集目的與應用、通訊設備選擇與建構方式、伺服器建構基礎與框架應用、手機 APP 設計軟體種類與實際功能操作嘗試。以協助學生了解物聯網建構方向，盡可能完整專業知識所需的資料收集與控制自動化之概念。

Introduction to Internet of Things　　1　　E　　T. C. Wu
This course mainly starts from understanding the basic structure of the Internet of Things, introduces the types of sensing components, the basis of embedded system production, the functions and types of cloud databases, the purpose and application of big data data collection, the selection and construction of communication equipment, and the basics of server construction and frame application, mobile APP design software types and actual function operation attempts. To help students understand the construction direction of the Internet of Things, as much as possible to complete the concept of data collection and control automation required for professional knowledge.

動物輔助實務活動設計實習　　1　　選　　羅書姍

本課程將以犬隻訓練為主軸，學習基礎犬隻行為訓練知識及領犬技能，並能將其結合動物輔助活動設計之方案，實際運用於場域服務中。。

The application of Animal-Assisted Therapy Program　　1　　E　　S. S. Lou
This course will focus on dog training, including the knowledge of dog behavior training and handling skills, and be able to combine them with animal-assisted activity design plans and actually apply them in services.

個人運動訓練與指導　　1　　選　　陳克豪

本課程主要目的在培養學生成為個人運動指導員，並考取相關證照。課程內容包含：健康體適能、運動生理學、人體解剖學、肌力訓練、特殊族群、運動訓練模組、運動行銷、溝通能力等。

Personal Exercise Training　　1　　E　　K. H. Chen

The main purpose of this course is to train students to become personal exercise trainer and obtain relevant licenses.
Course content includes: physical fitness, exercise physiology, human anatomy, strength training, special population, sports training modules, sports marketing, communication skills, etc.

團體運動與教練素養　　1　選　楊麗珠

藉由團體運動課程，讓學生透過運動的技術練習、正確的安全指導、分組個人與團隊練習等，提升學生健康生活與體育運動的知識，並增進人際關係與團隊合作的精神。

Group Exercise and Teaching Competence　　1　E　L. Z. Yang

Through group exercise classes, students
will enhance their knowledge of healthy living and physical fitness
by sports skills practices, safety instructions, and participating in individual and team exercises. Additionally, this will foster interpersonal relationships and promote a spirit of teamwork and cooperation.

國民運動中心經營管理銷售實務　　1　選　楊麗珠

本課程主要目的是希望聚焦於運動產業中之國民運動中心,希望透過業界實務教師以及國民運動中心實際參訪，讓學生更進一步了解國民運動中心現有營運現況，進一步可以針對消費市場進行分析、區隔與定位，最後可以配合於學程所學專長，將自己專業可以成功銷售給需要的運動消費者。

Civil Sports Center Operations Management and Sales Practices
1　E　L. Z. Yang

The main objective of this course is focus on the Civil Sports Center sports industry.
Through industry professionals and actual visits to commercial fitness centers, the purpose is to make students understand the commercial fitness operational status.
Therefore, they can use it in Marketing, to analyze, segment, and position the consumer market. With the use of the expertise that they learned in the program, they can do successful self-promotion to the consumers who demand sport.

幼兒服務學習實務　　1　選　林欣慈

本課程規劃由教師講述、示範教學通則、活動設計概念、認識幼兒園教材與教具、教學資源、教學媒體與教學法。介紹學習區、創造性教學理論與實務、幼兒園教保活 動課程大綱。另由教師安排課後學習活動，帶領學生分組準備說故事試教、小組各領 域試教與主題設計及試教等，教師並於針對各組的試教提出修改建議，同時提供學生 彼此觀摩學習與討論之機會，以增進學生編寫與合作帶領幼兒園教學活動設計的能力。

Early Childhood Services and Internships　　1　E　S. T. Ling

The course curriculum is structured around teacher lectures, demonstration teaching principles, concepts of activity design, familiarity with kindergarten materials and teaching aids, teaching resources, instructional media, and teaching methods. It includes an introduction to learning zones, creative teaching theories and practices, and the overall outline of kindergarten education and care activity curriculum. Additionally, teachers arrange post-class learning activities, guiding students in group preparation for storytelling demonstrations, domain-specific teaching trials, theme design, and teaching trials. Teachers provide feedback and suggestions for improvement based on each group's teaching trials, while also facilitating opportunities for students to observe and discuss each other's teaching, thereby enhancing their ability to collaborate and design educational activities for kindergarten.

幼兒健康促進服務創新設計與實務　　1　選　林欣慈

本課程旨在介紹幼兒身體動作與健康以及美感領域的基本概念,使學生能瞭解幼兒動作發展的基本元素與運用方式,幫助學生能設計幼兒體能與律動的活動與進行實作試教與律動編創演出,更加瞭解幼兒階段身心發展特質,具備幼兒課程與教學的知能以及發展幼兒藝術知能與創造力。本課程規劃由教師講述、示範教學通則、活動設計概念、認識幼兒園教材與教具、 教學資源、教學媒體與教學法。介紹學習區、創造性教學理論與實務、並藉由實體參與幼兒教學活動,將學習應用於實務

課程。

Innovative design and practice of early childhood health promotion services
1　E　S. T. Ling

This course aims to introduce fundamental concepts in the areas of young children's physical movement, health, and aesthetics. The goal is to enable students to understand the basic elements and applications of young children's motor development, assisting them in designing physical and rhythmic activities for young children. Students will engage in practical teaching demonstrations and creative performances related to movement, gaining a deeper understanding of the developmental characteristics of children and acquiring the skills necessary for curriculum design and teaching in early childhood education. The course includes teacher lectures, demonstration of teaching principles, concepts of activity design, familiarity with kindergarten materials and teaching aids, teaching resources, instructional media, and teaching methods. It covers learning zones, creative teaching theories and practices, and involves hands-on participation in early childhood teaching activities, allowing students to apply their learning to practical situations.

高齡健康促進服務創新設計與實務　　1　選　林欣慈

運用健康促進與衛生教育的理論與模式，配合高齡者的生理、心理與社會適應特性，融合高齡學習理論，來培養銀髮族健康促進學習計畫之規劃、執行與評價能力。課程進行方式以銀髮族健康身、心、靈三方面著手，以兼具理論探討與實務執行的進程，同時透過銀髮族生活場域實際教育介入經驗之學習，期提高學生對於銀髮族健康促進之認知與操作。

Innovative design and practice of health promotion services for the elderly
1　E　S. T. Ling

Utilizing theories and models of health promotion and hygiene education, this course integrates the physiological, psychological, and social adaptation characteristics of the elderly. It incorporates theories of aging to cultivate the planning, implementation, and evaluation skills necessary for health promotion learning programs for the elderly. The course focuses on the physical, mental, and spiritual aspects of health for the elderly, combining theoretical discussions with practical implementation. Through hands-on learning experiences in the living environments of the elderly, the course aims to enhance students' awareness and proficiency in promoting health among the elderly.

農村社區綠色照顧導論　　1　選　廖曼利

課程規劃扣合綠色照顧政策面向之綠場域、綠飲食、綠療育、綠陪伴四主軸。
透過學習高齡的相關生理、認知、心理社會、營養學、以及高齡友善環境設計等相關知識，促使學生對高齡議題有全面性的瞭解，作為執行綠色照顧政策之基石。

Introduction to Green Care in Rural Communities　　1　E　M. L. Liao

The curriculum is in line with the four main axes of green care policy: green fields, green food, green therapy activities and green companionship.

By learning about relevant knowledge in gerontology, including physiology, cognition, psychosocial aspects, nutrition, and age-friendly environmental design, students will gain a comprehensive understanding of issues related to aging. This knowledge will serve as a foundation for implementing green care policies.

農村社區綠色照顧活動方案設計與實踐　　1　選　廖曼利

課程規劃扣合綠色照顧政策面向之綠場域、綠飲食、綠療育、綠陪伴四主軸。
學生將學習方案設計原則與活動帶領技巧，並針對農村社區設計高齡活動方案並在實際場域練習實踐之。

Design and practice of green care activities in rural communities
1　E　M. L. Liao

The curriculum is in line with the four main axes of green care policy: green fields, green food, green therapy activities and green companionship.

The students will learn the principles of program design and skills in leading activities. They will design elderly activity programs specifically tailored for rural communities and practice the implementation in

real-world settings.

家庭農園的食農教育體驗實務　　1　選　黃雅莉

家庭農園為混農林業的形式之一，以多層次且多樣性作物所建構的家庭農園能維繫生物多樣性以及保種的功能，同時提供社區居民自給自足，掌握糧食自主權，更能連結地方文化與日常所需。因此，本課程藉由理論與實務並重的教學方式，讓同學對家庭農園對社區部落的重要性，並實際參與家庭農園栽植與食農教育體驗設計。

Hands-on of Food and Agricultural Education at Homegardens
1　E　Y. L. Huang

Homegarden, as a form of agroforestry, encompasses multi-layered and diverse cultivation of crops. Homegarden constructed in this manner contributes to the maintenance of biodiversity and seed conservation. Simultaneously, they facilitate self-sufficiency for community residents, empowering them with food sovereignty, and fostering a connection between local culture and daily necessities. Therefore, this course adopts a balanced approach of theoretical knowledge and practical application to enhance students' understanding of the significance of home farming in local communities. Students actively engage in the cultivation of Homegarden and the design of food and agricultural educational experiences.

樂當森林護花使者-白花蝴蝶蘭的繁殖與復育　　1　選　吳羽婷

本微型課程以原生於恆春半島的瀕危植物-臺灣白花蝴蝶蘭為主角，切入森林自然資源保育、組織培養繁殖技術等知識教育，將物種繁殖後送回其原生地復育，如牡丹鄉高士部落場域，藉由部落的力量就地保種，更可與部落發展結合，讓學生瞭解 USR 計畫如何透過專業領域協助解決生態問題及人文發展，並透過實務操作課程讓學生實際參與實作。

Happy to be a flower protector in forest - Propagation and restoration of Phalaenopsis aphrodite subsp. formosana　　1　E　Y. T. Wu

The course mainly focuses on the forest natural resource conservation and tissue culture propagation technology of the endangered plant Phalaenopsis aphrodite subsp. formosana, which is native species in Hengchun Peninsula. After breeding, the species is returned to its native place for restoration, such as the Gaoshi Tribe Field in Mudan Township. This orchid can be conserved through the tribe people and integrated with tribal development. Demonstrating to understand how the USR project can help to solve ecological problems and improve humanistic development with professional knowledge. Additionally, the students will participate the practical courses to experience the micropropagation manipulation.

記帳士實務入門(1)　　1　選　馬上閔

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

Introduction to Bookkeeper Practice (1)　　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.

112 學年度第 2 學期教師申請開授通識課程中英文課程大綱

1. 世界通史 World History

中、英文課程綱要：

一、遠古時代

內容包括：史前史、埃及文化、兩河流域、印度河谷文化等。

二、古典時代

內容包括：希臘文明、波斯、羅馬共和與帝國、東羅馬帝國、回教的興起與十字軍東征等。

三、西方世界的轉型

內容包括：文藝復興、宗教改革、地理大發現、啟蒙運動、民族國家興起、美國獨立與法國革命等。

四、全球化的形成

內容包括：工業革命、兩次世界大戰、冷戰與後冷戰、全球化與多元文化社會等。

1. Early Civilizations

Focus on: Prehistory, Ancient Egypt, Mesopotamia, India

2. The Emergence of Religions

Focus on: Greek and Roman Empire, Christianity and Islam world, Crusades

3. A Whole New World

Focus on: Renaissance, Reformation, Age of Discovery, Enlightenment, American history, France Revolutions

4. Challenges and Globalization

Focus on: Industrial Revolution, World War I&II, Cold War, Globalization and Culturally Diverse Society

2. 西方近代文明史 The History of the Modern Western Civilization

中、英文課程綱要：

一、全球史的視野

內容包括：全球史、文明的省思等。

二、近代西方文明的形成

內容包括：近代科技與工業、民族國家興起、民主與極權等。

三、文明衝突與調適

內容包括：亞洲維新、戰爭型態的轉變、冷戰壁壘等。

四、全球化的形成

內容包括：第三波民主、文化認同與當代生活、全球化與國際組織等。

1. World history

Focus on: World History, Civilization Reconsidered

2. Modern Civilization

Focus on: Technology and Industry, Nation-state, Democracy and Totalitarity

3. Conflicts and Adjustments between Civilizations

Focus on: The Modernization of Asia, Transitions to War, Cold war

4. Globalization

Focus on: The Third Wave, Cultural Identity, Globalization,International organizations

3. 哲學基本問題 Central Problems in Philosophy

中文課程綱要：

在本學期課程中，我們總共安排了六個哲學單元，它們分別是：知識論、形上學、心智哲學、道德哲學、政治哲學與法律哲學。基於本課程的「人文思維」目標，我們在議題挑選上，盡量選擇與「人」相關的哲學議題，希望讓同學們意識到哲學討論不僅僅是腦力遊戲，更是與我們的生活息息相關。以下簡單介紹這些單元在本課程中所涉及之相關議題：

（一）知識論：

人類與其他動物的一項主要差異，在於人類對這個世界有更深入的理解，而這樣的理解似乎建立在人類擁有更多的「知識」上。然而，我們真的對「知識」這個概念有足夠恰當的掌握嗎？知識與「真信念」的關係是甚麼？

（二）形上學：

「形上學」問題直接對應到我們的世界觀，它探究這個世界的真實樣貌，以及存在有哪些事物。在本學期的形上學單元，我們將焦點放在「自由意志」、「因果關係」與「人格同一性」這三個主題上。

三）心智哲學：

這個單元我們要探討「心智」（尤其是人類的心智）是怎麼樣的存在。人類有著複雜的心智能力，可以區分自己與他者的分別，可以認知到不同事物的差異。這些心智能力的本質是什麼？我們將會討論幾個常見的心智理論，並進一步檢視它們困難之處。

（四）道德哲學：

「道德哲學」關注人與人之間的相處，具體來說，在於我們應該用什麼方式對待彼此。我們觀察不到對與錯、好與壞。這讓我們產生一項疑問：真的有道德性質存在嗎？如果有，這樣的性質應該怎麼樣被理解與認識？

（五）政治哲學：

如果說道德哲學關注的是人與人之間的相處，那麼政治哲學關注的就是人與國家之間的相處。國家總是宣稱自己具有統治人民的正當性，這樣的正當性從何而來？

（六）法律哲學：

國家透過法律來規範人民，而「法律規範」與道德規範的一項重大差異，在於法律規範通常伴隨著相應的處罰，而且這樣的處罰具有強制性。這讓我們產生一項疑惑：「法律」憑什麼具有這樣的強制力？

英文課程綱要：

In this semester's course, we have arranged a total of six philosophical units: Epistemology, Metaphysics, Philosophy of Mind, Ethics, Political Philosophy, and Philosophy of Law. In line with our course's goal of "Humanistic Thinking," we have chosen philosophical issues related to 'humans' as much as possible, hoping to make students realize that philosophical discussions are not just mental exercises, but are

closely related to our lives. Here's a brief introduction to the topics covered in these units:

1. Epistemology: A major difference between humans and other animals lies in the deeper understanding humans have of this world, which seems to be based on having more 'knowledge'. However, do we really have a proper grasp of the concept of 'knowledge'? What is the relationship between knowledge and 'true belief'?

2. Metaphysics: Metaphysical questions directly correspond to our worldview, exploring the true nature of the world and what exists within it. In this semester's metaphysics unit, we will focus on the themes of 'free will', 'causality', and 'personal identity'.

3. Philosophy of Mind: In this unit, we will explore what the 'mind' (especially the human mind) is like. Humans have complex mental abilities that allow them to distinguish themselves from others and to recognize differences in various things. What is the nature of these mental abilities? We will discuss several common theories of mind and further examine their difficulties.

4. Ethics: Ethics focuses on how people interact with each other, specifically, how we should treat one another. We cannot observe right and wrong, good and bad. This raises a question: Do moral properties really exist? If so, how should such properties be understood and recognized?

5. Political Philosophy: If ethics is concerned with the interactions between people, political philosophy deals with the relationship between individuals and the state. States always claim to have the legitimacy to govern their people, but where does this legitimacy come from?

6. Philosophy of Law: The state regulates its citizens through laws, and a major difference between legal norms and moral norms is that legal norms usually come with corresponding punishments, which are coercive. This raises a question: By what right does the 'law' have such coercive power?

4. 博物美術與農事的美麗邂逅 The beautiful encounter between museums, art and farming

中、英文課程綱要：

現代農業與藝術混搭不違合感的觀念定義、藝術的材料與技巧，形式。知名創作者作品欣賞與價值分析等於課程中分享。讓同學對「農業藝術化」的藝術生成，由認識進而產生學習驅動力。

The mix of modern agriculture and art does not violate the conceptual definition of harmony, the materials and techniques of art, and the form. Appreciation and value analysis of the works of well-known creators are shared in the course. Let students develop the art of "agricultural art", and then generate learning motivation through understanding.

5. 好好生活心理學 Living-well psychology

中、英文課程綱要：

本課程以傳授心理學對個體生命與心智發展的相關論點為主，並逐一介紹重要實驗，期學生能洞悉個體外在行為與內在心理之交互影響。課程內容涵蓋心理學的基本論點，並聚焦於制約、人格、自我效能與自我實現等主題。

This course mainly fouced on the relevant arguments of psychology on individual life and mental development, and introduces important experiments one by one, so that students can gain insight into the interactive influence of individual external behavior and inner psychology. The course content covers basic arguments in psychology and focuses on topics such as conditioning, personality, self-efficacy and self-actualization..

6. 分子技術概論 **Biotechnology**

中、英文課程綱要：

生物技術所產生的產品已經融入生活之中，例如藥品開發，作物改良與檢測技術. 本課程透過介紹分子技術的概念與應用，增加學生知識的廣度也希望能使學生多一份學習的興趣.

Course Outline

Biotechnology brings light to our life, like medicine development, crop improvement and pathogen screening technique. This course is designed to establish the fundamental biotech knowledge of students.

7. 生物演化史 **Evolution**

中、英文課程綱要：

DNA 構成生物的基本藍圖，由細菌到人類. 站在現在這個時間點回溯物種的歷史，透過化石，型態與遺傳物質比較說明為什麼發生改變及如何產生適應上的改變。 這門課希望由生活中的例子說明演化與物種的關聯。這門課為 2 學分。

Course outline

　　DNA is the blueprint of organisms. From bacteria to human, we share the same fundamental materials. When looking back, fossils, morphological traits and DNA provide us clues to elucidate mechanism behind adaptation and trait change. The credit of this course is 2.

8.&9. 基礎邏輯 **Basic Logic**

中、英文課程綱要：

本門課將邏輯知識區分為兩大部分：（一）邏輯語言；（二）邏輯證明。在期中考之前的課程，我們將授課目標放在與（一）相關的邏輯知識上，期望讓同學認識邏輯語言如何與自然語言不同，學習邏輯語言的語法結構以及語意特徵，並進而認識邏輯推論的各種類型。而在期中考之後，我們將重點放在與（二）相關的邏輯知識上，讓同學熟悉邏輯證明規則，以及實際操作邏輯證明，進而學習抽象推理能力。本學期將會安排期中與期末兩次紙筆測驗，目的在於檢視同學對課程內容的接受狀況，而在兩次紙筆測驗的前一週，我們也會進行課前複習，讓同學可以回憶課程內容，以及針對較不熟系的課程內容提供講解與說明。

英文課程綱要：

This course divides logical knowledge into two main parts: (1) Logical Language; (2) Logical Proof. In the lessons before the midterm exam, our teaching objective is focused on the logical knowledge related to (1), with the expectation of helping students understand how logical language differs from natural language. Students will learn the grammatical structure and semantic features of logical language, and then recognize various types of logical inferences. After the midterm exam, our focus will shift to the logical knowledge related to (2), acquainting students with logical proof rules and practical operations of logical proofs, thereby learning abstract reasoning skills. This semester, we will arrange two written tests, midterm and final, to examine students' reception of the course content. One week before each test, we will also conduct a pre-test review to help students recall the course content and provide explanations and clarifications for less familiar topics.

10. 天然災害防救概論 Introduction to Natural Disaster Mitigation and Prevention

中、英文課程綱要：

本課程首先介紹氣候變遷對環境與生活之影響，其次說明氣候因子所引發之颱洪災害、旱災、土石流及崩塌災害，地殼變動及火山爆發等所引發之地震災害等天然災害之成因，並說明各類災害之防救方法，最後介紹災害管理觀念與各級政府對災害之防範、應變作為及相關法規，以使學生瞭解主要天然災害之特性與因應方法，並鼓勵生參與討論，以激發學生對災害防救議題之學習意願。

The goal of this course is to inspire the students' interest in learning about the prevention and rescue methods of different natural disasters. Firstly, the course will introduce the effects of climate change on the environment and general existences. Secondly, the natural calamities caused by climate factors will be explored, such as typhoon, flood, drought, debris flow and landslide hazards. In addition, the natural disasters induced by the interaction between the earth's crust and plate tectonics, and volcanic eruptions will be discussed. Then, the course will proceed to illustrate the methods of prevention and rescue of different natural disaster. Lastly, the course will introduce the government' s prevention systems and related legislations.

11. 輻射與安全 Radiation and Safety

中、英文課程綱要：

311 日本強震後，造成全球對核能電廠的安全疑慮與輻射外洩的恐慌，台灣核三廠至屏科大直線距離僅有 80 公里，提供正確輻射相關知識與建立適當輻射防護觀念對屏科大學生都是當務之急。本課程以淺顯易懂的授課內容(案例分析)與方式(參訪核三廠)，讓學生瞭解輻射的基本原理，引入輻射與日常生活的關聯性及應用，進而對輻射建立正確的觀念。課程內容主要針對四個面項做探討：

1.輻射的基本原理、種類、來源與特性概述。

2.解析輻射檢測方法、防護原理、劑量限值與生物效應等對輻射安全(土壤、水、食品與環境)的影響。

3.輻射在醫學、工業、環境、農業、考古與能源方面之應用。

4.核電廠的風險與事故案例分析作為輻射災害防救對策與應變措施之演練教材。

『輻射與安全』是讓學生了解輻射的特性與應用的課程,於此同時也週知輻射與生活息息相關,無法避免。希冀透過輻射教育的普及性,讓學生重視如何做好輻射防護、避免輻射傷害,才不會遇到相關問題產生時而慌張失措,最終啟發學生對輻射利弊的省思。

311 Fukushima nuclear disaster caused by global nuclear power plant safety concerns and radiation leak panic. After that, it is imperative to provide proper radiation-related knowledge and establish appropriate radiation protection concepts for students of National Pingtung University of Science and Technology(NPUST) due to the only 80 km straight-line distance from Taiwan Third Nuclear Plant to NPUST. This course will help students understand the basic principles of radiation by making use of the easy-to-follow instructional content and methods. At the same time, the course also introduces the relevance and application of radiation and daily life to establish the correct concept of radiation. The main contents of the course are discussed in four aspects, as following:

1.Basic principles, types, sources and characteristics of radiation.

2.Radiation protection methods, protection principles, dose limits and biological effects on radiation safety, including soil, water, food and the environment.

3.The application of radiation in medicine, industry, environment, agriculture, archeology and energy and so on.

4.Case analysis of risks and accidents in Nuclear Power as a radiation disaster prevention measures and contingency measures of the exercise materials.

"Radiation and Safety" is a course that allows students to understand the characteristics and applications of radiation. At the same time, it also shows that radiation and life are closely related, can not be avoided. Through the popularity of radiation education, so that students attach importance to how to do radiation protection in order to avoid radiation damage. Students will not encounter problems arising from time to time panic and ultimately this course enlightens students on the pros and cons of radiation considerations.