**動物科學與畜產系**

**Department of Animal Science**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 專業必修科目Required Courses | | | | | | | | | | | |
| 262001 | 生物統計 | | 2 | | 必 | | 張秀鑾 | | 上 | | |
| 本課程旨在使學生瞭解生物資料分析之統計原理、方法與統計相關基本名詞，授課內容包括數據資料之特性及整理方式介紹、敘述統計，機率與機率分布、估計、假設檢定、卡方分析、變方分析，迴歸與相關。 | | | | | | | | | | | |
| 262001 | Biometry | | 2 | | R | | H. L. Chang | | F | | |
| The aims of this course are to introduce the principles and methods of statistics, as well as the related basic terminology for life science data analysis. The course covers the introduction of data characteristics and management methods. However, descriptive statistics, probability and probability distributions, estimation, hypothesis test, chi-square analysis, analysis of variance, as well as regression and correlation analysis are also included. | | | | | | | | | | | |
| 262002 | 生物統計實習 | | 1 | | 必 | | 張秀鑾 | | 上 | | |
| 本實習依上課進度進行數據整理，以敘述統計、各項分布（常、二項式、多項式、卜瓦松、ｔ-、卡方與Ｆ分布）、估計、假設檢定、變方分析、迴歸及相關等原理，應用生物數據實例進行練習。 | | | | | | | | | | | |
| 262002 | Practice of Biometry | | 1 | | R | | H. L. Chang | | F | | |
| The lab. proceeds with the lectures of biometry. The practice of this course focus on exercises of biological data management and the application of descriptive statistics, useful distributions (Normal, binomial, polynomial, Poisson, t-, chi-square and F) theory, estimation protocol, hypothesis test, analysis of variance, regression and correlations techniques on data analysis for biologists. | | | | | | | | | | | |
| 262003 | 實務專題 | | 2 | | 必 | | 全系教師 | | 上、下 | | |
| 本課程由教師輔導學生選定其有興趣之試驗題目，進行動物飼養管理、生產技術操作或實驗室內之試驗、分析，並將實驗結果撰寫報告。 | | | | | | | | | | | |
| 262003 | Special Projects | | 2 | | R | | Faculties | | F、S | | |
| The students will select their special topics of interest and advisor with the specialty to instruct him. Course contents include laboratory research, analysis techniques, and farm animal management. The experimental results have to be presented and written in report. | | | | | | | | | | | |
| 262004 | 動物學 | | 2 | | 必 | | 劉炳燦、劉世賢、沈朋志 | | 上 | | |
| 本課程之設計主要是幫助學生了解動物之演化、分類與生理功能，內容包括器官的發育、細胞分裂與遺傳、動物行為與生態、原生生物、假體腔動物、軟體動物、環節動物、節肢動物、昆蟲、魚類、兩生類、爬蟲類、鳥類、哺乳類。 | | | | | | | | | | | |
| 262004 | Zoology | | 2 | | R | | B.T. Liu, S. S. Liu, P. C. Shen | | F | | |
| The object of this course is helping the students to understand the evolution, classification and physiological function of the animal. The contents include: development of tissue, organ, system, cell division and inheritance, animal behavior and ecology, protozoa, pseudocoelomate body plan, molluscan, annelida, arthropod, hexapod, fish, amphibian, reptile, bird and mammal. | | | | | | | | | | | |
| 262005 | 動物學實習 | | 1 | | 必 | | 沈朋志、黃自毅 | | 上 | | |
| 本課程之設計主要是幫助學生學習動物的一般構造及功能，內容包括光學顯微鏡使用、動物細胞及原生生物外部構造之觀察、蚯蚓及蝦解剖構造之觀察、以及脊椎動物之循環、呼吸、排泄、生殖、肌肉、消化與骨骼等系統解剖構造的暸解。 | | | | | | | | | | | |
| 262005 | Practice of Zoology | | 1 | | R | | P. C. Shen,  T. Y. Huang | | F | | |
| The object of this course is helping the students to learn the general structure and function of animal. The contents include: utilization of light microscopy, observating the external features of animal cells and protozoas, observating the anatomic structures of pheretima, and crayfish, understanding the anatomic structures of circulatory, respiratory, excretory, reproduction, digestive, muscle and skeleton systems of vertebrates. | | | | | | | | | | | |
| 262006 | 畜產微生物學 | | 2 | | 必 | | 林美貞 | | 下 | | |
| 本課程講授微生物之特性及分類、原核細胞之結構、細菌之分類及鑑定、真核細胞之結構、真菌、原生生物及寄生蟲、病毒之分類及鑑定、微生物之生長、微生物之營養與代謝、微生物之控制及於基因工程之應用。並針對畜產相關之微生物加以探討，包括畜產品原料中微生物之性質和殺菌條件、原料之貯存技術、發酵微生物之加工特性及成品之微生物變敗。 | | | | | | | | | | | |
| 262006 | Microbiology of Animal Products | | 2 | | R | | M. J. Lin | | S | | |
| This course includes characteristics and classification of microorganisms, structure of procaryotes, classification and identification of bacteria, structure of eukaryotes, fungi, protists, parasites, classification and identification of virus, growth, nutrition and metabolism of microorganisms, microbial control, and genetic engineering. The course will focus on the microbiology related to animal production, including microbial control of animal products, properties and destruction of microorganism in animal products, storing technique of raw materials, processing characters of fermented culture, and microbial spoilage final products. | | | | | | | | | | | |
| 262007 | 畜產微生物學實習 | | 1 | | 必 | | 林美貞 | | 下 | | |
| 本實習配合畜產品微生物學之課程，內容包括微生物培養、菌種活化、微生物檢驗及鑑定，抗生素檢查與發酵產品之製造，期使學生能於畜產品微生物操作及掌控更具信心。 | | | | | | | | | | | |
| 262007 | Practice of Microorganism of Animal Products | | 1 | | R | | M. J. Lin | | S | | |
| The objective of this course is to give the student more confidence in practically handling the microbial condition of animal products. It includes the activation and cultivation of pure culture, determination and identification of microorganisms, examination of antibiotics, and manufacture of fermented products, etc | | | | | | | | | | | |
| 262008 | 動物解剖生理學 | | 3 | | 必 | | 余祺、劉世華 | | 下 | | | | |
| 本課程以解剖學為基礎，依生理系統介紹禽畜之身體各部位構造與功能，依次分別為骨骼、肌肉、神經、血管循環、呼吸、消化、吸收、代謝、排泄、內分泌及生殖等系統。 | | | | | | | | | | | | | |
| 262008 | Anatomy and Physiology of Animal | | 3 | | R | | C. Yu  S. H. Liu | | S | | | | |
| The object of this course will introduce animal anatomy and physiology with organ system. The lectures contain skeleton system, joints, muscles system, nerves system, cardiovascular system, respiratory system, digestion system, urinary system, endocrine system and reproductive system. | | | | | | | | | | | | | |
| 262009 | 動物解剖生理學實習 | | 1 | | 必 | | 余祺、劉世華 | | 下 | | | | |
| 本課程將利用標本及實際解剖生物來介紹身體構造，並在實驗室以顯微鏡、檢測試劑及多項小型手術用具，透過實驗操作來進一步了解了解血液、心臟、循環、呼吸、泌尿及生殖之生理現象。 | | | | | | | | | | | | | |
| 262009 | Practice of Anatomy and Physiology of Animal | | 1 | | R | | C. Yu  S. H. Liu | | S | | | | |
| Students will learn animal anatomy with specimens and necropsy and will learn physiological function on blood cell, heart function, circulation, respiratory volume and reproductive cycle by microscopy and polygraph instruments. | | | | | | | | | | | | | |
| 262010 | 遺傳學 | | 2 | | 必 | | 張秀鑾 | | 下 | | | |
| 本課程旨在介紹遺傳學基本原理與解說生物體之遺傳特徵在世代間如何傳遞、遺傳密碼如何複製與表現，及其變異原因。課程內容包括古典孟德爾遺傳學、基因表現與交感、連鎖與性聯遺傳、遺傳之染色體學說、DNA之遺傳功能、複製、重組、轉錄與轉譯；最後簡介突變與核外遺傳對家畜之影響。 | | | | | | | | | | | | |
| 262010 | Genetics | | 2 | | R | | H. L. Chang | | S | | | |
| The objectives of this course are to introduce the principles of genetics and to state how the genetic characteristics being transmitted between generations, how the genetic code being replicated and expressed, and the causes of variation. It covers major topics usually taught in an introductory course, including classical Mendelian genetics, gene expression and interaction, linkage and sex linked inheritance, chromosome theory of inheritance, genetic function of DNA, replication, recombination, transcription and translation. In addition, both mutation and extranuclear inheritance are to be briefly introduced but not covered in detail. | | | | | | | | | | | | |
| 262011 | 遺傳學實習 | | 1 | | 必 | | 劉世華 | | 下 | | | |
| 本課程旨在指導學生使其具遺傳學原理之基本知識與提供數量遺傳與分子遺傳相關技術之學習機會。實習課程內容涵蓋卡方檢測、族群遺傳調查、外表型T值檢定、遺傳變異率估計、染色體與動物公母鑑別、核型分析、遺傳性狀觀察、動物細胞有絲分裂與減數分裂、DNA抽取、DNA純化、基因表現與突變等知識及相關技術之操作。 | | | | | | | | | | | | |
| 262011 | Practice of Genetics | | 1 | | R | | S.H. Liu | | S | | | |
| The aims of this practical lab are to provide students with basic knowledge of the principles of genetics and activities in quantitative and molecular genetic related technologies. The predicted activities are chi-square test, t-test for phenotypes, heritability estimation, chromosome and sex identification of animal, karyotype analysis, observation of genetic trait, meiosis and mitosis of animal cells, DNA extraction and purification, gene expression and mutation. | | | | | | | | | | | | |
| 262012 | 肉品原料與利用 | | 2 | | 必 | | 陳志銘 | | 上 | | | |
| 本課程介紹畜產品原料的種類與特性，使學生對乳、肉、蛋及禽肉與副產物的特性有概括認識，並可提供往後研習肉品、乳品與蛋品加工之參考。主要內容包括各種畜產食品原料之構造、特性、組成營養價值、影響產品原料之因素以及原料之貯存與處理等。 | | | | | | | | | | | | |
| 262012 | Raw Material Quality and Utilization of Meat | | 2 | | R | | C .M. Chen | | F | | | |
| This course will discuss the types and characteristics of animal product materials, in order to give students a basic insight into the materials of meat, milk, egg, and poultry meat and their by-products, and for the further study of meat, dairy and egg processing technique. The major contents conclude structure, characteristics, and composition of materials, functional properties of raw materials of animal products quality influencing factors, storage and handling of materials, and etc. | | | | | | | | | | | | |
| 262013 | 生物化學 | | 3 | | 必 | | 劉世華 | | 上 | | | |
| 本課程主要提供學生對於生物體內構成物質及其生物化學作用之基本認知，以作為修習營養學、遺傳學等之基礎。課程內容包括：1.生物體之構成物質－包括碳水化合物、蛋白質、脂質等之構造與代謝；2.生物能量之代謝；3.生化反應之催化及控制－酵素；4.遺傳訊息之傳遞－核酸。 | | | | | | | | | | | | |
| 262013 | Biochemistry | | 3 | | R | | S. H. Liu | | F | | | |
| This course offer students the basic concepts of Biochemistry for further studying in nutrition and genetics. The contents include：the structure and metabolism of carbohydrates, proteins and lipids; the metabolism of energy; biochemical reaction catalysis and regulations－enzymes; and genetic control－nucleic acids. | | | | | | | | | | | | |
| 262014 | 生物化學實驗 | | 1 | | 必 | | 劉世華 | | 上 | | | |
| 本課程主要配合生物化學正課提供學生對於生物化學相關實驗之基本操作。課程內容包括： PH值之測定法、緩衝溶液之製備、氨基酸之滴定曲線；2. 蛋白質一般反應、氨基酸與蛋白質之定性分析、蛋白質之定量分析；3. 醣類之定性分析與定量分析。 | | | | | | | | | | | | |
| 262014 | Biochemistry Lab. | | 1 | | R | | S. H. Liu | | F | | | |
| This course is to offer students about the basic practice of biochemistry. The contents of the basic practice were to include： determination of pH values, preparation of buffers, titration curve of amino acids; general reactions of proteins, qualitative and quantitative determination of amino acids and proteins; and qualitative and quantitative determination of carbohydrates. | | | | | | | | | | | | |
| 262015 | 乳蛋品原料與利用 | | 2 | | 必 | | 林美貞 | | 上 | | | |
| 本課程介紹畜產品加工利用的方式與種類，使學生對乳、蛋與副產物利用有概括認識，並可提供往後研習乳品與蛋品加工之參考。主要內容包括各種畜產食品之原料特性、加工原理、以及加工步驟等。 | | | | | | | | | | | | |
| 262015 | Raw Material Quality and Utilization of Milk and Eggs | | 2 | | R | | M. J. Lin | | F | | | |
| This course will discuss the methods and type of animal products utility, in order to give students a basic insight into the meat, milk, egg, and poultry meat and their by-products utilization, and for the further study of meat processing and egg processing technique. The major content concludes animal food on structure and composition, functional properties of raw material of animal products, processing principles and procedures | | | | | | | | | | | | |
| 262016 | 牧場實務實習 | | 2 | | 必 | | 牧場主任 | | 上、下 | | | |
| 本課程之目的在使學生在牧場實務實習中，將所學理論與實際配合，在操作中學習。課程內容包括，畜牧之現在及未來之展望、牧場工作簡介、養豬實習、蛋雞實習、肉雞實習、種雞實習、孵化實習、肉牛實習、乳牛實習、牧草管理、犬隻管理。 | | | | | | | | | | | | |
| 262016 | Practice of Animal Farm | | 2 | | R | | Head of Livestock Farm | | F、S | | | |
| The purpose of the course is to let students match the theory and practice, to reach the goal of training-learning by doing. The following items are included future and past of animal production, introduction of animal farm, practice of swine production, practice of layer production, practice of broiler production, practice of feeder production, practice of hatchery production, practice of beef cattle production, practice of dairy cattle production, management of grassland, management of dogs. | | | | | | | | | | | | |
| 262017 | 動物育種學 | | 3 | | 必 | | 張秀鑾 | | 下 | | | |
| 本課程之目的在解析家畜育種學原理，並介紹各種育種技術於家畜改良計畫之應用。課程內容包括族群基因頻率、簡單與多基因遺傳性狀、選拔原理與應用、配種制度、數量性狀之遺傳模式、遺傳參數估計與應用、生物技術發展與家畜育種之應用。 | | | | | | | | | | | | |
| 262017 | Animal Breeding | | 3 | | R | | H. L. Chang | | S | | | |
| The objectives of this course are to provide an understanding of the principles of animal breeding and to introduce the application of animal breeding techniques in farm animal improvement programs. Material includes gene frequencies in populations, simple-inherited and polygenic traits, selection, mating systems, genetic models for quantitative traits, estimation and application of genetic parameters, development of biotechnology and its application in animal breeding. | | | | | | | | | | | | |
| 262018 | 動物營養學 | | 2 | | 必 | | 謝豪晃 | | 下 | | | |
| 本課程主要討論動物營養學的原理，包括：營養學的發展、動物營養消化生理、飼料的營養組成分、消化率測定、營養需要量測定、營養素的代謝利用過程，包括碳水化合物、脂質、蛋白質、礦物質、維生素及水之代謝；最後並討論營養性疾病及營養知識的應用。 | | | | | | | | | | | | |
| 262018 | Animal Nutrition | | 2 | | R | | H. H. Hsieh | | S | | | |
| This course will discuss the principle and application of animal nutrition. The contents include：the development of nutrition, digestive physiology, the composition of feed, the measurement of digestibility, the metabolism of nutrients；carbohydrates, fats, proteins, minerals, vitamins and water；nutritional deficiency and application of nutritional knowledge. | | | | | | | | | | | | |
| 262019 | 經濟動物繁殖學 | | 2 | | 必 | | 沈朋志、劉世賢 | | 下 | | | | |
| 本課程著重於討論禽畜繁殖問題及新近發展之繁殖技術，包括雌雄種畜生殖機能之評估與改善，繁殖管理之新觀念與方法，生殖性狀之選拔，人工授精與體外授精技術之應用，性別選擇，配子和胚之顯微操作及保存，與胚移置技術等，並以有助於解除緊迫環境下禽畜之繁殖困擾者為優先．修習本課程之學生可藉課堂討論與國內外相關文獻之閱讀以掌握繁殖技術之最新發展，提升改善禽畜繁殖效率之能力。 | | | | | | | | | | | | | |
| 262019 | Reproduction of Farm Animal | | 2 | | R | | P. C. Shen,  S. S. Liu | | S | | | | |
| The objective of this course is to give the students more confidence in their abilities for improving the reproductive efficiency of the livestock. Dealing with the modern concepts and the recent techniques in livestock reproduction, it consists of the following subjects: evaluation and improving of the reproductive functions of the breeding livestock; reproductive management; selection on the reproductive characteristics; methods of sex selection; applications of artificial insemination and in vitro fertilization; micromanipulation and preservation of the gametes and embryos; the technique of embryo transfer; and so on. The topics being put in the priority are those techniques that are capable of being used for restoring the prevalent reproductive failure of the livestock under the environmental stress. For catching up the new developing concepts. | | | | | | | | | | | | | |
| 262020 | | 經濟動物繁殖學實習 | | 1 | | 必 | | 沈朋志、 劉世賢 | | | 下 | | |
| 本實習之目的在配合「經濟動物繁殖學」課程進度，使學生藉由人為之控制提高禽畜繁殖效率，並育成合乎人類所需之經濟動物。課程內容設計以禽畜類別為單位，分別探討其繁殖生理特性、繁殖方法與繁殖管理、人為控制之發情與排卵、人工授精、懷孕診斷、分娩控制、胚移置及縮短世代間距之各種方法。 | | | | | | | | | | | | | |
| 262020 | | Practice of Reproductive of Farm Animal | | 1 | | R | | P.C. Shen,  S. S. Liu | | | S | | |
| Objectives of this course are: 1) increasing reproductive efficiency by artificial control, 2) cropping desired economic animal. Class is arranged by animal species. Topics include the characteristics of reproductive physiology and management, artificial control of estrus, ovulation, and insemination, pregnancy diagnosis, control of parturition, reducing calving interval and embryo transfer. | | | | | | | | | | | | | |
| 262021 | 家禽飼養管理 | | 1 | | 必 | | 謝豪晃 | | 上 | | | | |
| 本課程介紹家禽飼養管理之理論與實務作業技術，包括：家禽品種，種蛋經營，孵化作業，育雛及一般飼養管理，雞舍與設備操作，疾病防治與產品屠宰、包裝及銷售等事務，使學生對家禽產業之整合，生產現況與未來發展有全盤之認識。 | | | | | | | | | | | | | |
| 262021 | Poultry Feeding and Management | | 1 | | R | | H. H. Hsieh | | F | | | | |
| The objective of this course is to introduce the theory and practical operation technique of poultry to the students. The contents include：breeds and students of poultry, management of breeders, hatching operation, brooding and rearing, houses and equipment operation, disease control, processing and marketing products . | | | | | | | | | | | | | |
| 262022 | 家禽飼養管理實習 | | 1 | | 必 | | 謝豪晃 | | 上 | | | | |
| 本課程實習內容主要配合「家禽飼養管理」課程，使學生實際進行生產過程所需要之操作訓練，包括：種蛋之處理、孵化技術、飼養試驗、配合課程之需要邀請現場人員作專題研討、並參觀實習，包括：自動化飼養系統、屠宰作業、雞蛋洗選包裝等，使學生充分瞭解家禽生產之作業技術。 | | | | | | | | | | | | | |
| 262022 | Practice of Poultry Feeding and Management | | 1 | | R | | H. H. Hsieh | | F | | | | |
| This practice course is associated with the poultry productive technique to enforce the students on the skill and technique part through field practice. Learning by doing is the basic concept of technique education. In this course students are allocated into groups to operate the whole process for poultry production, include：hatching eggs operations, hatchery technique and feeding trials. In addition there will be seminars and direct discussion with industry people, field trip to commercial farm processing plant, etc, Through this practice course students will get a comprehensive knowledge of poultry production. | | | | | | | | | | | | | |
| 262023 | 豬隻飼養管理 | | 1 | | 必 | | 翁瑞奇 | | 上 | | | | |
| 本課程目的在於介紹台灣高溫多濕的環境下，養豬事業之成就與豐富之經驗以及國內外養豬業之先進技術與科學知識。其內容包括豬隻生理解剖、遺傳育種、品種選拔與改良、生物技術與生殖、營養與飼料、飼養管理、環境與污染控制、經濟經營規模與市場產銷等知識，再配合實際操作，使學生參與養豬現場之訓練，以期成為務實之經營者。 | | | | | | | | | | | | | |
| 262023 | Pig Feeding and Management | | 1 | | R | | R.C. Weng | | F | | | | |
| The purpose of this course is to introduce a technical basis and rich experience for successful production of swine industry under the high temperature and high moisture environments in Taiwan, and to provide the current new knowledge and technology of the world’s swine science. The contents of this course advance in swine: physiology and anatomy, genetics and breeding, breeds selection and improvement, biotechnology and reproduction, feeds and nutrition, feeding and management, environment and waste control, economic size and marketing and so on. The practical training on-farm can be enhanced in this course. | | | | | | | | | | | | | |
| 262024 | 豬隻飼養管理實習 | | 1 | | 必 | | 翁瑞奇 | | 上 | | | | |
| 實習內容在使學生實際從事養豬技術、規劃及經營之訓練，以造就成為真正養豬經營之專業人才，諸如品種與選種評分、豬場清洗與消毒、分娩介助、發情觀察與配種、豬場紀錄規劃、豬舍建築設計與豬舍配置規劃、飼料需求量估計、飼養成本之概估、經濟經營規模擬定、投資報酬之分析、市場供需資料之搜集及總生產成本與收益之計算與分析。 | | | | | | | | | | | | | |
| 262024 | Practice of Pig Feeding and Management | | 1 | | R | | R.C. Weng | | F | | | | |
| The contents of swine productive practice are to provide a training of students on technique, planning and management of swine production. It contains: swine breeding and selection, washing and sanitation of pig house, farrowing nurse, estrus observation and service, productive record, design and scaling of growing-finishing house and farrowing house, requirements of feeds, feeding cost, the decision of economic size, the analysis of investment and margin, collecting the information of the supply and demand on market, calculation and analysis of the total cost of production and total revenue. | | | | | | | | | | | | | |
| 262025 | 禽畜保健 | | 2 | | 必 | | 獸醫系 | | 下 | | | | |
| 本課程目的在使學生瞭解重要禽畜疾病之理論與實際及簡單外科手術。其中包括有關傳染性、內科性及繁殖性疾病之控制、消毒及預防措施，並同時教導學生有關外傷性之簡單外科處理技術。期能使學生瞭解疾病之發生、處理及預防方法。 | | | | | | | | | | | | | |
| 262025 | Livestock Health | | 2 | | R | | Dept. of Veterinary | | S | | | | |
| This course will introduce students the theory of important domestic animal diseases and simple surgical techniques. It provides students general knowledge of disease control; aseptic procedure; and prevention of infectious diseases, internal diseases and reproductive disorder. It also teaches students basic surgical techniques for wounds care. Students are expected to understand the knowledge of diseases occurrence, and the methods of medical treatment and disease prevention. | | | | | | | | | | | | | |
| 262026 | 禽畜保健實習 | | 1 | | 必 | | 獸醫系 | | 下 | | | | |
| 本課程配合正課，著重於疾病診斷與預防，主要在提供學生對於禽畜傳染性、內科性及繁殖障礙性疾病之控制、消毒及預防等基本概念與操作，並教導簡單之外科縫合技術。期能使學生瞭解疾病之處理及預防之實際處理方式。 | | | | | | | | | | | | | |
| 262026 | Practice of Livestock Health | | 1 | | R | | Dept. of Veterinary | | S | | | | |
| This course introduces the method of diseases diagnosis and prevention. It provides the basic concepts and operative practices in diseases control; aseptic procedure; and prevention in animal infection diseases, internal diseases and reproductive disorder. It also teaches students basic and practical surgical techniques. | | | | | | | | | | | | | |
| 262027 | 乳用家畜飼養管理 | | 1 | | 必 | | 吳錫勳 | | 下 | | | | |
| 本課程主要著重於熱帶地區高溫多濕環境下乳用家畜飼養管理之理論與實務，對於擠乳管理、電腦管理系統，完全混合日糧飼養系統，畜舍降溫裝置，最新反芻營養科技資料以及乳用家畜較常發生之疾病與其防治加以闡述，以訓練學生對於經營農場更具信心。 | | | | | | | | | | | | | |
| 262027 | Dairy Livestock Feeding and Management | | 1 | | R | | H. H. Wu | | S | | | | |
| This course lays special emphasis on the feeding and management of dairy livestock in the high temperature and humid environment. This includes milking management, computer management system, TMR feeding system, house cooling equipment, recent ruminant nutrition knowledge, disease and control of dairy cows, this will give the students more confidence in running the dairy farm. | | | | | | | | | | | | | |
| 262028 | 乳用家畜飼養管理實習 | | 1 | | 必 | | 吳錫勳 | | 下 | | | | |
| 本課程之內容旨在讓學生熟悉乳用家畜管理技術，例如人工授精與妊娠診斷，公牛精液選擇，擠奶機功能檢測，血液檢查，粗料乾物質快速測定；營養代謝性疾病之認識與檢測；並鼓勵學生多與民間乳牛場接觸，以發掘現存之問題與設法解決達到理論與實際之配合。 | | | | | | | | | | | | | |
| 262028 | Practice of Feeding and Management in Dairy Livestock | | 1 | | R | | H. H. Wu | | S | | | | |
| The purpose of this course is to give the students more familiar with the management tool of dairy livestock. This includes artificial insemination and pregnancy diagnosis, bull frozen semen selection, milking machine function testing, blood test of dairy cow, rapid testing of roughage dry matter contents, nutritional metabolic disorders. The students were encouraged to visit private dairy farm so that they could learn more problems and try to find solutions | | | | | | | | | | | | | |
| 262029 | 校外實習 | | 2 | | 必 | | 全系教師 | | | 上 | | | |
| 本課程目的在，讓學生於校內學習後，對產業的運作有初步的認識與瞭解後。進而實際投入產業的運作，更進一步讓學理與實際的配合，更能充分瞭解的全程實際運作，時所遇到的問題與結局方法的訂定。作為日後投入業界的基礎訓練。 | | | | | | | | | | | | | |
| 262029 | Practice of Industrial Training | | 2 | | R | | Faculties | | | F | | | |
| This course aims to enable students to learn at school after the initial operation of the industry\'s awareness and understanding later. And thus the operation of actual investment industry, further to the theoretical and practical cooperation, better understanding of the actual operation of the whole, the problems encountered when the method set with the outcome. The basis for future investment in industry training. | | | | | | | | | | | | | |
| 262030 | 畜產產業實習 | | 7 | | 必 | | 全系教師 | | 上 | | | | |
| 為落實動物科學與畜產系學生對整體畜產經營實務之技術，藉以整合在校所學各科目之連貫性，安排一學期之時間至產業界現場進行完整的實務訓練，而開設此一課程。本課程之安排，於事先經系務會議篩選具規模且經營上軌有制度之畜產企業單位，包括公、民營機構，雙方取得共識，安排必要之實習項目與進度，於學期期間，共實習4個半月，於實習期間完成預定進度，繳交報告，並經實習單位及系主任共同考核合格者，始給予學分。 | | | | | | | | | | | | | |
| 262030 | Practice of Livestock Enterprises | | 7 | | R | | Faculties | | F | | | | |
| This course is designed to offer the students a link to the livestock industry and to enforce their ability in operating an integrate livestock production unit. Students in this course will be appointed to some selected enterprises or companies with livestock production units for four and a half months of training program. Students who complete the practical training program with writing reports and pass the evaluation by both the department and the counterpart will be granted the credits. | | | | | | | | | | | | | |
| 262031 | 現場實務實習 | | 7 | | 必 | | 全系教師 | | 上 | | | | |
| 本課程由系內教師輔導學生選定特定牧場實作及試驗題目，以進行為期4個半月的現場操作技術。於學習期間完成預定進度，繳交報告，並經系上老師考核合格者，始給予學分。 | | | | | | | | | | | | | |
| 262031 | Practice of Animal Farm | | 7 | | R | | Faculties | | F | | | | |
| The students will be assigned to complete a special topic in ranching for a period of four and a half months. Students who complete the practical training program with writing reports and pass the evaluation by the department will be granted the credits. | | | | | | | | | | | | | |
| 262032 | 專題討論 | | 1 | | 必 | | 全系教師 | | 下 | | | | |
| 本課程旨訓練研究生對於與畜產科學或論文有關的題目，經由資料之收集、研讀與彙整，令學生從而習得相關之專業知識，並由之獲得資料之分析、歸納與邏輯思考、試驗設計與統計、數據分析與統整之能力。並藉由書面報告、口頭發表及討論之歷練，以培養學生之論文撰寫能力及口頭表達能力。 | | | | | | | | | | | | | |
| 262032 | Seminar | | 1 | | R | | Faculties | | S | | | | |
| The purpose of this course is to give graduate students the trainings on searching information, reviewing references related to animal science or their research topics, therefore, the abilities on logical thinking, experimental design, data collection and analysis, results discussion. Students are required to select a topic in the field of animal science or that related to their thesis. Students must give oral presentation and dissertation. | | | | | | | | | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 專業選修科目 Elective Courses | | | | | |
| 262033 | 畜產品營養與健康 | 2 | 選 | 陳志銘 | 上 |
| 畜產品包括乳品、肉品、蛋品是人類優良的食物來源之ㄧ，尤其是人類的主要蛋白質來源，對人類健康有舉足輕重的影響。本課程主要介紹乳品、肉品、蛋品之主要營養成分：水分、蛋白質、脂肪、維他命、礦物質及其他微量元素，還包括部分重要機能性成分；並進一步說明這些營養素對人體健康的優點、貢獻及影響；尤其是其機能性保健成份對人體健康與保健的效果及加工時應注意事項。其次，也會探討攝食畜產品的正確觀念，使大眾可以健康、安心地享受美食。 | | | | | |
| 262033 | Nutrition and Health of Animal | 2 | E | C. M. Chen | Ｆ |
| Animal products, including milk, meat and egg products, are one of the major excellent food sources, especially, those are major protein resources of human being, and are quite important for human health. This course mainly introduces the major components, including moisture, proteins, fats, vitamins, minerals and other microingredients, milk, meat and egg, as well some vital functional ingredients of them. Furthermore, it also illustrates the merits, contribution and effects of those nutrients for human health. Especially, it focuses the human health and functional efficiency of those functional ingredients and the matters needing attention during the processing procedures. The next, this course investigates the correct concept to intake animal products, and make the people can feeling at ease to enjoy the feats in healthy way. | | | | | |
| 262034 | 動物行為 | 2 | 選 | 翁瑞奇 | 上 |
| 本課程在使學生瞭解動物行為學之一般原理，課程內容包括：什麼是行為、適應性行為、簡單行為、生物節奏與時鐘、訊號刺激、行為的基因基礎、生理準備、學習、鉻印、遷移、社會行為、溝通、統治階級、領域、性行為、轉移動作及社會生物學等。 | | | | | |
| 262034 | Animal Behavior | 2 | E | R. C. Weng | F |
| This course is on introduction to the study of general concepts of animal behavior. It is offered to cover topics such as what is behavior?; behavior as adaptation; simple behavior; biological rhythms; sign stimuli; the genetic; physiological readiness; learning; imprinting; migration; social behavior; communication; dominance; territoriality; sexual behavior; displacement activity; and sociobiology. | | | | | |
| 262035 | 畜產機械 | 2 | 選 | 生機系 | 上 |
| 本課程之目的為介紹畜產機械之種類構造原理利用與維護，其內容包括緒論、機械原理、牧草地之造成機械、畜舍建築及管理利用機械、放牧利用之設施與機械、畜產品加工利用與機械及畜舍廢棄物處理與利用機械等。 | | | | | |
| 262035 | Animal Production Machinery | 2 | E | Dept. of Biomechatronics Engineering | F |
| The subject of this course contains structure utilization and maintenance of animal husbandry machinery. Main topics include introduction, theory of machines, reclamation machinery for pasture, animal house management machines, pasture machines and installations, equipment for animal products, and equipment for livestock wastes. | | | | | |
| 262036 | 畜產機械實習 | 1 | 選 | 生機系 | 上 |
| 本課程為配合正課實際需要，其重點為注重操作管理及維護保養以達到理論與實際技術相配合，其內容包括汽柴油引擎之維護保養與實習、曳引機駕駛維護保養與實習、牧草機操作機械保養與實習、畜舍建築及利用機械操作實習、自動給飼機械之操作及保養實習、畜產品加工利用機械實習及畜舍廢棄物處理及利用機械操作保養實習。 | | | | | |
| 262036 | Practice of Animal Production Machinery | 1 | E | Dept. of Biomechatronics Engineering | F |
| This practice course provides essential technology training for students to operate, and maintenance for animal husbandry machinery. Main topics include training to skill of operate and maintenance for diesel engine, training to skill of operate and maintenance for tractor, forage harvesting operate and maintenance, animal house management machines, automatic feeding machine, equipment for animal products, and equipment for livestock waste. | | | | | |
| 262037 | 畜產生物多樣性 | 2 | 選 | 張秀鑾 | 上 |
| 本課程旨在介紹生物多樣性維護之理論基礎、種原基因保存、管理與應用機制，以達到動物遺傳資源永續利用之目的。課程內容包括台灣畜產資源簡介、畜產動物活體與離體保存法、國內外畜產遺傳資源交流國外機制、國際條約與國內相關法規等。 | | | | | |
| 262037 | Biodiversity in Farm Animal | 2 | E | H. L. Chang | F |
| The objectives of this course are to state the fundamental theory of biodiversity maintenance, germplasm preservation, management and application mechanism for sustainable utilization of farm animal. Material includes an introduction of Taiwan farm animal genetic resources, both in- and ex-situ conservation protocols, and exchange mechanism of genetic resources for local and global usages, as well as acts, rules and regulations applied to nation and international purpose. | | | | | |
| 262038 | 安全畜產品生產導論 | 2 | 選 | 陳志銘 | 上 |
| 本課程旨在探討抗生素造成之問題及取代抗菌藥物之畜產品生產。主要內容包括無藥物殘留畜產品介紹、取代抗菌藥物之物質與安全性畜產品、及無菌無污染之畜產品加工製成。 | | | | | |
| 262038 | Introduction to safe Animal Production | 2 | E | C. M. Chen | F |
| Current topics in safe animal production will be discussed, with special emphasis on the problems of antibiotic residues, the various species of antibiotic replacers, and the production of free contamination safe animal products. | | | | | |
| 262039 | 有機化學 | 3 | 選 | 環工系 | 下 |
| 本課程乃注重於重要之碳合物 (包括烷、醇、醚、有機鹵化物、芳香族化合物、醛、酮、酸、酯及胺) 之官能基反應，各類之合成方法，相互間之關係以及其實際之應用。 | | | | | |
| 262039 | Organic Chemistry | 3 | E | Dept. of Environmental Science and Engineering | S |
| A systematic study of the reaction in each functional group in the important classes of carbon compounds (alkane, alcohol, ether, organic halides, aromatic compounds, aldehyde, ketone, carboxylic acids, ester and amine) the methods of the synthesis of each compound, the relationship and it’s uses in each compound. | | | | | |
| 262040 | 有機化學實習 | 1 | 選 | 環工系 | 下 |
| 本課程係為非提供主修有機化學之學生而開設，其促使學生得以熟悉一般有機化學之實驗技術，並從實驗中增加對教材之瞭解。本實驗除授以物理常之測定外，並依各官能基之不同之化合物逐一實驗：烷、炔、苯、有機鹵化物、醇、醚、酮、羧酸衍生物及胺等，每一實驗之重點是不同之官能基所產生的不同化學反應的試驗。 | | | | | |
| 262040 | Practice of Organic Chemistry | 1 | E | Dept. of Environmental Science and Engineering | S |
| This course is designed in conjunction with the lecture of organic chemistry for the students that are not major in organic chemistry. It intends to provide students a profound understanding of subject, matter from laboratory work and familiar with basic laboratory technique. In addition to the measurements of physical constants, the course is carried out in a functional approach: alkanes, alkenes, alkynes, benzenes, organic halides, alcohols, ethers, aldehydes, ketones, carboxylic acids and the derivatives of carboxylic acid, amines. Each experiment will emphasize on the common chemical properties ascribed to functional groups. | | | | | |
| 262041 | 動物福祉 | 2 | 選 | 翁瑞奇 | 下 |
| 本課程之目的在使學生能深刻瞭解動物福利，以為從事畜牧生產之基礎。課程內容包括：動物福利定義、緊迫對動物的影響、動物福利和產業之關係、各種家畜禽動物之福利。 | | | | | |
| 262041 | Animal Welfare | 2 | E | R. C. Weng | S |
| The arrangement of this course is to let the students understand the knowledge about animal welfare. The following topics included in the course: definition of animal welfare, the influence of stress on farm animals, animal welfare, animal welfare and industry, and specific topic of animal welfare on different farm animals. | | | | | |
| 262042 | 農業政策與法規 | 2 | 選 | 張秀鑾 | 下 |
| 本課程旨在介紹農業政策的意義、內容與相關法規，培養學生具備農業動物資源政策分析與援用相關法規之能力。課程內容包括農業政策、畜牧法規與施行細則、農業資源管理、畜產品生產與廢棄物資源化等有關法令，藉以充實法律常識、培育動物科技人員兼具專業與法律素養。 | | | | | |
| 262042 | Agricultural Policy and Laws | 2 | E | H. L. Chang | S |
| The objective of this course is to introduce the concept and contents of agricultural policy, laws and regulations related to animal industry, and thus provide students with the ability of invoking an article of law or regulations. Material includes current agricultural policy, animal industry act and the enforcement rules, rules or regulations for management of agricultural resources, and for animal production as well as for waste treatment law with promoting in both reducing waste and recycling resources. | | | | | |
| 262043 | 畜產統計入門 | 2 | 選 | 張秀鑾 | 下 |
| 本課程旨在介紹常用於資料分析之統計基礎原理，課程內容包括矩陣代數複習、二次型分布、迴歸、變方分析與統計模式建立策略等；最終目的在建立學生具備應用SAS商業套裝軟體，進行複雜資料分析與準確地解釋分析結果之能力。 | | | | | |
| 262043 | Understanding Statistical Methods in Animal Science | 2 | E | H. L. Chang | S |
| The course provides an introduction to fundamental theory of the most commonly used linear models in statistical data analysis. Review of matrix algebra, distribution of quadratic forms, regression, and analysis of variance are covered, as well as statistical model-building strategies. The final goal is to equip the students with the ability to correctly apply the SAS commercial statistical packages to analyze the complex data and to interpret the results accurately. | | | | | |
| 262044 | 畜產檢驗與分析 | 2 | 選 | 吳錫勳 | 上 |
| 本課程之設計主要在介紹正確的分析方法，儀器的正確使用，以減少分析結果之誤差，配合畜產品之品質檢查方法及配合畜產品製造流程之品管現代技術，內容包括：一般成分分析及精密儀器的基本操作、方法、原理和應用等。 | | | | | |
| 262044 | Analysis of Animal Products | 2 | E | H. H. Wu | F |
| This course is designed to give the students to use the instruments correctly and accurately, to reduce the analytical error, to assist the students to understand the modern technique about the detection of the ingredients and the quality control of the formula feeds. The contents include basic operation of proximate composition analysis, and methods, principles and applications of instrument analysis for animal products. | | | | | |
| 262045 | 畜產檢驗與分析實習 | 1 | 選 | 吳錫勳 | 上 |
| 本實習內容主要是配合「畜產品檢驗與分析」課程，使學生實際進行所需要之操作訓練；其內容包括：實驗室的安全認識、採樣及分析基本訓練、畜產品各項分析的分析方法及儀器操作等。 | | | | | |
| 262045 | Practice of Animal Products Analysis | 1 | E | H. H. Wu | F |
| This practice course is in associate with the course of analysis of animal products to provide the training to students on this technique. The contents include the safety of laboratory, sampling and basic operation of analysis, the methods that may be employed for the detection and determination of animal products. | | | | | |
| 262046 | 動物內分泌學 | 2 | 選 | 沈朋志 | 上 |
| 本課程主要講授家畜內分泌腺（組織）所分泌的激素種類、調節作用機轉、下視丘和腦下腺間之相互調控，及各激素的生理機能，本課程將有助於學生對激素整體了解，以培養更深入研究內分泌之能力。 | | | | | |
| 262046 | Animal Endocrinology | 2 | E | P. C. Shen | F |
| This course is designed for study the classes of hormones, the mechanisms of hormone action, the control of hypothalamic-hypophyseal hormone and the physiological roles of the endocrine glands (tissues) in domestic animal. After complete this course, students can understand the hormone functions and can learn advance topic easily. | | | | | |
| 262047 | 禽畜環境生理學 | 2 | 選 | 謝豪晃 | 上 |
| 本課程主要討論環境因素、氣候條件以及動物的各種生理控制機構；進而探討環境對動物所造成的影響，以及克服的方法；從動物行為、飼養管理以及畜舍設計等方面來提高畜牧生產的效率。台灣地處亞熱帶，每年長達6～7個月的時間處在高溫高濕的緊迫環境，如何克服環境緊迫所造成的不良影響，提高畜牧生產，實為一重要課題。 | | | | | |
| 262047 | Environmental Physiology of Domestic Animals | 2 | E | H. H. Hsieh | F |
| This course will discuss the environmental factors, climatic conditions and physiological mechanisms of domestic animals, and further investigate the effects of environments on the performance of animals. The important object of this course is to evaluate some methods to overcome the animal production problems due to the warm humid environments in Taiwan. | | | | | |
| 262048 | 動物細胞生物學 | 2 | 選 | 余祺 | 上 |
| 本課程主要介紹動物細胞結構、生理與功能。內容包括細胞膜運輸、信息傳導、細胞能量轉換、細胞骨架、細胞週期及腫瘤發生等。 | | | | | |
| 262048 | Animal Cell Biology | 2 | E | C. Yu | F |
| The aim of this course will introduce the basic structure; physiology and function of animal cells. The contents include membrane structure, membrane transport, signal transduction, energy flow in cells, energy metabolism, cell organelles, cytoskeleton, cell cycle, and tumor development. | | | | | |
| 262049 | 營養免疫學 | 2 | 選 | 余祺 | 上 |
| 本課程主要提供學生學習一般的免疫學概論及營養物質對動物免疫的影響。課程內容將介紹免疫系統之作用，包括免疫細胞的種類與生成機制，介紹抗原、半抗原與抗體之定義與應用，免疫系統之基本運作機制，免疫球蛋白之種類與結構，免疫細胞之功能以及營養免疫相關之應用。 | | | | | |
| 262049 | Nutritional Immunology | 2 | E | C. Yu | F |
| General concepts on Immunology and the interaction with nutrition and immunology will be introduced in this course, including different types of immune cells and their synthesis, definitions of antigens, haptens and antibodies and their applications, the basic mechanisms in regulating immune responses, types of immunoglobulins and their structures, the functions of different immune cells and the applications of nutrition immunology. | | | | | |
| 262050 | 族群遺傳學導論 | 2 | 選 | 張秀鑾 | 上 |
| 本課程旨在介紹族群遺傳學內涵與數學理論之應用，課程內容主要包括體染色體與性染色體基因座基因頻率估算、哈溫原理、配種系統、親屬間關係與改變基因頻率之壓力。 | | | | | |
| 262050 | Introduction to Population Genetics | 2 | E | H. L. Chang | F |
| The aims of this course are to introduce the insight of population genetics and to state the application of mathematical theory in this aspect. Course contents will include estimation of allele frequency for autosomal and X-chromosomal loci, Hardy-Weinberg principle, systems of mating, relationships between relatives, and forces that change allele frequency. | | | | | |
| 262051 | 飼料製造技術 | 2 | 選 | 謝豪晃 | 上 |
| 本課程乃教授禽畜及魚類完全配合飼料製造工業之現代技術，內容包括：單味飼料之生產方式與一般生產過程之影響因素、飼料預混劑之製造技術、配合飼料之製造包括設計、收料、混合、製粒、包裝儲存與糖蜜、油脂等液體原料添加之有關技術、養魚飼料之製造技術等。 | | | | | |
| 262051 | Feed Manufacture Technology | 2 | E | H. H. Hsieh | F |
| The objective of this course is to acquaint the students with the modern technique about the formula feed industry of the livestock, poultry and fish. The course contains the processing of the ingredient feed and the influent factors about general processing problems; processing and adding of feed premix; the engineering of formula feed, including design, receiving, grinding, mixing, pelleting, bagging, weighing, loading and the technique of addition of liquid ingredients; and the technique of manufacturing of the fish formula feeds. | | | | | |
| 262052 | 飼料製造技術實習 | 1 | 選 | 謝豪晃 | 上 |
| 配合『飼料製造技術』課程之講授內容，作實地之見習與操作，藉予提高該課程之教學效果，內容包括：單味原料製造方法之見習、參觀各單味原料工廠，比較不同生產方法之結果、配合飼料工廠製造技術見習及操作。 | | | | | |
| 262052 | Practice of Feed Manufacture Technology | 1 | E | H. H. Hsieh | F |
| In conjunction with the lectures of the course of feed manufacturing technology, students are provided with the opportunity for the exercise and practical operation of the feed manufacturing technology, to enhance the effects of this course. The exercise of the feed manufacturing technology covers observation the processing of the various feed ingredients, visit feed plants to compare the results of different processes of feed ingredient, and explanation and operation of the process on the formula feed manufacturing. | | | | | |
| 262053 | 肉用草食家畜飼養管理 | 2 | 選 | 吳錫勳 | 下 |
| 本課程主要討論兔及山羊等草食肉用家畜之飼養管理。內容包括品種特性、營養與飼養、管理與設備、遺傳育種與繁殖技術、疾病防治與產品利用，畜舍規劃與市場經營等主題，並特別強調在本省地區之特殊環境下，如何經由學理與技術之應用，以調適經營及管理方法，提昇生產效率。 | | | | | |
| 262053 | Meat-production Ruminant Farm Animal Feeding and Management | 2 | E | H. H. Wu | S |
| The objective of this course is to give the students more confidence in their abilities for meat-production herbivorous farm animals. The major concepts of this course include: major breeds of rabbits and goats, their characteristics, principles of genetics, nutrition, feeds and feeding, herd and reproductive managements, reproductive techniques, disease control, marketing, and management of products. The topics being put in the priority are those factors and techniques that are capable of being used for improving the efficiency of rabbits and goats production under the adverse environmental conditions. | | | | | |
| 262054 | 芻料作物及其調製 | 2 | 選 | 吳錫勳 | 下 |
| 本課程主要在介紹熱帶芻料的生產利用，就土壤、作物和動物生產之相關問題進行探討，包括芻料的生長環境、芻料種類的選擇、性狀、栽培管理（如施肥、雜草防治）、芻料的收穫利用（如青割、乾草、半乾青儲料、青儲料）及草地的維護（如放牧頭數、放牧方式）並就台灣現有芻料的生產利用加以討論，以達學以致用之效果。 | | | | | |
| 262054 | Forage Production and Utilization | 2 | E | H. H. Wu | S |
| This course is designed to discuss the production and utilization of forages. The objectives of this course are to offer the relationships among soil, forages and animal production, including: climatic factors in forage production; characters, culture, management (e.g. fertilization, weed control) and utilization of forages (e.g. silage, hay, haylage, silage); management of improved pastures (e.g. stocking rate, systems of grazing management). In addition, topics of forages in Taiwan will also be discussed so that the students will become aware of forage, application for further of livestock production. | | | | | |
| 262055 | 飼料分析與品管 | 2 | 選 | 黃自毅 | 下 |
| 本課程之設計主要在介紹正確的分析方法，儀器的正確使用，以減少分析結果之誤差，配合飼料所需單位原料之品質檢查方法及配合飼料製造流程之品管現代技術，內容包括：飼料分析的基本操作、飼料分析的方法、原理和應用、單位原料之品質管理、配合飼料之品質管理、添加物之品質管理、飼料製造之品質管理。 | | | | | |
| 262055 | Feed Analysis and Quality Control | 2 | E | T. Y. Huang | S |
| This practice course is in associate with the course of feed analysis and quality control to provide the training to students on this technique. The contents include the safety of laboratory, sampling and basic operation of analysis, the methods that may be employed for the detection and determination of feeds, quality control of feedstuffs, and quality control of feeds plants in manufactured processing. | | | | | |
| 262056 | 飼料分析與品管實習 | 1 | 選 | 黃自毅 | 下 |
| 本實習內容主要是配合「飼料分析與品管技術」課程，使學生實際進行所需要之操作訓練；其內容包括：實驗室的安全認識、採樣及分析基本訓練、飼料各項分析的分析方法及操作、各種飼料原料之品質鑑定、飼料原料摻雜物之檢出。 | | | | | |
| 262056 | Practice of Feed Analysis and Quality Control | 1 | E | T. Y. Huang | S |
| This practice course is in associate with the course of feed analysis and quality control to provide the training to students on this technique. The contents include the safety of laboratory, sampling and basic operation of analysis, the methods that may be employed for the detection and determination of feeds, quality control of feedstuffs, and quality control of feeds plants in manufactured processing. | | | | | |
| 262057 | 禽畜副產物利用 | 2 | 選 | 陳志銘 | 下 |
| 本課程之主要內容包含：禽畜副產物之種類、生產量、價值與特性，腸衣、脂肪、明膠、血液、毛皮及羽毛、乳品副產物及蛋品副產物等之處理與應用，及禽畜副產物在食品加工、工業與醫學上之應用 | | | | | |
| 262057 | Utilization of Animal and Poultry | 2 | E | C. M. Chen | S |
| The major contents in this course include kinds, production quantity, values, and characteristics of animal and poultry byproducts. In addition, many byproducts, including casing, lipids, gelatin, blood, father, dairy, and egg byproducts will also be addressed. Finally, uses of these byproducts in food processing, industries, and medical application will also be included. | | | | | |
| 262058 | 蛋品加工 | 2 | 選 | 黃自毅 | 下 |
| 本課程介紹蛋品加工有關技術之學理與所使用設備的原理。重點將著重於使學生暸解各種加工技術，包括蛋品之濃縮、蒸煮、乾燥、酸鹼值改變、添加物使用與蛋品保存等之原理與應用。 | | | | | |
| 262058 | Processing of Egg Products | 2 | E | T. Y. Huang | S |
| This course introduces technologies related to egg processing and principles of the equipments and facilities related. The purpose of this course is educating students with knowledge include condensation, steam cooking, drying, pH adjustment, food additives addition, egg product preservation, and etc. | | | | | |
| 262059 | 蛋品加工實習 | 1 | 選 | 黃自毅 | 下 |
| 本課程配合蛋品加工技術之正課，使得學生能在暸解蛋品加工技術有關之原理及設備的功能外，更能實際正確地操作各項設備，以製作各項產品，包括: 皮蛋、鹹蛋、蒸蛋、三色蛋、長蛋、滷蛋、焗蛋等。 | | | | | |
| 262059 | Practice of Egg Products | 21 | E | T. Y. Huang | S |
| In this course, it educates students how to handling the egg processing equipments correctly. Moreover, students will apply these equipments to produce several egg products, including preserved eggs, salty eggs, steaming eggs, three-colored eggs, long eggs and other egg products. | | | | | |
| 262060 | 數量遺傳學導論 | 2 | 選 | 張秀鑾 | 下 |
| 本課程旨在介紹數量遺傳學基本原理與解說多基因性狀及其在世代間之遺傳特性，內容主要包括交替基因介紹、基因型與基因頻率估算、具上位作用之逢機配種、親屬間相似性、路徑係數、重複勢、遺傳變異率，以及單性狀與多性狀選拔等。 | | | | | |
| 262060 | Introduction to Quantitative Genetics | 2 | E | H. L. Chang | S |
| The objectives of this course are to provide an introduction to the principles of quantitative genetics and to state how the polygenic traits being characterized and transmitted between generations. Contents mainly cover allelic, genotypic and gametic frequencies, random mating with epistasis, covariances between relatives, path coefficient analysis, repeatability, heritability, selection, correlated characteristics, and selection more than one characteristic. | | | | | |
| 262061 | 單胃動物營養與飼料 | 2 | 選 | 謝豪晃 | 上 |
| 本課程係針對單胃動物之營養需要，給予飼料之種類，及特性作較深入之闡述，其內容包括：肉豬各生長階段之營養需要、種豬之營養需要、養豬飼料之種類及特性、馬不同用途之營養需要、馬飼料之特性。 | | | | | |
| 262061 | Monogastric Animal Nutrition and Feed | 2 | E | H. H. Hsieh | F |
| The object of this course is to give the students more deep descriptions on the nutrition requirements and feed kinds and characteristics of the monogastric animals. The course includes the nutrition requirements for swine in different growing stage, the nutrition requirements for the sow and boar, the kinds and characteristics of swine feed, the nutrition requirements for the horses of different uses, and the kinds and characteristics of horses. | | | | | |
| 262062 | 馬學 | 2 | 選 | 劉炳燦 | 上 |
| 本課程係討論馬的飼養及管理有關的各項問題，內容包括有養馬事業的歷史與發展、馬的鑑別與選拔、品種與類型、營養與飼料、日常照料、行為與調教、馬廄管理、馬的放牧及衛生管理。 | | | | | |
| 262062 | Equine Science | 2 | E | B. T. Liu | F |
| The course will deal with the feeding and management of horse. It will cover the history and development of the horses industry, selecting and judging horses, breeds and types of horses, nutrition and feeds for horses, feeding and management, horse behavior and training, pasture for horses, and horses health, disease prevention, and parasite control. | | | | | |
| 262063 | 馬學實習 | 1 | 選 | 劉炳燦 | 上 |
| 本實習課程旨在探討馬的習性、飼養管理及御馬，並使學生習得馬飼養、清潔、修蹄、騎乘之基本技能。主要課程內容包括：馬的習性、馬舍管理、馬之調教清潔、馬蹄保護及騎乘。 | | | | | |
| 262063 | Practice of Equine Science | 1 | E | B. T. Liu | F |
| The purpose of this course is to give students more familiar with horse behavior, management, horse training, and horse driving. It contains: horse behavior and training, care and management, herd health, hoof care, and the skill of horses riding. | | | | | |
| 262064 | 乳品加工 | 2 | 選 | 林美貞 | 上 |
| 本課程講授乳之種類及成分、原料乳之品質、原料配合、加工原理、加工製程、品質管制及貯藏。乳製品種類包涵鮮乳、調味乳、乳粉、煉乳、發酵乳、冰淇淋、乾酪、乳酪及乳油。 | | | | | |
| 262064 | Processing of Dairy Products | 2 | E | M. J. Lin | F |
| This course includes milk compositions, raw material quality, raw material recipes of dairy products, chemical changes of processing, processing scheme, quality control and storage. Major dairy products such as fresh milk, flavored milk, milk powder, concentrated milk, fermented milk, ice cream, cheese, butter and cream will be included. | | | | | |
| 262065 | 乳品加工實習 | 1 | 選 | 林美貞 | 上 |
| 本實習配合乳品技術之課程，使學生熟悉乳品之製程及品質控制。內容包括生乳及鮮乳檢驗、乳成分及微生物檢驗、鮮乳及調味乳製造、發酵乳製造、冰淇淋製造及乾酪製造。 | | | | | |
| 262065 | Practice of Dairy Products | 1 | E | M. J. Lin | F |
| he objective of this course is to give students practical training on formula, processing and quality control of dairy products. It includes chemical, physical and microbial examinations of raw milk and dairy products, manufactures of fresh milk, flavored milk, fermented milk, ice cream and cheese. | | | | | |
| 262066 | 無特定病原實驗動物飼養與管理 | 2 | 選 | 沈朋志等 | 上 |
| 本課程主要介紹應用於農學及生物醫學之實驗動物的飼養管理及其動物學之基礎特性，以作為研究、治療及實驗之模式系統。課程內容包括實驗動物種類與命名及育種、實驗動物管理標準操作程序；實驗動物飼養環境與設施；實驗動物營養與飼養管理；實驗動物網路資源；實驗動物品質管制；以及實驗動物疾病與人畜共通傳染病等，涵蓋之實驗動物有小鼠、大鼠、倉鼠、天竺鼠、家兔、犬及家畜等，以有助於瞭解實驗動物在農學及生物醫學等領域之科技研發上所扮演之角色與特性。 | | | | | |
| 262066 | Specific Pathogen Free Laboratory Animal Feeding and Management | 2 | E | P. C. Shen et al | F |
| This course provides a concept and introduction to the feeding and management of laboratory animals applied in the research of agriculture and biomedical medicine. It includes the standard operative procedures, environmental control, nutrition and feeding, network resources for laboratory animals, quality control, important zoonosis and health control. | | | | | |
| 262067 | 無特定病原實驗動物飼養與管理實習 | 1 | 選 | 沈朋志等 | 上 |
| 本課程主要介紹應用於農學及生物醫學之實驗動物的飼養管理方法及其實務操作，以作為研究、治療及實驗之模式系統。課程內容包括實驗動物之動物識別與記錄；實驗動物國際認證及標準操作程序編寫；實驗動物之大體解剖操作與生理構造；動情週期及配種觀察；實驗動物之保定、採血、注射與麻醉；實驗動物之健康診斷與治療等，涵蓋之實驗動物有小鼠、大鼠、倉鼠、天竺鼠、家兔、犬及家畜等，以有助於學生習得各種實驗動物之飼養管理技術。 | | | | | |
| 262067 | Practice of Specific Pathogen Free Laboratory Animal Feeding and Management | 1 | E | P. C. Shen et al | F |
| This practical course emphasizes on the technical training about identification, record, recognizance and SOP of the laboratory animals, gross anatomy and physiological function, reproductive cycles and breeding observation, holding, bleeding, injection and anesthesia, health monitoring and simple practice in disease diagnosis and exclusion. | | | | | |
| 262068 | 畜產品品質管理技術 | 2 | 選 | 陳志銘 | 上 |
| 本課程探討生產安全性畜產品之技術，使學生能在日後生產安全性畜產品時，能應用所學相關知識。主要課程內容包括：安全性飼料生產、動物飼養管理、防疫監測、安全性加工生產及抗生素殘留檢測分析。 | | | | | |
| 262068 | Quality Control and Techniques in Animal Products Management | 2 | E | C. M. Chen | F |
| The arrangement of this course is to let the student understand the technique about safe animal production. Specific topics including the safe feed manufacturing, feed additives, animal feeding and management, diseases control, safe animal products processing, and antibiotic residues analysis. | | | | | |
| 262069 | 水禽飼養管理 | 2 | 選 | 黃自毅 | 上 |
| 本課程在使學生瞭解水禽的飼養管理，課程內容包括：水禽簡介、鴨及鵝的特性與習性、水禽的品種、鴨及鵝的捕捉與固定法、種禽的選擇與配種、鴨及鵝的雌雄鑑別法、種用水禽的房舍、飼養及管理、種蛋的管理及保存、鴨蛋及鵝蛋的孵化法、肉用鴨、鵝的生產，水禽產品的處理。 | | | | | |
| 262069 | Waterfowl Feeding and Management | 2 | E | T. Y. Huang | F |
| An advanced study of waterfowl production that includes introduction to waterfowl, their peculiarities and habits, breeds, handing and holding of waterfowl, selection of breeders and management of the breeds, caring and holding of hatching eggs, incubation of duck and geese egg, production of market ducks and geese, the processing of waterfowl etc. | | | | | |
| 262070 | 兔學 | 2 | 選 | 劉炳燦 | 上 |
| 本課程之討論範圍包括兔的生物學及各品種特性，營養與飼養，管理與設備，遺傳育種與繁殖技術，疾病防治與產品利用，兔舍規劃與市場經營等主題，並特別強調在本省地區之特殊環境下，如何經由學理與技術之應用，以調適經營及管理方法，提昇生產效率。 | | | | | |
| 262070 | Rabbit Science | 2 | E | B. T. Liu | F |
| The objective of this course is to give the students more confidence in their abilities for producing rabbits, managing and improving rabbit industry. Dealing with the modern concepts in rabbit science, it comprises the following subjects: biology of the rabbits; major breeds of the domestic rabbit and their characteristics; principles of rabbit genetics, nutrition, feeds and feeding; herd and reproductive managements; reproductive techniques; disease control; preparation of rabbit meat, fur and wool; marketing the rabbit products; and so on. The topics being put in the priority are those factors and techniques that are capable of being used for improving the efficiency of rabbit production under the adverse environmental conditions.   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | 262071 | 畜產海外專業實習 | 2 | 選 | 張秀鑾、林美貞 | 上 | | 本課程旨在提供大學部學生海外專業實習，以瞭解產業現況與加強畜產專業能力之養成，進而培養良好工作態度與增進現場實作能力。同時，經由海外實習機會，增進學生畜產專業之國際觀，達到增強學生未來就業能力之目標。 | | | | | | | 262071 | Overseas Practice of Animal Science | 2 | E | H. L. Chang  M. J. Lin | F | | The aims of this course are designed for the oversea training of animal science undergraduate students to realize current status of animal industry, enhance professional capacity, educate working attitude, and train practical ability. It also provides industrial experience and career capacity for students. By doing practice overseas, students can learn from our sister university and broaden students’ global view. | | | | | | | | | | | |
| 262072 | 肉品加工 | 2 | 選 | 陳志銘 | 下 |
| 本課程介紹肉品加工有關技術之學理與所使用設備的原理。重點將著重於使學生暸解各種加工技術，包括肉品之醃漬、嫩化、煙燻、乳化、乾燥、添加物使用與肉品保存等之原理與應用。 | | | | | |
| 262072 | Meat Products Processing | 2 | E | C.M. Chen | S |
| This course introduces technologies related to meat processing and principles of the equipments and facilities related. The purpose of this course is educating students with knowledge include meat marination, tenderization, smoking, emulsion, drying, food additives addition, meat product preservation, and etc. | | | | | |
| 262073 | 肉品加工實習 | 1 | 選 | 陳志銘 | 下 |
| 本課程配合肉品加工技術之正課，使得學生能在暸解肉品加工技術有關之原理及設備的功能外，更能實際正確地操作各項設備，以製作各項產品，包括: 醃漬肉排、香腸、火腿、臘肉、貢丸、叉燒、油雞等。 | | | | | |
| 262073 | Practice of Meat Products Processing | 1 | E | C.M. Chen | S |
| In this course, it educates students how to handling the meat processing equipments correctly. Moreover, students will apply these equipments to produce several meat products, including marinated chops, sausages, hams, Chinese bacon, Chinese meatball, BBQ pork, poultry products. | | | | | |
| 262074 | 動物遺傳工程 | 2 | 選 | 沈朋志 | 下 |
| 動物遺傳工程課程首先介紹動物遺傳基因與DNA之構造與功能，其次介紹動物染色體構造與複製，基因連鎖與突變，DNA複製與重組技術及其應用，基因之突變與重組之遺傳機制，重組DNA之表現及遺傳分析技術。 | | | | | |
| 262074 | Animal Genetic Engineering | 2 | E | P. C. Shen | S |
| The major goal of the animal genetic engineering course is to emphasize the animal genetics, DNA structure and function, chromosome structure and replication, gene linkage and mutation, the techniques and application of DNA replication and recombination, the mechanism on mutation and recombination of the gene, the expression of recombination DNA and the analysis of DNA variation. | | | | | |
| 262075 | 動物遺傳工程實習 | 1 | 選 | 沈朋志 | 下 |
| 本課程配合動物遺傳工程課程使學生瞭解動物遺傳基因與DNA之構造與功能，其次使學生實際操作動物細胞DNA 抽取與DNA 純化、DNA體外複製方法、限制酵素切割方法、重組DNA技術、細胞培養、標的基因之確認與選殖、標的基因表現與突變等有關技術。 | | | | | |
| 262075 | Practice of Animal Genetic Engineering | 1 | E | P. C. Shen | S |
| This course is to practice the technique in animal DNA extraction and purification, DNA replication by polymerase chain reaction, the digestion of restriction enzyme, analysis of the restriction map, DNA recombination, cells culture, identification and cloning of trait genes, target gene expression and mutation. | | | | | |
| 262076 | 實驗動物應用學 | 2 | 選 | 劉世賢等 | 下 |
| 本課程以實驗動物在各重要領域之應用之講授主體,授課內容由法規及管理以及應用概論入手,進而至醫學、健康食品檢測、臨床前安全及功能評估、疫苗工業以及在生殖科技等之應用進行講授。期能使學生瞭解實驗動物在各領域應用相關資訊,進而提昇未來投入實驗動物相關行業興趣。 | | | | | |
| 262076 | Application of Laboratory Animals | 2 | E | S. S. Liu et.al | S |
| This course is to study the application of laboratory animals in different field. The content of this course includes regulation, management, general application, application in medicine, monitoring system of health foods, estimation of security and function before clinical treatment, vaccine industry and reproductive biotechnology. Students could learn the relevant information in different fields, and increase their interest in joining the industry of applied laboratory animals in the future. | | | | | |
| 262077 | 實驗動物應用學實習 | 1 | 選 | 劉世賢等 | 下 |
| 本課程以實驗動物在各重要領域之應用之實習及實地參訪為主體,授課內容包括醫學、健康食品檢測、臨床前安全及功能評估、疫苗工業以及在生殖科技等之應用進行實習與實地參訪行程。期能使學生瞭解實驗動物在各領域應用相關資訊,進而提昇未來投入實驗動物相關行業興趣。 | | | | | |
| 262077 | Practice of Application of Laboratory Animals | 1 | E | S. S. Liu et.al | S |
| This course is major in the practice and visiting of application of Laboratory animals in different field. The content includes the application in the medicine, the monitor of health foods, the estimate of security and function before clinical treatment, vaccine industry and reproductive biotechnology, etc. From those practice and visiting will let students understand that the relevant information in different fields are used, and then promote and invest the relevant trade interest of Laboratory animals in the future. | | | | | |
| 262078 | 反芻動物營養與飼料 | 2 | 選 | 吳錫勳 | 下 |
| 本課程之設計在討論反芻動物營養與飼料之特性和應用。內容包括瘤胃的環境，各種養分如碳水化合物、蛋白質和脂質在瘤胃的發酵，與胃腸道有關的營養性問題，進而討論反芻動物營養需要量，飼料之類別及日糧之平衡。 | | | | | |
| 262078 | Ruminant Nutrition and Feeds | 2 | E | H. H. Wu | S |
| This course is designed to discuss the characteristicsand application of ruminant animal nutrition and feeds. The contents include : rumen environment; carbohydrate, protein and lipid fermentation in rumen; nutritional problems related to the gastro-intestinal tract; nutrient requirement of ruminant animal; classification of feeds and balance of ration. | | | | | |
| 262079 | 飼料配方設計 | 2 | 選 | 謝豪晃 | 下 |
| 本課程係傳授各種禽畜飼料添加物及飼料配方之最新設計技術，其內容包括：飼料添加物之種類、特性及用途、飼料配方之設計原理與設計方法、養豬飼料配方之設計、養雞飼料配方之設計、反芻動物飼料配方之設計、其他飼料配方之設計。 | | | | | |
| 262079 | Design of Feed Formulation | 2 | E | H. H. Hsieh | S |
| The object of this course is to acquaint the students with feed additives and the modern design technique of feed formulation for the livestock and poultry. The contents of this course are the kind and using of the feed additives, principle and method of designing feed formulations, design of swine feed formulation, design of poultry feed formulation, design of ruminants feed formulation, and design of the other animal feed formulation. | | | | | |
| 262080 | 鹿學 | 2 | 選 | 劉炳燦 | 下 |
| 本課程之討論範圍包括鹿的生物學及台灣現有鹿種之特性，營養與飼養，管理與設備，繁殖管理，疾病防治與產品利用，鹿舍規劃與市場經營，並特別強調在台灣之特殊環境下，如何經由學理與技術之應用，以調適經營及管理方法，提昇生產效率。 | | | | | |
| 262080 | Deer Science | 2 | E | B. T. Liu | S |
| The objective of this course is to give the students more confidence in their abilities for producing domestic deer, managing and improving deer industry. Dealing with the modern concepts in deer science, it comprises the following subjects: biology of the cervides; major breeds of the native cervides and their characteristics; principles of cervides genetics, nutrition, feeds and feeding; herd and reproductive managements; deer farm planning; disease control; preparation and marketing of the deer products, and so on. The topics being put in the priority are those factors and techniques that are capable of being used for improving the efficiency of deer production under the native conditions. | | | | | |
| 262081 | 功能性基因體學 | 2 | 選 | 沈朋志 | 下 |
| 本課程目標著重在介紹基因體完成定序的意義，不僅只是驗證解讀個別基因的功能，還著重在基因間之相互作用是如何協調與控制，以及這種基因間的協調與控制在農業、醫學、工業、生態與環保等領域所產生的正面效應。 | | | | | |
| 262081 | Functional Genomics | 2 | E | P. C. Shen | S |
| The goals of this course intends to introduce students the concepts regarding the significance of completion of sequencing the whole genome, not just the annotation of gene function, but the organization and control of gene pathways that may impact on fields of griculture, medicine, industry, ecology, and environment. | | | | | |
| 262082 | 畜產與氣侯變遷 | 2 | 選 | 林美貞 等 | 下 |
| 本課程旨在探討面對氣候暖化造成的全球氣候異常現象，畜牧生產目前與未來面臨的挑戰。將分別由育種、營養、生理及畜產品利用等四大領域教師，進行因應氣候變遷之畜產相關產業發展方向、畜產技術開發及應用、畜產經營規劃及理念、及畜產界應具有之社會責任等相關議題的探討。本課程將由各種因氣候變遷造成之議題，引導高年級學生應用所學專業知識，培養具有收集資料、分析資料、討論之能力。 | | | | | |
| 262082 | Animal Industry and Climate Change | 2 | E | M. J. Lin et al. | S |
| This course focuses on the challenges to animal production industry by the climate change caused by global warming. There will be teachers from the fields of breeding, nutrition, physiology, and products utilization co-teaching this complicated subject and exploring problems as well as opportunities. We will cover the issues related to future development, new technology, and farm management of animal industry, so as the social responsibility. Senior students will apply knowledge they have learned and practice the ability of collecting data, analyzing information, and discussing topics which are related to the future of animal industry. | | | | | |
| 262083 | 動物基因轉殖 | 2 | 選 | 沈朋志 | 下 |
| 本課程目的在介紹動物基因轉殖相關之技術，包含受精卵收集處理與培養、標的基因之構築、原核DNA顯微注射方法、胚胎培養、胚移置、標的基因之鑑定、轉殖基因品系之評估、生產基因轉殖動物與人類醫藥用蛋白質。 | | | | | |
| 262083 | Animal Transgenics | 2 | E | P. C. Shen | S |
| This course is to introduce the technique for the animal transgenics. The contents include: the collecting and culture of zygote, construction of target gene, pronuclear DNA microinjection, embryo culture, embryo transfer, identification of target gene, evaluation of transgenic lines, production of transgenic animal and medicine protein for human. | | | | | |
| 262084 | 畜產品在美容之應用 | 2 | 選 | 林美貞 | 下 |
| 本課程講授畜產品的特性及於美容產業之應用。課程內容包括美容產業及美容產品之介紹、畜產原料及成分之特性、乳於美容產業之應用、各種畜產副產物原料及成分之特性、特殊成分之萃取與純化、畜產副產物於美容產業之應用及相關法規。 | | | | | |
| 262084 | Application of Animal Products on Beauty Industry | 2 | E | M. J. Lin | S |
| This course includes properties of animal products and their application in beauty industry. The content of this course includes the introduction of beauty industry, properties of animal products and ingredients, application of milk on beauty products, properties of animal by-products, extraction and purification of special ingredients, application of animal by-products ingredients, and related regulation. | | | | | |
| 262085 | 伴侶動物飼養管理 | 2 | 選 | 余祺 | 下 |
| 本課程之授課內容包括：伴侶動物種類來源、品種、繁殖與育種、營養、飼養與管理、畜舍和保定，以及保健。本課程所提供飼養寵物之相關常識，將有助於寵物飼養技術之提升。 | | | | | |
| 262085 | Companion Animals Feeding and Management | 2 | E | C. Yu | S |
| The purpose of this course provides the necessary information including origins, breeds, reproduction and breeding, nutrition, feeding and management, housing and handing, health care in companion animals. It is hoped that this study will serve as a guide for advanced in the field of companion management. | | | | | |
| 262086 | 禽畜廢棄物管理 | 2 | 選 | 翁瑞奇 | 下 |
| 本課程旨在協助學生熟悉畜牧廢棄物之特性，一般廢棄物處理技術與原理，三段式廢水處理場之設計及各種禽畜污染防治技術，堆肥原理與製作，脫臭原理與技術，污染之減量及處理，以達到環保法規之要求標準，方能永續發展。 | | | | | |
| 262086 | Poultry and Livestock Waste Management | 2 | E | R. C. Weng | S |
| The purpose of this course is to assist the students to understand the characteristics of animal waste, the general principles and techniques of treatment, the design of wastewater treatment plant, composting treatment, odor control and sludge minimization in order to achieve the EPA required standards. | | | | | |
| 262087 | 禽畜廢棄物管理實習 | 1 | 選 | 翁瑞奇 | 下 |
| 本課程旨在協助學生熟悉畜牧廢水或排放水之一般分析，其中包括實驗室之安全注意事項，品保與品管，廢水之取樣與保存，QC，COD、BOD、TS、SS、VSS、N、P、PH，杯皿試驗，導電度，透視度與沈降性試驗與堆肥腐熟度與有機質分析。 | | | | | |
| 262087 | Practice of Poultry and Livestock Waste Management | 1 | E | R. C. Weng | S |
| The purpose of this Course to is assist the students to understand the analysis and sampling procedure of wastewater and discharge water including the QA and QC of laboratory, COD, BOD, TS, SS, VSS, N, P, PH, jar test, conductivity, transparency test and SV30 test, compost maturity and organic matter analysis. | | | | | |
| 262088 | 畜產經營學 | 2 | 選 |  | 下 |
| 使學生瞭解經營牧場之一般原則、原理與如何應用經濟原則及牧場經營有關業務期降低經營成本，提高利益，其內容包括牧場生產資源之利用、牧場經營之經濟原則、禽畜生產預估、畜產品運銷、生產業務之配合利用、牧場建築與設備、環境污染控制、以及自動化生產的方式評估。 | | | | | |
| 262088 | Livestock Production Management | 2 | E |  | S |
| To allow students to understand the general principles of managing animal production, and to know to apply the economic theories into the animal production with a view to decreasing production costs and increasing profits. This course is dealing with the utilization of animal production resources, the estimating of animal production, the marketing of animal products, the coordination of production business, the farm building and equipment and the control of environmental pollution. | | | | | |
| 262089 | 生物資訊學概論 | 2 | 選 | 劉世華 | 下 |
| 本課程目的在訓練學生使用網路上的軟體程式去分析網路上的生物資料庫，並從中解讀或汲取有用的生物資訊。課程內容包括生物資料庫簡介、DNA與蛋白質序列比對、蛋白質與RNA苷結構預測、單核酸多態型(SNPs)分析、演化樹建構以及生物傳導路徑等。修課學生須至少預修過生物化學、遺傳學或分子生物學(任一門皆可)。 | | | | | |
| 262089 | Essential Bioinformatics | 2 | E | S. H. Liu | S |
| The multidisciplinary course attempts to train students using web-based programs to analyze and retrive useful biological information from web-based database. Topics including: biological databases, sequence alignments, structure prediction on macromolecules, single nucleotide polymorphisms (SNPs), constructure of phylogenies, molecular interaction of biopathway. Students are required to have taken at least one of the following classes: biochemistry, genetics, or molecular biology in advance. | | | | | |
| 262090 | 現代動物育種技術 | 2 | 選 | 張秀鑾 | 下 |
| 本課程內容主要分兩部份：第一部份講授現代分子生物學分析技術與傳統動物育種基本相關知識，第二部份為兩者結合後對現代家畜禽育種所造成之效應與影響。授課內容包括遺傳標記育種技術(如RFLP、微衛星、SNPs及QTLs)、連鎖分析、遺傳輿圖分析及基因體定序解讀等，以及成功案例之解說。 | | | | | |
| 262090 | Modern Animal Breeding Technology | 2 | E | H. L. Chang | S |
| The introductory course will instruct students in basic knowledge of both modern molecular biology techniques and traditional breeding methods, and will show students how the interaction of these techniques and methods profoundly changes economical traits in farm animals. The contents of this course include mark-assisted breeding techniques (RFLP, minisatellite DNA, single nucleotide polymorphisms or SNPs, quantitative trait loci or QTLs), linkage analysis, genetic mapping, and genome sequencing. Several successful examples in animal breeding using such strategy will be also included during the lecture. | | | | | |
| 262091 | 休閒畜牧實務技術 | 2 | 選 | 黃自毅 | 下 |
| 本課程目的在讓學生了解休閒牧場的規劃和經營管理實務。內容包括：1.休閒牧場的規劃2.生產管理3.行銷管理4.人力資源管理5.財務管理6.教育宣導7.民宿經營8.農牧場餐飲管理9.環境管理10.安全管理11.經營診斷12.觀摩休閒牧場實務。 | | | | | |
| 262091 | Leisure Animal Farm Management | 2 | E | T.Y. Huang | S |
| The purpose of this course is to let students understand the planning and management of leisure animal farm. The contents include:1.The planning of leisure animal farm; 2.Production management; 3.Marketing management; 4.Human resource management; 5.Finance management; 6.Education; 7.Housing management; 8.Restaurant management; 9.Environmental management; 10.Safety management; 11.Managerial diagnosis; 12.Visiting leisure farms. | | | | | |
| 262092 | 加工廠經營管理導論 | 2 | 選 | 陳志銘 | 下 |
| 本課程主要討論食品加工廠經營管理的基本意義、目的與策略。主要內容包括：生產管理、物料管理、品質管理、行銷管理、財務管理、人事管理、危機與客訴管理及衛生安全管理等。 | | | | | |
| 262092 | Introduction to Food Processing Plant Management | 2 | E | C. M. Chen | S |
| This course will discuss the meaning, purpose and strategy of food processing plants. The major chapter contents processing management, materials management, quality management, marketing management, financial management, personnel management, and etc. | | | | | |
| 262093 | 屠體分切與應用 | 2 | 選 | 林美貞 | 下 |
| 本課程內容以豬、牛、雞屠體部位及應用為主，將依台、美、日等國屠體與食肉等級評定的標準及方法進行屠體評級，以判定屠體之組成與價值。進而介紹屠體分切之標準及技術，以解說不同部位肉之品質，及其品質判定方法與標準。依據食肉可口性與產量，說明屠體與部位肉之等級評定，並且討論各部位肉於中式加工品與西式料理之應用。 | | | | | |
| 262093 | Carcass Cutting and Application of Meat Parts | 2 | E | M. J. Lin | S |
| This course focuses on the cutting of pork, beef cattle, and chicken carcasses as well as the application of parts of carcass. The carcass evaluation and cutting standards will be introduced according to Taiwanese, American, and Japanese regulations. We will introduce how to classify the meat at various parts of carcass by quality parameters. The best use of meat on Chinese meat products and Western cuisines will be discussed. | | | | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 262094 | 動物科學導論 | 2 | 選 | 全系老師 | 上 |
| 讓學生對「動物科學與與畜產系」之學習領域與相關科學有一初步認識，便於衡量自己未來方向。引導認識本系教育目標、研究方向和主題，並認識學校實習畜牧場和技藝訓練中心畜牧組，以及介紹如何利用圖書館以及網際網路等管道，探索動物科學與畜產相關資源，循序漸進培養動物科學與畜產興趣及往後的規劃。 | | | | | |
| 262003 | Introduction to Animal Science | 2 | E | Faculties | F |
| Introduction Department of Animal science 2. Overview of animal science3. The evolution of livestock farming systems4. Our relationship with domestic animals is a symbiosis5. Animal behavior and farm animal management6. Environmental factors for animals7. Product identification and traceability in farm animal 8. Manure and wastewater treatment9. Organic biological farming and livestock10 .Environmental Hormones (Endocrine disruptor chemicals)11. Functional foods and Extracting bioactive compounds from animal products12. Biotechnology in animal nutrition, physiology and health | | | | | |