

98-2 校課程委員會

紀錄

傳閱附件-中英文摘要

農園生產系

附件 3-2

Department of Plant Industry Production

一、 選修科目 Elective Courses (大學部)

校外實習

2 選

本課程提供學生在校外之實習，以了解產業之現況，熟諳專業能力，培養良好工作態度及訓練實地操作之能力。提供學生產業之經驗，以增強學生就業之能力。

Practice of Industrial Training 2 S

The course is designed for the external and industrial training of undergraduate student to realize current status of agricultural industry, enhance professional capacity, educate working attitude, and train practical ability. It also provides industrial experience and career capacity for students

養殖系

校外實習

2 選

劉俊宏

本課程內容主要是讓學生有機會至其他水產相關研究機構或私人企業進行實務操作，以提升學生之實務經驗及技能，達到學理及實務並重之目的，並可使學生提早瞭解產業脈動，做為就業前之準備。

Extracurricular Intern 2 S C. H. Liu

This aims of the course are to provide the practice opportunities for students at other aquaculture related organizations and private companies. The output goal is to enable improved students' real experiences and skills in aquaculture which will help to fulfilling interaction between theory and practice, understating the industry dynamic and preparation for employment.

Department of Animal Science

一、選修科目 Elective Courses (大學部)

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。

Overseas Practice of

2 S

H. L. Chang

Animal Science

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.

一、選修科目 Elective Courses (碩士班)

畜產海外專業實習

2 選

張秀鑾、林美貞，上

本課程旨在提供碩士班研究生海外專業實習，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。

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農園生產系

附件 5

Department of Plant Industry Production

一、選修科目 Elective Courses (大學部)

水稻之多元化利用

2 選

林素汝、李鎮宇

本課程包括水稻起源、栽培、育種、生產以及目前世界水稻多元化利用趨勢，例如機能性產品、能源利用、稻田彩繪、涵養水源、水稻逆境栽培與選育等，並介紹特用米、有機米以及台灣十大經典好米等良質米品種，進而深入了解水稻模式植物目前在國際上合作之重要議題。

Diversity Application of Rice Production

2 S

S. J. Lin
C. Y. Lee

In this course, the original distribution, cultivation, production, breeding and marketing of rice are introduced. Course contents include the functional production, green energy, rice field painting, management of water resources and stress cultivation. Through this model plant, the good rice varieties, international issues and molecular techniques also will be discussed.

水稻之多元化利用實習

1 選

林素汝、李鎮宇

本實習課程包括水稻栽培、收穫、多元化加工利用，例如：機能性產品、能源利用、稻田彩繪等等以及水稻各項性狀之調查與分析，另外還包含了水稻雜交、農桿菌基因轉殖、水稻暫時性基因表現、報導基因分析等水稻模式植物之研究方法。

Practice of Diversity Application of Rice Production

1 S

S. J. Lin
C. Y. Lee

Course contents include the cultivation, harvest and diversity application of rice, such as the functional production, rice field painting and investigation of agriculture characters in the field. On the other hand, this course also provides the knowledge and skills of rice cross-pollination, *agrobacterium-mediated* transformation, transient gene expression and reporter assay.

農園生產系

Department of Plant Industry Production

一、選修科目 Elective Courses (碩士班)

水稻之多元化利用

2 選

林素汝、李鎮宇

本課程包括水稻起源、栽培、育種、生產以及目前世界水稻多元化利用趨勢，例如機能性產品、能源利用、稻田彩繪、涵養水源、水稻逆境栽培與選育等，並介紹特用米、有機米以及台灣十大經典好米等良質米品種，進而深入了解水稻模式植物目前在國際上合作之重要議題。

Diversity Application of Rice Production

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林素汝、李鎮宇

本實習課程包括水稻栽培、收穫、多元化加工利用，例如：機能性產品、能源利用、稻田彩繪等等以及水稻各項性狀之調查與分析，另外還包含了水稻雜交、農桿菌基因轉殖、水稻暫時性基因表現、報導基因分析等水稻模式植物之研究方法。

Practice of Diversity Application of Rice Production

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S. J. Lin, C. Y. Lee

Course contents include the cultivation, harvest and diversity application of rice, such as the functional production, rice field painting and investigation of agriculture characters in the field. On the other hand, this course also provides the knowledge and skills of rice cross-pollination, *agrobacterium-mediated* transformation, transient gene expression and reporter assay.

蘭花栽培

2 選

陳福旗

主要講授蘭花栽培之基礎知識及技能，內容分總論及各論二部份，其理論和實際並重。總論包括蘭花之分類、生長特性、栽培環境、繁殖方法、栽培管理技術、病蟲害防治、溫室管理、蘭花的利用等。各論包括各主要蘭花如嘉得利亞蘭、蝴蝶蘭、石斛蘭、萬代蘭、蕙蘭等之品種、繁殖方法、及栽培管理技術。

Orchid Culture

2 S F. C. Chen

This course is to introduce the knowledge and techniques of orchid culture for students, including general and specific aspects. In general aspect, classification, growth characters, cultural environment, propagation method, pest control, greenhouse management and utilization of orchids are discussed. In specific topics, Phalaenopsis, Oncidium, Paphiopedilum, Dendrobium, Cattleya, Vanda, etc., are introduced on their varieties, propagation and cultural techniques.

蘭花栽培實習

1 選 陳福旗

研習各主要蘭屬如蝴蝶蘭、文心蘭、嘉得利亞蘭、石斛蘭、萬代蘭、蕙蘭等之繁殖方法、肥培管理、病蟲害防治、育種技術等。訓練學生對從事蘭花栽培及生產更具信心。

Practice of Orchid Culture

1 S F. C. Chen

This course introduces the cultural techniques of different orchids, including Phalaenopsis, Oncidium, Cattleya, Dendrobium, Vanda and Cymbidium. The propagation, fertilizer management, disease control, breeding and technique of building orchid greenhouse are also practiced in the class.

植物醫學系

Department of Plant Medicine

一、選修科目 Elective Courses (大學部、碩士班)

昆蟲系統學原理

2 選

張萃嫻

昆蟲系統學是研究昆蟲系統演化及親緣關係方法與原理的科學。課程內容主要介紹分類特徵、鑑定與檢索表、昆蟲命名、模式標本、種的概念、新種形成原理及昆蟲系統學三大學派等概念。

Principle of Systematic Entomology

2 S

T. Y. Chang

Systematic is the scientific study of the kinds and diversity of organisms and of any and all relationships among them. This course is to introduce the taxonomic characters, identification and keys, zoological nomenclature, type specimens, species concepts, origin of new species taxa and speciation and the three schools of macrotaxonomy.

水產養殖系

飼料品質與管制實務

2 選

邱謝聰

本課程主要在於讓學生瞭解水族飼料品質與管制的意義、目的及方法內容包括：

1. 飼料原料之鑑別。
2. 飼料配製流程之管制。
3. 飼料成品的品質管理。

Practice in Quality Control of Aquatic Animal Feed

2 S

S. T. Chiu

The aims of the course are to give students the knowledge of aquatic animal feed quality control, which including:

1. The identification of feed ingredients.
2. The control of feed formulating.
3. The quality control of feed.

水生動物生產醫學 (I)

2 選

蔡信雄、陳石柱
鄭文騰、葉信平

本學程修業科目之講授內容主要目標為奠定學生現場執業需具備的專業知識基礎。強調健康和生產關係，結合疾病診斷與預防理念。並與各水生動物診斷中心、家畜衛生試驗所、水產試驗所及業界合作，安排學生實地學習以因應未來實際執業之準備。本課程目標在培育學生水生動物生產醫學(飼養管理、疾病防治、生產管理)知識且具獨立診療能力之水生動物專科獸醫師，進而投身水生動物生產醫學及養殖產業管理分析工作。

Aquatic Animal Production Medicine (I)

2 S

S. H. Tsai, S. C. Chen
W. T. Cheng, S. P. Yeh

This course enabling students (veterinarians) to gain skills and knowledge to help them increase the health and productivity of their client's herds, as well as increase the value of their consulting services. The program consists of intensive workshops which include a wide variety of hands-on farm problem solving, culture farms practice innovations, as well as the latest in culture farms production analysis.

水生動物疾病診療實習(I)

1 選

蔡信雄

本課程講解及實際操作各種水生動物病原(包括細菌、病毒、黴菌及寄生蟲等)之分離、鑑定及其他水生動物疾病診斷技術。本課程亦包括水生動物疾病之預防與治療及魚類免疫學診斷技術之應用。

Clinical Practice

1 S

S. H. Tsai

(Aquatic Animal Diseases) (I)

The purpose of this course is to provide the students with knowledge and practical techniques for clinical diagnosis of the diseased aquatic animal. Effective treatment and control measures are also introduced. The contents of this course include how to process the history taking, and to perform the clinical examination with the general and special methods. Instruction and practice of isolation, identification and various diagnosis techniques of aquatic animal pathogens such as bacteria, virus, fungi and parasite etc.

水生動物生產醫學(II)

2 選

蔡信雄、陳石柱
鄭文騰、葉信平

本學程修業科目之講授內容主要目標為奠定學生現場執業需具備的專業知識基礎。強調健康和生產關係，結合疾病診斷與預防理念。並與各水生動物診斷中心、家畜衛生試驗所、水產試驗所及業界合作，安排學生實地學習以因應未來實際執業之準備。本課程目標在培育學生水生動物生產醫學(飼養管理、疾病防治、生產管理)知識且具獨立診療能力之水生動物專科獸醫師，進而投身水生動物生產醫學及養殖產業管理分析工作。

**Aquatic Animal Production
Medicine (II)**

2S

**S. H. Tsai, S. C. Chen
W. T. Cheng, S. P. Yeh**

This course enabling students (veterinarians) to gain skills and knowledge to help them increase the health and productivity of their client's herds, as well as increase the value of their consulting services. The program consists of intensive workshops which include a wide variety of hands-on farm problem solving, culture farms practice innovations, as well as the latest in culture farms production analysis.

水生動物疾病診療實習(II)

1 選

蔡信雄

本課程講解及實際操作各種水生動物病原(包括細菌、病毒、黴菌及寄生蟲等)之分離,鑑定及其他水生動物疾病診斷技術。本課程亦包括水生動物疾病之預防與治療及魚類免疫學診斷技術之應用。

Clinical Practice

1 S

S. H. Tsai

(Aquatic Animal Diseases) (II)

The purpose of this course is to provide the students with knowledge and practical techniques for clinical diagnosis of the diseased aquatic animal. Effective treatment and control measures are also introduced. The contents of this course include how to process the history taking, and to perform the clinical examination with the general and special methods. Instruction and practice of isolation, identification and various diagnosis techniques of aquatic animal pathogens such as bacteria, virus, fungi and parasite etc.

水生動物疾病診療實習(III)

2 選

蔡信雄、陳石柱

本課程講解及實際操作各種水生動物病原(包括細菌、病毒、黴菌及寄生蟲等)之分離,鑑定及其他水生動物疾病診斷技術。本課程亦包括水生動物疾病之預防與治療及魚類免疫學診斷技術之應用。

Clinical Practice

2 S

S. H. Tsai, S. C. Chen

(Aquatic Animal Diseases) (III)

The purpose of this course is to provide the students with knowledge and practical techniques for clinical diagnosis of the diseased aquatic animal. Effective treatment and control measures are also introduced. The contents of this course include how to process the history taking, and to perform the clinical examination with the general and special methods. Instruction and practice of isolation, identification and various diagnosis techniques of aquatic animal pathogens such as bacteria, virus, fungi and parasite etc.

水生動物疾病診療實習(IV)

2 選

蔡信雄、陳石柱

本課程講解及實際操作各種水生動物病原(包括細菌、病毒、黴菌及寄生蟲等)之分離,鑑定及其他水生動物疾病診斷技術。本課程亦包括水生動物疾病之預防與治療及魚類免疫學診斷技術之應用。

Clinical Practice**2 S****S. H. Tsai, S. C. Chen****(Aquatic Animal Diseases) (IV)**

The purpose of this course is to provide the students with knowledge and practical techniques for clinical diagnosis of the diseased aquatic animal. Effective treatment and control measures are also introduced. The contents of this course include how to process the history taking, and to perform the clinical examination with the general and special methods. Instruction and practice of isolation, identification and various diagnosis techniques of aquatic animal pathogens such as bacteria, virus, fungi and parasite etc.

獸醫學系

Department of Veterinary Medicine

一、選修科目 Elective Courses (碩士班)

養豬醫學臨床診療一

1 選

鍾文彬、張聰洲
邱明堂

本課程為「養豬醫學」專科醫師養成教育之第一年基礎課程，以本校動物醫院及南部各養豬場之豬隻為實習對像，進行豬隻健康管理相關知識與技術之現場實習。授課內容包括豬隻傳染及非傳染性疾病診療、豬隻群體健康管理、豬隻生產及現場群體健康診療等技術之基礎訓練。

Clinical practice of swine medicine (I)

1 S

W.B. Chung,
T.C. Chang, M.T. Chiou

This course is designed for the first-year graduate students planning to specialize in 「swine medicine」. Participants will be provided with clinical practice regarding the knowledge and skills in swine health management. Animals involved in the clinical practice include the pigs registered in the Animal Hospital of NPUST and the animals from pig farms in southern Taiwan. The contents of this course include the clinical training in the diagnosis, treatment and control of individual infectious and non-infectious swine disease, swine herd health management, swine production, and on-farm swine herd health and disease control program.

養豬醫學臨床診療二

1 選

鍾文彬、張聰洲
邱明堂

本課程為「養豬醫學」專科醫師養成教育之第一年基礎課程，以本校動物醫院及南部各養豬場之豬隻為實習對像，進行豬隻健康管理相關知識與技術之現場實習。授課內容包括豬隻傳染及非傳染性疾病診療、豬隻群體健康管理、豬隻生產及現場群體健康診療等技術之進一步訓練。

Clinical practice of swine medicine (II)

1 S

W.B. Chung,
T.C. Chang, M.T. Chiou

This course is designed for the first-year graduate students planning to specialize in 「swine medicine」. Participants will be provided with clinical practice regarding the knowledge and skills in swine health management. Animals involved in the clinical practice include the pigs registered in the Animal Hospital of NPUST and the animals from pig farms in southern Taiwan. The contents of this course include the advanced clinical training in the diagnosis, treatment and control of individual infectious and non-infectious swine disease, swine herd health management, swine production, and on-farm swine herd health and disease control program.

養豬醫學臨床診療三

1 選

鍾文彬、張聰洲
邱明堂

本課程為「養豬醫學」專科醫師養成教育之第二年課程，以本校動物醫院及南部各養豬場之豬隻為實習對像，進行豬隻健康管理相關知識與技術之現場實習。授課內容包括豬隻傳染及非傳染性疾病診療、豬隻群體健康管理、豬隻生產及現場群體健康改善等新技術之訓練課程。學生亦參與獸醫學系大學部學生「診療實習」之教學訓練。

Clinical practice of

1 S

W.B. Chung,

swine medicine (III)

T.C. Chang, M.T. Chiou

This course is designed for the second-year graduate students planning to specialize in 「swine medicine」. Participants will be provided with clinical practice regarding the knowledge and skills in swine health management. Animals involved in the clinical practice include the pigs registered in the Animal Hospital of NPUST and the animals from pig farms in southern Taiwan. The contents of this course include the advanced clinical training in the diagnosis, treatment and control of individual infectious and non-infectious swine disease, swine herd health management, swine production, and on-farm swine herd health and disease control program. The graduate students will be expected to participate in the teaching of the undergraduate course of 「clinical practice (swine diseases)」.

養豬醫學臨床診療四

1 選

鍾文彬、張聰洲
邱明堂

本課程為「養豬醫學」專科醫師養成教育之第二年課程，以本校動物醫院及南部各養豬場之豬隻為實習對像，進行豬隻健康管理相關知識與技術之現場實習。授課內容包括豬隻傳染及非傳染性疾病診療、豬隻群體健康管理、豬隻生產及現場群體健康改善等新技術之訓練課程。學生亦參與獸醫學系大學部學生「診療實習」之教學訓練。

Clinical practice of

1 S

W.B. Chung,

swine medicine (IV)

T.C. Chang, M.T. Chiou

This course is designed for the second-year graduate students planning to specialize in 「swine medicine」. Participants will be provided with clinical practice regarding the knowledge and skills in swine health management. Animals involved in the clinical practice include the pigs registered in the Animal Hospital of NPUST and the animals from pig farms in southern Taiwan. The contents of this course include the clinical training in the diagnosis, treatment and control of individual infectious and non-infectious swine disease, swine herd health management, swine production, and on-farm swine herd health and disease control program. The graduate students will be expected to participate in the teaching of the undergraduate course of 「clinical practice (swine diseases)」.

臨床豬病學一

2 選

鍾文彬、張聰洲
邱明堂

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Clinical swine medicine (I)

2 S

W.B. Chung, T.C.
Chang, M.T. Chiou

This course is designed for the first-year graduate students planning to specialize in 「swine medicine」. Participants will be provided with lectures and discussion regarding the knowledge and skills in swine health management. The contents of this course include the clinical training in the diagnosis, treatment and control of individual infectious and non-infectious swine disease, swine herd health management, swine production, and on-farm swine herd health and disease control program.

臨床豬病學二

2 選

鍾文彬、張聰洲
邱明堂

本課程為「養豬醫學」專科醫師養成教育之第一一年基礎課程。本課程進行豬隻健康管理相關知識與技術之現場實習、講授與討論。授課內容包括豬隻傳染及非傳染性疾病診療、豬隻群體健康管理、豬隻生產及現場群體健康改善等新技術之訓練課程。

Clinical swine medicine (II)

2 S

W.B. Chung, T.C.
Chang, M.T. Chiou

This course is designed for the first-year graduate students planning to specialize in 「swine medicine」. Participants will be provided with lectures and discussion regarding the knowledge and skills in swine health management. The contents of this course include the clinical training in the diagnosis, treatment and control of individual infectious and non-infectious swine disease, swine herd health management, swine production, and on-farm swine herd health and disease control program..

臨床豬病學特論一

2 選

鍾文彬、張聰洲
邱明堂

本課程為「養豬醫學」專科醫師養成教育之第二年課程，本課程進行豬隻健康管理相關知識與技術之講授與討論。授課內容著重於教導學生獨立從事豬病診療及群體健康管理、特定新浮現或重要豬病之診斷與預防控制新技術。

Special topics on **2 S** **W.B. Chung,**
clinical swine medicine (I) **T.C. Chang, M.T. Chiou**

This course is designed for the second-year graduate students planning to specialize in 「swine medicine」. Participants will be provided with lecture and discussion regarding the knowledge and skills in swine health management. The contents of this course will be emphasized on the training of the specialists in independently conducting the diagnosis, treatment and control of swine diseases, familiar with the new technology in herd health management, and the diagnosis and control of the newly emerged or important swine diseases.

臨床豬病學特論二 **2 選** **鍾文彬、張聰洲**
邱明堂

本課程為「養豬醫學」專科醫師養成教育之第二年課程，本課程進行豬隻健康管理相關知識與技術之講授與討論。授課內容著重於教導學生獨立從事豬病診療及群體健康管理、特定新浮現或重要豬病之診斷與預防控制新技術。

Special topics on **2 S** **W.B. Chung,**
clinical swine medicine (II) **T.C. Chang, M.T. Chiou**

This course is designed for the second-year graduate students planning to specialize in 「swine medicine」. Participants will be provided with lectures and discussion regarding the knowledge and skills in swine health management. The contents of this course will be emphasized on the training of the specialists in independently conducting the diagnosis, treatment and control of swine diseases, familiar with the new technology in herd health management, and the diagnosis and control of the newly emerged or important swine diseases.

動物生殖科技特論 **2 選** **劉世賢、劉炳燦**
沈朋志

本課程旨在探討有關動物的生殖生理，育種方法，繁殖管理，人工控制動物發情和排卵，人工受精，妊娠診斷，繁殖控制，胚胎移植，動物複製等。為提高學生新的觀念和技術之能力，要求學生閱讀和討論有關動物繁殖相關的新報告。

Advanced Animal **2 s** **S. S. Liu,**
Reproductive Technology **B.T. Liu, P.C.Shen**

This course designed to explore the objectives about animal reproductive physiology, breeding methods, reproductive management, artificial control of animal estrus and ovulation, artificial insemination, pregnancy diagnosis, breeding control, embryo transfer, animal cloning, and so on. For improved the ability of the new developing concepts and techniques, students are required to read and discuss the new papers about animal reproduction.

獸醫學系

Department of Veterinary Medicine

一、選修科目 Elective Courses (博士班)

動物生殖科技特論

2 選

劉世賢、劉炳燦

沈朋志

本課程著重於討論家畜生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家畜之生殖困擾者為優先。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。

Advanced Animal

2 S

S. S. Liu, B.T. Liu,

Reproductive Technology

P. C. Shen

The objective of this course is to give the students more confidence in their abilities for improving the animal reproductive efficiency. Dealing with the modern concepts and the recent techniques in animal reproduction, it consists of the following subjects: evaluation and improving of the reproductive functions of the breeding animals; 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; animal cloning, and so on. The topics being put in the priority are those techniques that are capable of being used for restoring the prevalent animal reproductive failure under the environmental stress. For catching up the new developing concepts and techniques, students are required to read and discuss the publication in animal reproduction.

動物疫苗科技研究所

Graduate Institute of Animal Vaccine Technology

一、選修科目 Required Courses

免疫功能技術評估

2 選

楊忠達

當抗原或疫苗進行動物免疫之後，需有特定免疫評估技術協助分析所引起的功能性免疫反應，本課程即幫助學生瞭解各種免疫評估技術之原理及應用，以加強學生在免疫反應分析及評估能力。

Technoevaluation for the effective immune response

2 S

C.D. Yang

Many special immunoevaluation techniques should be used to analyze the effective immune responses induced by the given antigens or vaccines. This curriculum will help students to realize theorems and applications of different immunoevaluation techniques and to reinforce their capacities for analyzing immune responses.

免疫功能技術評估實習

1 選

楊忠達

本課程將教導學生操作各種免疫評估技術以分析功能性免疫反應。

Practice of technoevaluation for The effective immune response

1 S

C.D. Yang

This curriculum will teach students to operate different immunoevaluation techniques for analyzing effective immune responses.

免疫基因與生物資訊概論

2 選

楊忠達

病原的結構基因經常可轉錄轉譯出重要的抗原決定位來引起強烈的免疫反應，因此本課程將針對這些病原的重要結構基因之功能及調控機制加以探討，同時也幫助學生學習利用不同的表現系統針對結構基因加以表現成蛋白質，並獲得大量的重組蛋白以提高抗原的製備技術，同時本課程也協助學生瞭解並應用基因資料庫、使用 RNA 序列的預測法、序列多型性、蛋白質結構預測、分子之間的作用及蛋白質鑑定。

Introduction to immunogenic genes and bioinformatics

2 S

C.D. Yang

Structural genes of infectious pathogens often transcribe and translate into important antigenic epitopes to induce strong immune responses. This curriculum will therefore explore the functions and regulation mechanisms of these pathogenic structural genes. Moreover, it will help students to use different expression systems to express these structural genes and to obtain the large-scale recombinant proteins for improving antigen preparation. Moreover, this curriculum will also help students realize and apply genomic databases, predictive methods using RNA sequences, sequence polymorphisms, protein structure prediction, intermolecular interactions, and proteomic approaches for protein identification.

免疫科技與產業應用

3 選

鄭力廷

課程以介紹疫苗產業相關應用技術為主。將討論產業裡研發，生產，品管過程會運用上之相關技術。也以經濟角度來探討疫苗產業之價值鏈。

Immunological Technologies & Industrial Applications

3 S

L.T. Cheng

This class will introduce various technologies that are currently being used in the animal vaccine industry. Technologies pertaining to the R&D, production, and quality control processes will be discussed. The state of the animal vaccine industry will also be examined from the economic perspective.

營養免疫學

2 選

莊國賓

本課程主要提供學生全面性關於營養學及其相關健康科學知識，使修習此課程之學生具有了解食物之功能和營養對免疫學之關係。學生可明白現今營養理論及營養科學基礎如何影響和避免急性及慢性疾病，了解營養對免疫反應的影響。

Nutritional immunology

2 S

K.P. Chuang

This course aims to provide students with a comprehensive knowledge on nutrition and related health science:

To understand nutritional immunology knowledge in the sources and functions of food and the relationship of nutrition on immunology.

To understand current theories and scientific basis for nutrition in prevention of acute or chronic human diseases.

To understand the effects of nutrition in immune response.

野生動物保育研究所

Institute of Wildlife Conservation

一、選修科目 Elective Courses

科技英文閱讀與寫作

2 選

喬雅玲

本課程的設計對象是使用英文書寫論文計畫書的學生。這門課將讓學生由閱讀相關的論文和研究計畫書，討論寫作技巧，同時練習審查評論同學的作業。關於寫作的專題討論，對象是使用英文書寫論文的學生。課程內容包括如何讓學生寫作論文裡的前言、方法、結果、討論和圖表部分以及個人簡歷。

Scientific Reading and Writing

2 S

C. L. Bridgman

This is a reading and writing workshop designed for students writing their thesis proposal in English. This course allows them to discuss the skill in writing a proposal. Also, they practice peer review by evaluating and discussing classmates' work. In this semester, they write their introductions, methods, results and discussion. They also begin developing tables and figures and a Curriculum Vita.

一、選修科目 Elective Courses

嬰幼兒健康評估暨實習

3 選

蔡惠玲、上

本課程旨在探討嬰幼兒身體檢查的原理、技巧與評估，以期使學生能初步判讀檢查結果。內容包含健康史，視聽觸診、叩診等技能及相關儀器使用，以及呼吸、循環、神經感覺、腸胃功能、排泄、肌骨系統之功能性檢查。

**Child Health Evaluation
and Practicum**

3 S

Huei-Ling Tsai , F

A course designed to provide beginning level knowledge and psychomotor skills necessary for the health assessment of young children. The framework of nursing process is introduced to the students to elicit health histories and perform physical examinations on respiratory , circulatory, eurossensory, gastrointestinal , And muscle skeletal systems . Students are introduced to a broad range of normal variations through supervised practice with peers.

兒童音樂劇

2 選

李之光、下

本課程旨在幫助學生學習將音樂與戲劇的元素結合在兒童的藝術活動中，並且鼓勵創造性的戲劇與音樂活動，期許學生於期末時能完成兒童音樂劇的呈現。課程內容包括：兒童音樂劇的賞析、兒童音樂劇的展演以及各類型的音樂戲劇活動。

Children's Musical Drama

2 S

Tze-KuangLee , S

This course is to help students learn how to combine music and drama components into the children's art activities. The students are encouraged to perform creative dramatic and musical activities in this course. It is also expected that the students perform children drama at the end of the semester. The course content contains: The appreciation of children' musical drama, performance of musical drama and other types of music and drama activities.

兒童認知與學習專題研究

3 選

江淑卿、馬祖琳

本課程旨在探討兒童認知發展的理論與研究。內容包含認知發展基本概念，社會文化觀點、皮亞傑與新皮亞傑學派、訊息處理論等理論，記憶、問題解決與推理、社會認知、智力等研究主題。

**Cognitive Development for
Children**

3 S

S. C. Jiang 、Tzu-Lin Ma

The course is to introduce to the theories and research of cognitive development for children. The contents include: basic concepts in cognitive development, sociocultural perspectives on cognitive development, Piaget's theory and the Neo-Piagetians, information-processing approaches, memory, problem solving and reasoning, social cognition, intelligence.

校共同選修課程

附件 10

進階英文(檢定)

0 選

本課程旨在培養學生應試英語測驗之語言能力。授課內容包含建構基礎單字，擴充字彙量，增進聽力反應，熟稔基礎文法，培養閱讀能力。

Advanced English

(for English Proficiency Test)

0 S

This course is to develop students' language proficiency for passing an examination on English abilities. The content of the course covers constructing basic vocabulary, expanding vocabulary, improving listening comprehension, learning and knowing basic grammar well, and building up reading ability.