**野生動物保育研究所 中英文課程內容摘要**

Graduated Institute of Wildlife Conservation

1. 必修科目Required Courses

176001 碩士論文 6 必 各教師

利用執行完整之試驗﹑觀察或實務操作，使學生能徹底了解並應用修課之知識﹑練習口頭報告﹑與科學論文之寫作。老師與其他則藉由討論，提供改進之意見。

176001 Thesis 6 R All faculties

Purpose: After a well-designed project being properly practiced by students, he/she will give a presentation, summit a written report before a deadline, and attain the knowledge of the skills and practice of oral presentation. Discussions among teachers and students will improve the quality of his/her research.

176002 專題討論 2 必 翁國精

本課程之宗旨在使學生聆聽從事野生動物保育工作與研究者之實際經驗，以瞭解、學習野生動物保育工作之範疇，加強建立學生從事野生動物保育的興趣。

176002 Seminar 2 R G. J. Weng

This course aims at making students understanding and learning the scope of wildlife conservation task, and enhancing students’ interest in wildlife conservation issues.

176003野生動物調查技術 1 必 合授

本課程在介紹野生動物族群、食性、棲地、行為等調查技術，課程內容包括捕捉、標記、判別年齡和性別、棲地測量、動物相調查、食性分析等。

176003 Technique of wildlife survey 1R All Teachers

This is a course for students to understand the methods of population survey, food habit, habitat use, and behavior. The course includes animal trapping and marking, aging, and sexing, habitat measurement, fauna survey techniques, and food habit analysis.

176004 野生動物調查技術實習 1必 合授

本課程在介紹野生動物族群、食性、棲地、行為等調查技術，課程內容包括捕捉、標記、判別年齡和性別、棲地測量、動物相調查、食性分析等。

176004 Technique of wildlife survey practice 1R All Teachers

This is a course for students to understand the methods of population survey, food habit, habitat use, and behavior. The course includes animal trapping and marking, aging, and sexing, habitat measurement, fauna survey techniques, and food habit analysis.

176005 野外研究安全教育 1必 合授

台灣野外研究調查困難度高，從事野生動植物生態研究的工作者，不僅需要具備專業的學術背景，充足的山野知識與技能更是不可或缺。本課程邀集各類生態研究和山野活動經驗豐富之專家學者共同授課，透過室內課程及野外實作演練之方式，強化學生熟悉各種野外研究相關的專業素養、荒野安全之知識和技能，以及具備野外緊急應變的能力。同時，透過瞭解國內山野通訊和緊急救難系統之現況及使用方法，熟悉危機處理程序，降低野外研究的風險，俾以順利完成研究調查之任務。

176005 **Education of Field Research Safety**   **1R All Teachers**

Field studies in Taiwan often face difficult challenges because of the rugged terrain and complicated climate. Besides the academic knowledge, researchers need to have comprehensive knowledge and skills for working in the wild. This course will involve various experienced professionals from related fields. Through lectures and outdoor practices, the objective is to enhance the knowledge of and capacity in the wilderness, including ethics, safety, emergency response and communication system. The course goal is to reduce the risk of field research and fulfill the survey mission.

176006 哺乳類學 ３ 選 蘇秀慧

本課程之設計旨在提供學生對於哺乳動物有一全盤及深入的瞭解。課程主題包括哺乳動物的演化、生物地理的歷史、不同分類階層的形態結構及功能的多樣性，以及哺乳類動物行為、生態、族群動態、生殖、生理等方面的特性。課程亦涵蓋野外研究哺乳動物的技術、資料收集的方法、以及保育此類動物的進展。除了強調全球性的趨勢之外，我們亦將介紹並評析台灣各種哺乳動物的習性、生態研究和保育現況。

176006 Mammalogy ３ E H. H. Su

The course is designed to give students a comprehensive understanding and appreciation of mammals. Specific topics include the evolutionary and biogeographic history of mammals, the diversity of structures and functions exhibited by different orders and families of mammals, and attributes of their behavior, ecology, population dynamic, reproduction, and physiology. Additionally, it will embrace techniques of field study, methods of data collection, and conservation for mammals. Except for an emphasis on a global pattern, we will introduce and analyze the ecological study and conservation status of various mammals in Taiwan.

176007 鳥類學 ３ 選 孫元勳

本課程之目的在讓學生了解鳥類的分類、演化、生理、飛行、行為、領域、繁殖、配對系統、族群、遷移、導航、生態、保育等相關領域。

176007 Ornithology ３ E Y. H. Sun

The aims of this course is to let student understand the related field in bird’s classification, evolution, physiology, flight, behavior, territory, breeding, mating system, population, migration, navigation, ecology, and conservation.

176008 遷移性鳥類生態學 ３ 選 孫元勳

本課程之目的著重在探討遷移性鳥類的行為、族群變動、棲地、群聚，特別針對猛禽、雁鴨、涉禽和岸鳥等鳥類。

176008 Migratory Bird Ecology ３ E Y. H. Sun

This course focuses on the behavior, population dynamics, habitat, and community of migratory birds, especially for raptors, waterfowl, wading birds, and shorebirds.

176009 森林野生動物生態特論 ３ 選 蘇秀慧

本課程旨在幫助學生熟悉森林科學以及野生動物經營管理的相關重要概念、術語、議題，從而發展出整合不同學科領域和不同尺度的解決問題能力。課程尤其強調森林的生態過程、功能和價值，森林與野生動物的關係、其永續性和適應性經營管理，以及經營管理技術及其對於棲地、生物多樣性和生產力的潛在影響。藉由教科書、期刊論文閱讀、課堂報告、以及課外見習活動所獲得的各種資訊，以促進學生進行廣泛且有新意的討論。

176009 Advanced Forest Wildlife Ecology ３E H. H. Su

The course is designed to help students to familiarize students with essential concepts, terminology, and issues in forest science and forest ecosystem management, and further to develop a problem-solving ability by integrating across disciplines and at various scales. It emphasized specifically on ecological processes, function and value of forests, linkages between forests and wildlife, sustainability and adaptive management of forests, and alternative management techniques and their potential effects on habitat, diversity and productivity.  Information in the text, assigned readings, class presentations, and field trips will enhance students to conduct extensive and creative discussions.

176010 行為生態學 ３ 選 黃美秀

行為生態學是一門從演化角度探討動物行為的科學。此課程強調行為的功能、以及動物如何利用行為以適應其生態及社會環境。課程主題包括覓食、捕食者－獵物交互作用、棲地選擇和空間使用、溝通、敵對、性擇、交配系統、親代育幼、以及社會行為等。此課程亦將會介紹觀察和量化行為的方法，以利學生獨自完成研究計畫。

176010 Behavioral Ecology ３ E M. H. Hwang

Behavioral Ecology is the study of animal behavior from an evolutionary perspective. The course emphasizes the function of behavior and how it allows animals to adapt to the demands of their ecological and social environments. Topics will includes the role and mechanism of behaviors in foraging, predator-prey interactions, habitat selection and spacing, communication, aggregation, sexual selection, mating system, and parental care, and group living. The course also introduces methods for the observation and quantification of behavior in order to accomplish an independent study project.

176011 保育人文學 ３ 選 裴家騏

本課程廣泛的討論野生動物與人類的關係，課程內容並將著在以下的幾項主題，如現代人出現前野生動物的一般狀況、人類使用或影響野生動物的歷史與模式、近代野生動物經營管理與保育形成之歷程、自然保育與社區發展的關係、自然資源的永續利用與生物多樣性的保育。

176011 Human Dimension on ３ E J. C. Pei

 Natural Conservation

This course broadly discusses the relationship between wildlife and human. It is emphasized specifically on the status of wildlife before man, the history and patterns of human’s utilization and impact on wildlife, the development of contemporary wildlife management and conservation, natural conservation and community development, and sustainable utilization on natural resources and conservation on bio-diversity.

176012 哺乳類學特論 ３ 選 蘇秀慧

這門課程之目的在透過研討與田野調查過程，希望能加強學生在哺乳類學之研究能力。

176012 Special Topics on Mammals ３ E H. H. Su

The aim of this course is to enhance student’s research ability in mammals through the process of discussion or field study.

176013 鳥類研究特論 ３ 選 孫元勳

這門課程的內容在針對鳥類學中學生有興趣的主題，進行報告研讀與討論，以增加學生對鳥類的深層認識。

176013 Special Topics on Ornithology ３ E Y. H. Sun

The content of this course emphasizes some interested subjects of students in ornithology, through the works of reading and discussion, in order to gain a better understanding of birds.

176014 兩棲爬蟲類學 ３ 選 陳添喜

以探討兩棲爬蟲類之演化、分類、生理、生態與行為為課程重點，並以台灣兩爬研究為例子，探討兩棲爬蟲動物保育之重要性。

176014 Herpetology ３ E T.C. Chen

This course is to study evolution, taxonomy, physiology, ecology and behavior of amphibians and reptiles. This course emphasizes on the importance of conservation in amphibians and reptiles as well.

176015 地景生態學 2 選 裴家騏

本課程討論地球上主要的陸域生態系統（包括森林、草原、沼澤、農村…等）的異質性結合現象。重點將包括：地景生態學的慨念及原理、地景的多樣性、嵌塊體的概念及作用、廊道的形成及結構、基質及其異質性、地景的整體結構及形成、地景的變化及交流、地景動態及地景的管理。

176015 Landscape Ecology 2 E J. C. Pei

This course discusses the phenomenon of the heterogeneity of the major terrestrial ecosystems on the earth, such as forest, grassland, wetland, farmland, etc. Important topics include: the concepts and principles of landscape ecology, the diversity of landscape, the concepts and functions of patches, the origins and structures of the corridor, matrix and its heterogeneity, the configuration and development of landscapes, the changes of and interaction between landscapes, landscape dynamics, and landscape management.

176016 靈長目保育特論 ３ 選 蘇秀慧

本課程探討現今靈長類動物所面臨的保育問題與可能的解決之道。靈長類種類繁多，生態習性與社會組成有高度的歧異度，且其棲地因人類開發而遭到嚴重的破壞或形成人猴棲地高度重疊的狀況。不同的靈長類族群因棲地變化族群量或增或減，因而形成不同的保育問題，本課程藉由對靈長類行為與生態的瞭解來探討其所面臨的保育問題的可能解決之道。

176016 Independent Study on ３ E H. H. Su

 Primate Conservation

This course is to study conservation issues of primates and their habitats. By understanding the high diversity in behavior and ecology of primates, we are able to work out various tactics to conserve the precious primate populations in the world.

176017 食肉目保育特論 ３ 選 黃美秀

本課程之設計旨在提供學生對於食肉目動物及其保育有一全盤及深入的瞭解，並激發其保育議題的整體性關注。課程內容除了涵蓋食肉目動物的行為、生態、演化理論之外，並強調保育這些動物的相關理論和實務，以及檢視保育相關的生物、社經、政治等議題。

176017 Independent Study on ３ E M. H. Hwang

 Carnivore Conservation

The course is designed to give students a comprehensive understanding and appreciation of carnivores and principles of carnivore conservation, and further to inspire their broad-spectrum concern on conservation issues. Course topics include: (1) theory of carnivore behavior, ecology, and evolution; (2) disciplines and case study of conserving carnivores; and (3) performance of biological, socio-economical, political issues pertinent to the field of conserving carnivores.

176018 猛禽保育特論 ３ 選 孫元勳

本課程將著重在世界猛禽的介紹、生態、調查方法、遭遇的問題、保育措施。讓有志於猛禽生態研究與保育的學生能夠有更深入的教育訓練。

176018 Independent Study on ３ E Y. H. Sun

 Raptor Conservation

This course focuses on the introduction to world raptors, ecology, research techniques, status, and conservation strategy. And by taking this course students who are interested in such field can have better training and education.

176019 野生動物危害防治 ３ 選 孫元勳

這門課程之目的在讓學生瞭解野生動物危害人身安全、農業、公共衛生、交通事業、生態的模式與防治之道。

176019 Wildlife Damage ３ E Y. H. Sun

 Control

This course allows students to realize the patters of wildlife damage on human safety, agriculture, public sanitation, traffic business, and ecology, and their specific control methods applied in the world.

176020 城鄉生態系特論 ３ 選 蘇秀慧

城鄉生態系統所維繫的野生動物群聚不但有其特殊性，也具有非常高的保育價值。本課程將介紹最新有關城市、鄉間、郊野環境中野生動物族群生態學和地景生態學的研究、理論發展及保育應用。討論將著重在陸域脊椎動物，尤其是鳥類及哺乳類。

176022 Advance in Urban ３ E H. H. Su

 and Suburban Ecology

Wildlife communities in urban and suburban ecosystem are not only unique, but also high in conservation priority. This course will provide the latest studies in wildlife or landscape ecology in the urban and suburban ecosystem, as well as theoretical development and their application in conservation action. Discussion will focus on terrestrial vertebrates, especially birds and mammals.

176021 野生動物棲息地經營管理 ３ 選 孫元勳

這門課程之目的在讓學生探討陸域野生動物和棲地的交互作用、控制族群數量的相關棲地管理方法。

176021 Wildlife Habitat Management ３ E Y. H. Sun

This course intends to let students explore the nature of interactions between territorial wildlife, and learning the techniques of habitat management in controlling wildlife population.

176022 生態研究試驗設計 ３ 選 翁國精

本課程介紹實驗設計的原則與方法，並討論生態學野外實驗中常遇到的問題與謬誤。內容包括如何提出問題，實驗設計的要素，抽樣方法，假說的測試，假性重複，交絡現象，以及各種生態系中的實驗設計方法。

176022 Experimental Design in Ecological ３ E G. J. Weng

This course introduces principles and components of experimental design and discusses common problems and mistakes in ecological field experiments. The contents include how to ask a question, components of experimental design, sampling methods, hypothesis testing, pseudoreplication, confounding effect, and experimental design in various ecosystems.

176023 生態學資料分析 ３ 選 翁國精

本課程介紹基礎的統計概念，生態學中常用的統計方法，野生動物研究中所用的調查方法及資料分析方式等。

176023 Data Analysis in Ecology ３ E G. J. Weng

This course introduces basic concepts of statistics, statistics in ecology, and survey and data analysis methods in wildlife research.

176024 保育遺傳學 ３ 選 翁國精

本課程介紹基因層次的生物多樣性，使學生了解基因組成與野生動物族群的健康與存續的關係，進而從遺傳學的角度探討保育工作及野生動物經營管理的目標與實務。內容包括遺傳學簡介，遺傳組成的演化，野生動物族群面臨的遺傳問題，以及保育野生動物族群遺傳多樣性的實務等等。

176024 Conservation Genetics ３ E G. J. Weng

This course introduces the biodiversity at the gene level aiming to make students understand the relationship between genetic composition and the health and survival of wildlife populations and further discusses goals and operations of genetic management of wildlife populations. The contents include introduction of genetics, evolution of genetic composition, genetic issues of wildlife populations, and the practices of conserving genetic diversity of wildlife.

176025溼地生態與經營管理 ３ 選 陳添喜

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。

176025 Wetland Ecology and Management ３ E T.C. Chen

This course includes (but not limited to) the following topics: definition, composition, and function of wetlands; basics of hydrology, wetland hydrology, interaction between organisms and hydrology; wetland soils, chemical reactions, and elemental circulation; structural and physical adaptation to wetlands in animals and plants; succession of wetland plant community; ecology of vertebrate and invertebrates in wetlands; generation and succession of wetland ecosystem, circulation of materials and energy; introduction to coastal and inland wetlands; introduction to wetland policies and regulations in the US; introduction to wetlands in Taiwan; wetland management objectives and techniques, wetland loss, reestablishment, creation, and transformation; possible impacts of global change on wetlands.

176026保育遺傳學特論 ３ 選 翁國精

本課程為保育遺傳學的進階課程，課程宗旨在於指導學生將遺傳學應用於野生動物生態與保育之研究，並提供學生實際操作之機會。固定上課內容包含：親緣關係、親子關係、瓶頸效應、族群分化等。此外亦可針對學生需要，安排（但不限於）下列內容：分子演化、溯祖理論、隔離-遷徙模式、族群可存活率分析、野生動物遺傳經營管理。上課方式包含課堂講解與軟體操作，及部分實驗室操作。

176026 Special topics in 3E G. J. Weng

conservation genetics

This course is an advanced extension from conservation genetics. The purpose of this course is to instructstudents to apply genetics on wildlifeecology and conservation and also provide hands-on experiences. The contents will cover the analysis of phylogeny, parentage, bottleneck events, and populationdifferentiation. Besides, this course can be tailoredaccording to students’ needs and provide, but is not limited to, the followingtopics: molecular evolution, coalescence theory, isolation with migration model, populationviability analysis, wildlifegeneticmanagement. Classes include lectures, software operation and lab when necessary.

176027野生動物經營管理 2 選 裴家騏

本課程旨在應用野生動物族群生態與行為模式之知識，處理人與野生動物互動及衝突之經營管理，以及野生動物棲地經營管理之議題。本課程以靈長類生態與行為，靈長類、鹿科、豬科動物之作物危害，以及鷺科鳥類魚池危害之經營管理為例，探討人與野生動物衝突經營管理的相關議題。野生動物棲地經營管理則著重於，生態廊道應用於野生動物族群經營管理相關議題之探討。本課程將以課堂講演、實驗室操作及野外相關研究場域參訪之不同形式上課方式進行。

176027 Wildlife management 2E J. C. Pei

This course aims at applying ecology and behavior of wildlife on managing human-wildlife interactions and conflict, as well as wildlife habitats. We emphasize on behavior and ecology of wildlife, and deal with management issues of human-wildlife conflict from primates, deer, wild boars and birds of family Ardeidae. The application of ecological corridors to wildlife habitat management is to be discussed. The course will be delivered by lectures, laboratory and field trips to study sites for wildlife-management relevant research.

176028環境教育 3選 黃美秀

本課程介紹環境教育的定義、目標與發展歷史，並提供同學以環境科學和人文的觀點為基礎，瞭解人與環境之間的複雜交互作用，並能夠關切及探索從本土到全球所面臨的各種環境危機和議題，以獲得所需的知識、技能和價值觀。環境教育是一種教育過程，故課程中也將透過對話交流與互動討論的回饋機制，激發學生發展有意義且與與生命經驗相關的學習，從而體悟到知識、價值、行動與情感的內在關連，以培養出具備環境行動的公民。

176028 Environmental Education 3E M. H. Hwang

This course will introduce the definition, objective and history of environmental education. Students will learns to understand the complicated interaction between human beings and environments and the related issues through the science and human dimension perspectives. Students are also encouraged to explore and concern various local or global environmental issues and crisis to increase the required knowledge, skill and values. Environmental education itself is an education process. Thus, the course will also involve comprehensive class discussion to inspire students developing meaningful and life-experience related learning for understanding the connection between knowledge, values, action and emotion, and then cultivating a citizen with environmental action.

176029 環境倫理 2選 黃美秀

透過了解人與自然環境的道德關係，以及國內外環境倫理環境哲學的倡議，本課程旨在介紹環境倫理學的發展歷史，並且探討當今環境生態議題的重要哲學和倫理學觀點或主要流派。本課程將提供諸多環境倫理問題案例，引領同學透過價值澄清方法，學習思維現今重要的環境問題（如全球暖化、能源耗竭、生物多樣性減少等），以提升其環境倫理的素養。此將有助於學生有系統地分析與討論環境問題，提高環境意識，進而建立永續的價值信念。

176029 Environmental Ethics 2E M. H. Hwang

Through understanding the moral relationship between human and the natural environment, as well as the initiatives of domestic and international environmental philosophy or major schools, the course aims to introduce the history of the development of environmental ethics, and to explore the important philosophical and ethical point of views regarding today’s environmental issues. This course will provide various case studies regarding environmental ethics, leading students to learn and speculate contemporary environmental issues (such as global warming, energy depletion, loss of biodiversity, etc.), through values clarification methods. The goal is to establish and improve their literacy of environmental ethics, which will help to systematically analyze and discuss environmental problems, increase environmental awareness, and thereby establish values and beliefs of sustainability.

176030環境教育教材教法 2選 黃美秀

本課程旨在介紹推行環境教育所需的各項教材和教學方法。課程目標除了讓學生了解環境教育的目標，原理與實務之外，並希望將由淺入深地引導學生應用基本的環境教育理念，逐步設計及評析環境解說作品之成效，並且轉化環境科學研究資料或文獻，發揮創意，發展及設計各種環境教學和活動計畫。此課程期許學生能落實“Think globally, act locally”的環境行動，藉由其獨立的環境解說方案發展，以關切本土及全球的生態保育和環境教育課題，並提升環境教育之教學研究與推廣的能力。

176030 Teaching Methods and Material

in Environmental Education 2E M. H. Hwang

 This course introduces a series of methods and material required for performing environmental education. The objectives are not only to improve students’ understanding about the purposes, theories and practices, but also gradually lead students to apply the basic concepts to design and evaluate interpretative works, and to transfer scientific information or literatures into various environmental education programs. We expect students to implement the “Think globally, act locally” concept through improving their awareness and concern on the biological conservation and issues of environmental education, along with enhancing required skills and ability in outreach programs.