開課班級: 博觀賞魚專班一A **授課老師: Oystein Evensen** **學分數: 2**

課程大綱:

本課程的目的是教魚類疫苗的生產技術。課程內容包括各種魚類疫苗的準備，在法律許可的疫苗應用程序，法制化的實驗等。

outline:

The purpose of this course is to understand the recent production techniques for fish vaccines. Course contents include the preparation of various types of fish vaccines, application procedure for the legal approval vaccines, legalization experiments, biosafety and regulatory requirements for fish vaccines etc.

教學型態:

課堂教學

成績考核方式:

平時成績:%
期中考:50%
期末考:50%
其它:%

本科目教學目標:

參考書目:

課程進度表：

週次	起訖月日	授課單元(內容)	備註
第1週	2.17~2.24	A Systematic Approach towards Optimizing a Cohabitation Challenge Model for Infectious Pancreatic Necrosis Virus in Atlantic Salmon (Salmosalar L.).	8日正式上課。8~12日課程加退選，轉學(系)生、復學生及延修生選課，雙主修、輔系申請，12日申辦抵免學分截止日
第2週	2.24~3.03	Stability and efficacy of the 3'-UTR A4G-G5A variant of viral hemorrhagic septicemia virus (VHSV) as a live attenuated immersion VHSV vaccine in olive flounder (Paralichthys olivaceus).	
第3週	3.03~3.10	Use of Poly(I:C) Stabilized with Chitosan As a Vaccine-Adjuvant Against Viral Hemorrhagic Septicemia Virus Infection in Zebrafish.	28日(日)孔子誕辰紀念日/教師節(放假),29日(一)補假
第4週	3.10~3.17	A Review of Intra- and Extracellular Antigen Delivery Systems for Virus Vaccines of Finfish. IPNV Antigen Uptake and Distribution in Atlantic Salmon Following Oral Administration.	29日成績優異提前畢業者提出申請截止日
第5週	3.17~3.24	Sequence analysis and identification of new isoform of EP4 receptors in different atlantic salmon tissues (Salmo salar L.) and its role in PGE2 induced immunomodulation in vitro.	6日(一)中秋節(放假)，10日(五)國慶日(放假)
第6週	3.24~3.31	Difference in skin immune responses to infection with salmon louse (Lepeophtheirus salmonis) in Atlantic salmon (Salmo salar L.) of families selected for resistance and susceptibility.	14日學生宿舍安全輔導暨複合式防災疏散演練。18日多益測驗
第7週	3.31~4.07	Interferon regulatory factor-1 (IRF-1) is involved in the induction of phosphatidylserine receptor (PSR) in response to dsRNA virus infection and contributes to apoptotic cell clearance in CHSE-214 cell.	24日(五)補假，25日(六)光復暨古寧頭大捷日(放假)。
第8週	4.07~4.14	Augmentation of the antibody response of Atlantic salmon by oral administration of alginate-encapsulated IPNV antigens.	30日校課程委員會
第9週	4.14~4.21	Midterm Exam	3~9日期中考試
第10週	4.21~4.28	Acquired immunity and vaccination against infectious pancreatic necrosis	13日教務會議,16日教師期中成績上網登錄截止日

		virus of salmon.	
第11週	4.28~5.05	Acquired immunity and vaccination against infectious pancreatic necrosis virus of salmon.	
第12週	5.05~5.12	The kinetics of CD4+ and CD8+ T-cell gene expression correlate with protection in Atlantic salmon (Salmo salar L) vaccinated against infectious pancreatic necrosis.	24~28體育運動週。24日校園路跑。27日運動大會夜間開幕，28日運動大會活動，29日101週年校慶活動日，照常上班
第13週	5.12~5.19	Antigen dose and humoral immune response correspond with protection for inactivated infectious pancreatic necrosis virus vaccines in Atlantic salmon (Salmo salar L).	
第14週	5.19~5.26	Immunogenicity and cross protective ability of the central VP2 amino acids of infectious pancreatic necrosis virus in Atlantic salmon (Salmo salar L.).	12日申請停修課程截止日
第15週	5.26~6.02	Functional feeds reduce heart inflammation and pathology in Atlantic Salmon (Salmo salar L.) following experimental challenge with Atlantic salmon reovirus (ASRV).	
第16週	6.02~6.09	Antibody responses correlate with antigen dose and in vivo protection for oil-adjuvanted, experimental furunculosis (Aeromonas salmonicida subsp. salmonicida) vaccines in Atlantic salmon (Salmo salar L.) and can be used for batch potency testing of vaccines.	22日校務會議。25日行憲紀念日(放假)
第17週	6.09~6.16	Gene expression studies of host response to Salmonid alphavirus subtype 3 experimental infections in Atlantic salmon.	1日(四)開國紀念日(放假)
第18週	6.16~6.23	Final Exam	5~11日期末考試，10~11日學生退宿