

Semester	7		
Course code	ZOOL 41574		
Course Name:	Aquaculture Management		
Credit Value:	4		
Core/Optional	Core		
Pre requisites	ZOOL 32543		
Co-requisites	None		
Hourly Breakdown	Theory	Practical	Independent Learning
	40	60	100
Course Aim/Intended Learning Outcomes:			
After completion of this course unit, the student will be able to;			
<ul style="list-style-type: none"> ➤ describe and discuss the procedures, tools and techniques relevant to brood stock management, water quality, feed and health management of fin fishes and shell fishes used in aquaculture, ➤ describe and discuss post-harvest technologies used for fishery products, ➤ demonstrate skills in designing a hatchery, feed formulation and preparation, disease diagnosis and treatment used in aquaculture, and ➤ demonstrate skills in aquaculture management practices at farm level and post-harvest technologies at the processing plants. 			
Course Content:			
Theory sessions: Management of brood stocks to obtain good quality egg and first feeding fry, Production of good quality seed in required number at required time by environmental manipulation, Hormonal induction, Cryopreservation of gametes. Improvement of stocks by selective breeding, Sex control. Feed formulation and preparation. Culture of microalgae, rotifers and other live food used in rearing different development stages of cultured organisms, <i>Artemia</i> decapsulation to improve hatching efficiency. Water quality management in re-circulating systems, closed systems and integrated culture systems. Environmental management in coastal aquaculture. Health management in different aquaculture systems by environmentally friendly methods with minimum impacts on the environment. Food Safety Regulations in aquaculture according to ISO 22,000, Hazard Analysis of Critical Control Point System (HACCP) in processing fin fishes and shell fishes. Aquaculture Economics.			
Practical sessions: Designing a hatchery for edible carps, Feed formulation and preparation of feed, Use of anaesthetic agent to anaesthetize fin fishes, Culture of microalgae, Estimation of hatching efficiency of commercially available <i>Artemia</i> cysts, Antibiotic Sensitivity Test, Identification of common fin fish and shrimp diseases by histopathology and molecular biological techniques, prevention and control methods. Field study at Udawalawa Carp Breeding Center and Tilapia Breeding Center, Field study at <i>Macrobrachium</i> breeding Center, Field study at a shrimp processing plant, Field study at a tuna processing plant.			
Teaching /Learning Methods: A combination of lectures, laboratory and field practical sessions, computer based learning, self-studies, assignments and small group discussions.			
Assessment Strategy: Continuous assessment and end of course examination.			
Continuous Assessment 30%		Final Assessment 70%	
Details: Online/in-class tutorials/Assignments 30%		Theory (%) 50%	Practical (%) 20%
		Other (%) (specify) NA	
Recommended reading:			
<ol style="list-style-type: none"> 1. Brag, U. (1992). Guidelines for the promotion of Environmental Management of Coastal Aquaculture Development. FAO Fisheries Technical Paper No: 328. 2. Beveridge, M. C. M (1987). Cage Aquaculture. Blackwell Science, Oxford. 3. Bromage, N. R. and Roberts, R. J. (1995). Broodstock Management and egg and larval quality. Blackwell Science, Oxford. 4. Lightner, D.V (1996). Hand book of shrimp pathology. World Aquaculture Society, USA. 5. Post, G. (1987). Text Book of Fish Health. TFH Publications, Oxford. 			