

University offering the course: Khon Kaen University, Department of Fisheries, B.Sc.

Cluster name: Production-integrated environmental protection

Semester	Duration	Type	ECTS credits	Student workload in hours
	7 semesters	Mandatory (Core and Selective)		Class contact: 70 Self study 80
Requirements for participation	Usability	Examination type / duration of examination (requirement for the award of credit points)	Teaching and learning Methods	Person responsible for the Module
			lectures/ laboratory/ assignment (report/presentation)	KKU staff

Learning objectives / Competences

The cluster provides a definition and outline the significance waste management and zero waste. The courses introduce method used to utilize waste fishery industry and aquaculture. The courses provide knowledge of integrated environmental protection.

Upon successful completion of this course, students will be able understand zero waste concept in aquaculture. Students will be able to describe methods use in a utilization of waste for aquaculture production, nutrient cycle in aquaponics system. Students will be able to describe the utilization and value added on fishery industry by product.

Teaching content

See below

Literature

Course									
Subject	Semester								Total-Class contact
	1	2	3	4	5	6	7	8	
Water Quality						✓			
Quality control, Added Value product						✓			
Aquafarm Construction							✓*		
**Aquaponic system (New subject)							✓*		

Content which partly provide in the courses in listed in the second column	Subjects listed under a module
Zero waste in Aquaculture	Water Quality
Added value of by product from fishery industrial and Utilization of waste from Aquaculture	Quality control, Added Value product
Recirculation of water in Aquaculture, types of aquatic farm, factors affecting aquafarm activities and profitability.	Aquafarm Construction
Nutrients recycle, integrated waste	**Aquaponic system

utilization	
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