

STUDY PROGRAM INFORMATION

A.	Name of Study Program	:	Aquaculture	
	Level of Study.	:	Bachelor's Degree	
	Faculty	:	Agriculture and Animal Science	
B.	Vision	:	Becoming a center of excellence in aquaculture through cutting-edge research, innovation, and sustainable practices with a global perspective to support food security, maintain ecosystem health, and promote the growth of Indonesian blue economy	
C.	Graduate Learning Outcomes	:	<ol style="list-style-type: none"> 1. Aquatic Production Managers and Technicians 2. Aquaculture Entrepreneurs 3. Researchers 4. Aquatic Environmental NGO Activists 	
D.	Learning Outcomes	:	<ol style="list-style-type: none"> 1. Demonstrating devotion to Almighty God and practice progressive character and attitudes in civic and national life, with a global and sustainability-oriented perspective, grounded in the values of Progressive Islam and Pancasila 2. Demonstrating mastery of fundamental theories and advanced practices in biology, ecology, chemistry, genetics, physiology, and aquatic resource management to analyze aquaculture biological systems, produce scientific works, make data-driven decisions, and communicate ideas in an academic context 3. Demonstrating the ability to design, implement, and evaluate aquaculture production systems across ecosystems (freshwater, brackish water, and marine) through the sustainable application of ecological principles, nutrition, system engineering, and biotechnology 4. Demonstrating the ability to design scientific experiments; conduct environmental, feed, fish health, and genetic analyses in both laboratory and field settings; and generate applied research that supports safe, innovative, and sustainable aquaculture practices 5. Demonstrating the ability to develop new business models, strategic innovations, and entrepreneurial initiatives in aquaculture based on biotechnology, quality management systems, and efficient resource mapping, with adaptive capacity and global competitiveness 6. Demonstrating the ability to apply digital technologies, information systems, and AI-based engineering in the integrated management of water quality, feed, and fish health to enhance production efficiency and ensure the sustainability of the aquaculture industry 7. Demonstrating the ability to integrate knowledge, skills, and field experience into research activities, undergraduate thesis preparation, and scientific publications, and to provide creative and responsible solutions to real-world challenges in the aquaculture sector 	
E.	Courses	:	Semester I	
			1. Islam and Humanity	1
			2. Indonesian Language	2
			3. Pancasila and Civic Values	2
			4. Foreign Language Skills for Specific Purposes I	2

		5. Sustainable Development Insights	1
		6. Innovative Agrocomplex Systems	2
		7. Physics and Chemistry of Fisheries	2
		8. Fisheries Physics and Chemistry Laboratory	1
		9. Fisheries Biology	2
		10. Fisheries Biology Laboratory	1
		11. Mathematics	2
		12. Introduction to Fisheries and Marine Science	2
		Semester II	
		1. Civics Education	2
		2. Worship and Human Relations	1
		3. Foreign Language Skills for Specific Purposes II	2
		4. Fundamentals of Aquaculture	2
		5. Fundamentals of Aquaculture Laboratory	1
		6. Ichthyology	2
		7. Ichthyology Laboratory	1
		8. Biochemistry	2
		9. Biochemistry Laboratory	1
		10. Aquatic Invertebrates	2
		11. Aquatic Invertebrates Laboratory	1
		12. Fisheries Statistics	3
		Semester III	
		1. Entrepreneurship	2
		2. Muhammadiyah Studies	1
		3. Fundamentals of Aquatic Microbiology	2
		4. Fundamentals of Aquatic Microbiology Laboratory	1
		5. Experimental Design	2
		6. Aquatic Ecology	2
		7. Aquatic Ecology Laboratory	1
		8. Fundamentals of Capture Fisheries	2
		9. Aquatic Animal Physiology	2
		10. Aquatic Animal Physiology Laboratory	1
		11. Planktology	2
		12. Planktology Laboratory	1
		13. Business Planning and Analysis	2
		Semester IV	
		1. Islam and Science, Technology, and Arts	1
		2. Fundamentals of Fish Genetics	2
		3. Fundamentals of Fish Genetics Laboratory	1
		4. Live Feed Culture	2
		5. Live Feed Culture Laboratory	1
		6. Oceanography	2
		7. Oceanography Laboratory	1
		8. Basic Swimming Skills	1
		9. Fisheries Product Processing Technology	2
		10. Fisheries Product Processing Technology Laboratory	1
		11. Occupational Safety and Health	2
		12. Research Methodology	2
		13. Environmental Impact Assessment	2
		14. Digital Technology I (Software Applications)	2
		Semester V	

			1. Principles of Aquaculture Biotechnology	2
			2. Principles of Aquaculture Biotechnology Laboratory	1
			3. Fish Nutrition	2
			4. Fish Nutrition Laboratory	1
			5. Ornamental Fish and Aquascaping	2
			6. Ornamental Fish and Aquascaping Laboratory	1
			7. Fish Parasites and Diseases	2
			8. Fish Parasites and Diseases Laboratory	1
			9. Geographic Information Systems (GIS) for Aquaculture	2
			10. Geographic Information Systems (GIS) Laboratory for Aquaculture	1
			11. Integrated Coastal and Marine Resource Management	2
			12. Aquaculture Quality Management Systems	2
			13. Fisheries Communication and Extension	2
			14. Digital Technology II (Generative Artificial Intelligence)	2
			Semester VI	
			1. Water Quality Management	2
			2. Water Quality Management Laboratory	1
			3. Fish Feeding Technology and Management	2
			4. Fish Feeding Technology and Management Laboratory	1
			5. Aquaculture Engineering	2
			6. Aquaculture Engineering Laboratory	1
			7. Seed Production Management	2
			8. Seed Production Management Laboratory	1
			9. Freshwater, Brackish Water, and Marine Aquaculture Management	2
			10. Freshwater, Brackish Water, and Marine Aquaculture Management Laboratory	1
			11. Fish Health Management	2
			12. Fish Health Management Laboratory	1
			13. Sustainable Aquaculture	2
			Semester VII	
			1. Business Incubation	4
			2. Internship	4
			3. Community Service	4
			4. Seminar	1
			5. Thesis	5
			Total	144 credits
F.	Values Propositions	:	1. Preparing students with Python programming 2. Implementing intensive foreign language programs in the first academic years 3. Providing international classes 4. Providing the Center of Excellence (CoE) program in Professional Class of Shrimp Cultivation 5. Providing the Center of Excellence (CoE) program in Professional Class of Carp Cultivation	