Module Handbook: Practices of Water Quality Management

A Module Handbook or collection of module descriptions that are also available for students to consult should contain the following information about the individual modules:

Module designation	This practice is a laboratory and field practice course of Water Quality Management. This practice aims to understand the principles and work of water quality analysis and management in aquaculture consist of physical, chemicals, and biological parameters.
Module level, if applicable	Undergraduate
Code, if applicable	PIA 20192268
Subtitle, if applicable	Praktikum Manajemen Kualitas Air
Courses, if applicable	-
Semester(s) in which the module is taught	4th
Person responsible for the module	Prof. Dr. Ir. Rustadi, M.Sc.
Lecturer	Prof. Dr. Ir. Rustadi, M.Sc. Dr. Ir. Bambang Triyatmo, M.P.
Language	Indonesian
Relation to curriculum	Study Program, Compulsory
Type of teaching, contact hours	Teachings are conducted in the laboratory and field with 50-60 students within 16 session (110 min/session). The learning method consists of practices and discussions, case studies, and collaborative learning (60 min/session).
Workload	1 SKS x 170 minutes x 16 sessions = 2720 minutes = 45.33 hours = 45.33 hours/ 30 hours = 1.51 ECTS

Credit points	1 credit point
Requirements according to the examination regulations	Students must fully attend (100%) all of the effective laboratory sessions to be eligible to take the post-test.
Recommended prerequisites	Water Quality Management
Module objectives/intended learning outcomes	Program Learning Outcome: PLO8-KK3: To be able to conduct aquaculture activity start from design and construct aquaculture containers and supporting facilities, manage to produce fish-seed, feeds, health, water quality, and harvest of freshwater, brackish water, and marine organisms through good fish hatchery practices and good aquaculture practices in environment, analyze of socio-economic. Course Learning Outcomes: CO-1: Perform water quality analysis: physical, chemicals, and biological parameters in aquaculture (PLO8-KK3). CO-2: Perform water quality management: physical, chemicals, and biological parameters in aquaculture (PLO8-KK3).

Content	1. Practical materials and equipment for water quality parameters analysis and management 2. Regulate sunshine and temperature of water and room 3. Filter and suspend turbid water 4. Regulate fluctuating water pH 5. Increase low water alkalinity and hardness 6. Increase low dissolved oxygen 7. Decrease high poisonous gases 8. Regulate planktonic dense
Study and examination requirements and forms of examination	Lectures Quizzes, assignments Laboratory sessions
Media employed	LCD Zoom Lab Manual
Reading list	Boyd, C.E., 1982. Water Quality Management for Pond Fish Culture. Elsevier Sci. Pub. Co. Inc., New York. Losordo, T. M., dan Timmons, M.B.1994 (eds). Aquaculture Water Reuse Systems: Engineering Design and Management. Elsevier, Amsterdam.