Undergraduate Programme in Biology

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MODULE HANDBOOK

Module Name	Aquatic Ecology
Module level, if applicable	Bachelor
Code, if applicable	BIO425031
Subtitle, if applicable	-
Courses, if applicable	
Semester(s) in which the module is taught	5th (fifth)
Person responsible for the module	Chair of Ecology Laboratory
Lecturer(s)	Dr. Eka Sulistiyowati, M.A, M.IWM Ardyan Pramudya K, M.Sc
Language	Indonesia
Relation to curriculum	Elective course in the third year (6th semester) Bachelor Degree
Type of teaching, contact hours	100 minutes lectures and 120 minutes structured activities per week.
Workload	Total workload is 136 hours per semester, which consists of 100 minutes lectures per week for 14 weeks, 120 minutes structured activities per week, 120 minutes individual study per week, in total is 16 weeks per semester, including mid exam and final exam
Credit points	3 credits (4,5 ECTS)
Requirements according to the examination regulations	
Recommended prerequisites	No prerequisites stated on
Module objectives/intended learning outcomes	After completing this course, the students are able to: CO 1. Understand the concepts, theories, and factors contributing to process in the aquatic environment CO 2. Performed sampling techniques to aquatic biodiversity CO 3. Determine the quality of aquatic ecosystem
Content	a. The abiotic and biotic components of the fresh water ecosystem, sea waters and their interactions; b. Characteristics of freshwater, estuary and marine organisms. Biodiversity and types of Aquatic Organisms, a. Characteristics of freshwater, estuary and marine organisms, b. Biodiversity and types of Aquatic Organisms; c. Development of aquatic ecology in the fields of fisheries, agriculture & plantations and tourism, alternative development, Principles and applications of aquatic ecology; d. Practical aquatic ecology for Planners, Developers and coastal areas; e. Integrate and analyze in aquatic Journal Presentations including national and international journal

	f. The interaction between the environment and the diversity of aquatic organisms, a. Diversity of aquatic animals, b. Diversity of aquatic plants and c. Applied Ecology; g. Carbon stock of aquatic ecosystems, a. Sources of carbon stocks in waters. b. Carbon distribution in aquatic ecosystems; h. Application of aquatic conservation modeling; a. Concept of Aquatic Conservation, b. Habitat, Species, Examples & models of conservation; i. National policy to aquatic ecosystem management j. Aquatic ecosystem management
Study and examination requirements and forms of examination	The final mark will be weighted as follows: The final assessment is expressed in the form of a letter value converted from a number value with the following categories:
Media employed	White-board, Lcd Projector, e-learning (https://daring.uin-suka.ac.id/)
Reading list	1. Goldman, C.R., Horne, A. J. 1983. Limnology. McGraw-Hill. New York 2. Lampert, W., Sommer, W. Limnoecology The Ecology of lakes and Stream. 2nd Edition. Oxford University Press. New York 3. Nybakken, J. W., Bertness, M.D. 2005. Marine Biology "An Ecological Approach. 6th Edition. Pearson Education, Inc. San Francisco 4. English, S.C., Wilkinson, and V., Baker (Edit). 1994. Survey manual for tropical marine resources. ASEAN-Australian Marine Science project. Australia 5. Sumich, J.L. 1992. An introduction to the biology of marine life 5th ed. Wm. C. Brown Publ. 6. Wetzel, R.G. 2001. Limnology. 2nd ed. Sounders College Publ. Philadelphia 7. Altermatt, F. 2013. Diversity in riverine metacommunities: a network perspective. Aquat Ecol (2013) 47:365–377

The final mark will be weighted as follows:

NO	Assessment methods (components, activities)	Weight (percentage)
1	Final Examination	30%
2	Mid-Term Examination	30%
3	Class Activities : Quiz, Homework, etc.	40%

The final assessment is expressed in the form of a letter value converted from a number value with the following categories:

NO	Number Value	Letter Value	NO	Number Value	Letter Value
1	≥ 95	A	7	65-69.99	B/C
2	90-94.99	A-	8	60-64.99	C+
3	85-89.99	A/B	9	55-59.99	C
4	80-84.99	B+	10	50-54.99	C-
5	75-79.99	B	11	55-34.99	D
6	70-74.99	B-	12	<35	E

PLO and CO Mapping

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9	PLO 10	PLO 11
CO 1				√							
CO 2				√	√				√		
CO 3				√							