

Bachelor of BiologyEmail: biologi_fmipa@um.ac.idWebsite: http://biologi_fmipa.um.ac.id/**MODULE HANDBOOK**

Module designation	Phycology
Module level, if applicable	Undergraduate
Code, if applicable	NBIOUM6309
Subtitle, if applicable	-
Courses, if applicable	-
Semester(s) in which the module is taught	Even semester
Person responsible for the module	Sitoresmi Prabaningtyas, S.Si, M.Si
Lecturer	Sitoresmi Prabaningtyas, S.Si, M.Si
Language	Bahasa Indonesia
Relation to curriculum	Undergraduate degree program, elective, 6st semester
Type of teaching, contact hours	Undergraduate degree program: cooperative learning, presentation, laboratory work, 2 x 50 = 100 minutes and 1 x 170 minutes.
Workload	1. Lectures: 2 x 50 = 100 minutes (1.67 hours) per week. 2. Exercises and Assignments: 2 x 60 = 120 minutes (2 hours) per week. 3. Laboratory work: 1 x 170 minutes (2.83 hours) per week. 4. Private study: 2 x 60 = 120 minutes (2 hours) per week.
Credit points	3 credit points (~5 ECTS-eq)
Requirements according to the examination regulations	A student must have attended at least 80% of the lectures to be eligible for the final examination.
Recommended prerequisites	-
Module objectives/intended learning outcomes	Students are able to: (LO4) Apply basic concepts, principles and procedures of biology to design investigations as an effort to solve problems in the health, food and environment sectors using technological applications.
Course learning activity	1. Mastering concepts, principles, and procedures in the field of phycology that are integrated with the basic concepts of protists, biochemistry and microbiology. 2. Designing investigations independently, creatively and innovatively by finding, analyzing, and solving problems in the field of phycology comprehensively. 3. Applying technology in the field of phycology to produce accurate and accountable data for the purposes of prognosis, diagnosis and problem solving in the field of phycology through a research-based approach.
Content	This course covers the following main topics: ● Morphological, cytological, taxonomic studies. ● algae physiology and ecology; ● Various roles of algae in human life in the fields of environment, food and health; ● Algae isolation and cultivation techniques,

	• how to extract agarophytes, caraginophytes and alginophytes from macroalgae.	
Learning activity	Week 1	Explaining algae habitat
	Week 2	Explaining the classification of algae
	Week 3	Explaining the classification of algae
	Week 4	Analyzing and explaining the role of algae as bioindicators
	Week 5	Analyzing and explaining the role of algae as bioindicators
	Week 6	Analyzing and explaining the role of algae as natural food
	Week 7	Analyzing and explaining the role of single cell protein (PST) source algae
	Week 8	Understanding and explaining the role of algae in the health sector
	Week 9	Explaining the role of algae as food
	Week 10 - 12	Explaining the content of macroalgae
	Week 13	Knowing the composition of microalgae isolation media Knowing how to make microalgae isolation media
	Week 14 - 16	Explaining the microalgae isolation technique Explaining the technique of microalgae culture
Study and examination requirements and forms of examination	Assignment, Quiz, Midterm examination, Final examination, Performance	
Media employed	LCD, power point, white board, video and moodle (Sipejar)	
Reading list	1. Gupta, J.S. 1981. Textbook of Algae. New Delhi : Oxford & IBH Pub. 2. Chapman, V.J. 1970. Seaweed And Their Uses. Methuen and Co. LTP. London. 3. Lee,R.E, 1980. Phycology. Cambridge University Press, Cambridge 4. Sze, P. 1993. A Biology of The Algae. Second Edition. WM. C. Brown. Pub. Melbourne. 5. Taylor, W.R. 1972. Marine Algae of The Eastern Tropical and subTropical Coast of The Americas	
Date of last amendment made	January, 2022	