Module Description of Basic Biology

Module Name	:	Basic Biology
Module Level	:	Bachelor of Mathematics
Code, if applicable	:	23H04110102
Subtitle, if applicable	:	-
Courses, if applicable	:	Basic Biology
Semester(s) in which the module is taught	:	1 (First Semester)
Module coordinator(s)	:	Drs. Ambeng, M.Si
Lecturer(s)	:	BIology Lecturer Team
Language	:	Indonesian Language (Bahasa Indonesia)
Relation to curriculum	:	This course is a compulsory course and offered in first semester
Type of teaching		Group discussion, problem-based learning
Contact hours	:	100 minutes lectures per week, 120 minutes structured activities per week, and 120 minutes independent study per week
Workload	:	Total workload is 90 hours per semester which consists of 26 hours for Learning and Teaching, 32 hours for Self-Study, and 32 hours for Structured Works
Credit points	:	2 (3.2 ECTS)
Requirements according to the examination regulations	:	Students are required to attend at least 80% of the total meetings which is recorded via the attendance menu at https://sikola-v2.unhas.ac.id/, complete all mandatory assignments, and obtain permission from the lecturer to participate in the examination.
Recommended prerequisites	:	None
Module objectives/intended learning outcomes	:	Intended Learning Outcomes (ILO): ILO 3: Students are able to use the basic principles of physics in technology application. [ILO 1] ILO 7: Students are able to identify the physical problems based on the experimental results. [ILO 7] Course Learning Objective (CLO): ILO 3 ⇒ CLO 1: Students are able to analyze basic concepts in organisms and interactions with their environment. ILO 7 ⇒ CLO 2: Students are able to analyze the concepts of metabolism, reproduction, coordination of organisms and the application of biotechnology in the development of science in their respective fields.
Content	:	Students will learn about: 1. Basic Biology Courses Cover The Basic Concepts Biology 2. Basic Units of Life

		3. Metabolism 4. Cell Division 5. Inheritance of Traits 6. Reproduction in Organisms 7. Coordination Systems in Organisms 8. Homeostatis as Well as Knowledge of Ecology 9. Classification and Basics in Biotechnology
Study and examination requirements	:	Study and examination requirements: 1. Students must attend 15 minutes before the class starts 2. Students must inform the lecturer if they will not attend the class due to sickness, an urgent need, etc. 3. Students must submit all class assignments before the deadline 4. Students must switch off/silent all electronic devices 5. Students must the attend the exam to get final grade
Exams and assessment formats	:	Assesment weight: Report 50%, Written Exam = 50% Reports measure analytical and writing skills. The Written Exam assesses comprehension and synthesis of all materials discussed during the semester. Altogether, these components account for 100% of the final grade.
Reading list	:	Main: 1. Teaching materials / basic biology materials on the LMS. 2. Campbell, et al. 2003. Biology Volume 1: Erlangga 3. Campbell, et al. 2003. Biology volume 2. Jakarta: Erlangga 4. Campbell, et al. 2003. Biology jillid 3. Jakarta: Erlangga 5. Odum, E, P., 1998. Fundamentals of Ecology, third edition. UGM Press: Yogyakarta Support: 1. Barrett, J,M., 1986. Biology. Prentice-Hall, Englewood Cliffs, New Jersey 2. Odum, E, P., 1998. Dasar-Dasar Ekologiedisi ketiga. UGM Press: Yogyakarta. 3. Rompas, Y., Rampe, H.L., dan Rumondor, M.J. 2011. Struktur Sel Epidermis dan Stomata Daun Beberapa Tumbuhan Suku Orchidaceae. Jurnal Bioslogos. 1(1): 13-19. 4. Novitasari, R. 2017. Proses Respirasi Seluler pada Tumbuhan. Prosiding Seminar Nasional Pendidikan Biologi dan Biologi. UNY: FMIPA Biologi. 5. Wolf, J.B., Smith, A. C.F., dan Lorenz, A. 2022. Mendel's laws of heredity on his 200th birthday: What have we learned by considering exceptions?Heredity. 129: 1-3.

		6. Pereira, A. M., dan Coimbra, S. 2019.Advances in plant reproduction: from gametes to seeds. Journal of Experimental Botany. 70(11): 2933-2936. 7. Moore, S.G. dan Hasier, J.F., 2017. A 100-Year Review: Reproductive Technologies in Dairy Science. Journal of Diary Science. 100(12): 10314-10331. 8. Afrilianti, C., Sataral, M., Eljonnahdi, dan Fahri, F. 2019. Deskripsi Dan Habitat Mycalesis Perseus Fabricius, 1775 (Rhopalocera: Nymphalidae) Spesies Kosmopolitan Di Gunung Tompotika, Sulawesi. Journal of Dcience and Technology. 8(2): 134-137. 9. Kusmana, C., dan Hikmat, A. 2015. Keanekaragaman Hayati Flora di Indonesia. Jurnal Pengelolaan Sumberdaya Alam dan Lingkungan. 5(2): 187-198. 10. Mauerhofer, L.M., Pappenreiter, P.,Paulik, C., Selfert, A. H., Bernacchi, S., dan Rittmann, S.K.M.R. 2019. Methods for quantification of growth and productivity in anaerobic Microbiology and Biotechnology. Folla Microbiol. 64: 321-260.
Last Updated	:	June 5th, 2023