



THE MODULE HANDBOOK

FACULTY OF BIOLOGY

Microbial Physiology

Module code	BIO 50503
Module level	Undergraduate
Abbreviation, if applicable	-
Sub-heading, if applicable	-
Courses included in the module, if applicable	-
Semester/ term	Odd
Module coordinator(s)	Prof. Dra. Endang Sutariningsih Soetarto, M.Sc., Ph.D.
Lecture(s)	1. Dr. Miftahul Ilmi, S.Si., M.Si. 2. Sari Darmasiwi, S.Si., M. Biotech.
Language	Indonesia
Classification within the Curriculum	Elective
Teaching format/ class hours per week during the semester	1. This course is organised into a single class and planned to have 13 to 14 teaching weeks and 2-3 weeks of examination. 2. The course is delivered in class once a week for 2 hours using a mixture between teacher centered and student centered learning style. Active discussion is encouraged.
Workload	Estimated working hour: 4 hours/week.
Credit points	2-0 credits
Requirements	Microbiology (BIO 40501)
Learning goals/ competencies	1. Students understand the scope and roles of microbial physiology, and connections between structure and function of cells. 2. Learning connections between microbial metabolism, growth, and morphological changes in cell reproduction and dispersion. 3. Studying intrinsic and extrinsic factors which influence microbial growth and development. 4. Developing theoretical, practical, and technical skills in the application of microbial physiology for sustainable management of microbial biomass. 5. Developing data analytical proficiency



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	Developing team player mentality.
Content	Main subjects of the course: <ol style="list-style-type: none">1. Cytochemistry of microbial cell2. Physiological implication of nutrition microbial growth and death3. Central metabolisms and bioenergetics4. Biogenesis and function of macromolecules5. Integration of microbial metabolic processes6. Microbial eco-physiology
Study/ exam achievements	Midterm: 25 % Final Examination: 50 % Presentation, attendance, and class activity: 25 %
Forms of media	White board, LCD, online materials
Literature	<ol style="list-style-type: none">1. Brock Biology of Microorganisms (Madigan <i>et al.</i>)2. Microbial Physiology, 4th edition (Moat <i>et al.</i>)