



THE MODULE HANDBOOK
FACULTY OF BIOLOGY
MASTER PROGRAMME

MICROBIAL SYSTEMATICS

Module code	BIO-60502
Module level	1 st year of Master Program in Biology
Abbreviation, if applicable	-
Courses related	-
Semester	Odd
Course coordinator(s)	Dr. Endah Retnaningrum, M.Eng.
Lecture(s)	1. Dr. Endah Retnaningrum, M.Eng. 2. Dr. Miftahul Ilmi, M.Si.
Language	Bahasa Indonesia and English
Classification within the Curriculum	Compulsory Courses
Teaching format/class hours per week during the semester	This course is organized into one class and planned to have 14 teaching weeks and 2 weeks of examination. This course also has laboratory works credits.
Workload	Estimated working hour: 10.5 hours/week.
Credit	2-1 credits
Requirements	-
Course Learning Outcome	<ol style="list-style-type: none">1. Understand basic theory and instrumentation for conducting microbial systematic research.2. Understand biological phenomena at various levels and able to explain the relevance of the theory of evolution to microbial diversity.3. Understand the basic principles and practices of microbial systems as well as the concepts underlying the development of microbial classification, both traditional classification, phenetic, and phylogenetic classification to identify microbes.
Syllabus	Microbial Systematics is the study of microbial diversity and relations between each other, both relationships that are similar (phenetic) and kinship relationships (phylogenetic). This field of study has an important role in producing useful information about microbes. The development of chemical, molecular and Informatic Technology analyzes has led to significant evolutionary changes and produced the systematics of modern microbes. These evolutionary changes, especially in the classification and identification of microbes, especially bacterial groups, will be better able to answer problems related to microbes. The database used in the classification and identification system of



THE MODULE HANDBOOK

FACULTY OF BIOLOGY

MASTER PROGRAMME

	microbes will produce formulations in the discovery of useful rare and new (novel) microbial types in applications. Modern microbial systems can also provide information on microbial diversity in a variety of life, detecting fast target microbes so that they are very useful in all fields.
Study/exam achievements	a. Midterm: 40% b. Final examination: 40% c. Homework: 20%
Forms of media	White board, notebook, LCD
Reference	<ol style="list-style-type: none">1. Goodfellow, M. 2000. Microbial Systematics: Background and Uses. In Applied Microbial Systematics (F.G. Priest & M. Goodfellow, Eds.). Kluwer Academic Publisher.2. Stackebrandt, E., Tindall, B., Ludwig, W. & Goodfellow, M. 1999. Prokaryotic Diversity and Systematics. In Biology of The Prokaryotes (J.W. Langelier, G. Drews & H.G. Schlegel, Eds.), Blackwell Science, Thieme Stuttgart, New York.3. Logan, N.A. 1994. Bacterial Systematics. Blackwell Scientific Publications. Oxford. UK
