Module Handbook

Module Name:	Bacteriology (Practical Work)
Module Level:	Bachelor
Abbreviation, if applicable:	BIM104
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/term:	Even
Module coordinator(s):	Dr. Ni'matuzzahroh
Lecturer(s):	Dr. Ni'matuzzahroh Tri Nurhariyati, S.Si, M.Kes. Drs. Agus Supriyanto, M.Kes
Language:	Indonesian language
Classification within the curriculum	~~Compulsory Course~~ / Elective Studies
Teaching format / class hours per week during semester:	300 minutes/ week
Workload:	100 min lecture + 100 min structural assignment + 100 min self-assignment x 13 weeks; total 3900 min = 65 hours 65/25 = 2.6 ECTS
Credit point	1
Requirements	General Microbiology
Learning goals/competencies	**General competence (skill)** Students are able to carry out the isolation and identification of bacteria and compile the characteristics of bacteria **Specific competence** 1. Students are able to carry out vary of painting technique and evaluate the carried painting 2. Students are able to show the related of turbidity and concentration of cell 3. Students are able to carry out the characterization and characterize of Escherichia coli and coliform bacteria 4. Students are able to carry out and compile the characteristic of Actinomycetes group 5. Students are able to carry out isolation and characterize anaerobic bacteria 6. Students are able to carry out the characteristic of Gram positive coccus bacteria 7. Students are able to carry out effectiveness test of antiseptic on bacteria growth 8. Students are able to isolation and characterization of nitrogen-fixing bacteria 9. Students are able to carry biomonitoring water waste microbiologically

	10. Students are able to perform the degrading bacteria isolation and characterization of heavy metal degrading bacteria 11. Students are able to carry isolation and characterization of hydrocarbon degrading bacteria
Content	Morphology and Gram painting, Counting correlation of turbidity cell with cell concentration, Characterization of Escherichia coli bacteria and coliform, Characterization bacteria of Escherichia coli and coliform, characterization of Actinomycetes, isolation and characterization of anaerobic bacteria, characterization of Gram positive coccus bacteria, antiseptic effectivity on bacteria growth, isolation and characterization of nitrogen-fixing bacteria, biomonitoring water pollution, isolation and characterization of degrading hydrocarbon bacteria,
Soft skill Attribute	Diclipline and team work
Study/ exam achievements	Students are considered to be competent and pass if at least get 40% of maximum. Final score (NA) is calculated as follow: 20% (structural assignment + soft skill) + 40% mid exam + 40% final exam Final index is defined as follow: A : 75 - 100 AB : 70 - 74.99 B : 65 - 69.99 BC : 60 - 64.99 C : 55 - 59.99 D : 40 - 54.99 E : 0 - 39.99
Form of media	Laboratory equipment
Learning Method	Practical work and discussion
Literature	a. Salle, A.J.1961. *Fundamental Principles of Bacteriology*, Mc. Graw Hill Book Company. Inc. New York, Toronto, London. b. Koneman, E.W. 1988. *Diagnosis Microbiology.* J.B. Lippincott Company. c. Holt, J.G. 1994. *Bergeys Manual of Determinatif Bacteriology*. William & Wilkins Baltimore
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