THE MODULE HANDBOOK
FACULTY OF BIOLOGY

Mathematics

Module code	MMS 1107IUP
Module level	1st year of Undergraduate Program in Biology
Abbreviation, if applicable	-
Sub-heading, if applicable	-
Courses included in the module, if applicable	-
Semester/term	Odd
Module coordinator(s)	Dr. Irwan Endrayanto Aluicius, S.Si., M.Sc.
Lecture(s)	Dr. Irwan Endrayanto Aluicius, S.Si., M.Sc.
Language	English
Classification within the Curriculum	Compulsory Course
Teaching format/class hours per week during the semester	This course is thought in semester 1, has been planned to have 13 or 14 week-meetings per semester and 2 – 3 weeks of examination. Combine with teacher centerred method, Student Centered Learning (SCL) method using Problem Based Learning (PBL) approach is applied during some week teachings, especially when teaching topics need elaboration of students knowledge.
Workload	Estimated working hour: 10,5 hours/week.
Credit points	2-0 credits
Requirements	-
Learning goals/ competencies	1. Students have the ability to understand basic mathematical problems in accordance with the topics discussed. 2. Students are able to solve the basic mathematical problems. 3. Students are able to apply basic mathematical theory in real problems.
Content	The Mathematics course learns about the real number system and inequalities, relations and functions, limits of functions and continuity, derivative, derivative applications, Taylor series.

Study/ exam achievements	1. Midterm: 40% 2. Final examination: 40% 3. Individual task: 10% 4. Group assignment: 10%
Forms of media	White board, LCD and laptop
Literature	1. J. Stewart, 1999, Calculus, 4th edition, Brooks/ Cole Pub. Comp. 2. A. Mizrahi and Sullivan, 1982, Calculus and Analytic Geometry, Warsworth Publishing Comp. 3. G.L Bradley and K.J Smith, 1995, Calculus, Prentice Hall Inc. 4. Purcell, E.J. Kalkulus, Erlangga.