



Universitas Brawijaya
Faculty of Mathematics and Natural Sciences
Department of Statistics / Bachelor Statistics Study Programme

Module Handbook

Module Name:	Sciences (MAS62212)
Module Level:	Bachelor
Abbreviation, if applicable:	-
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/term:	2nd / First Year
Module Coordinator(s):	Dr. Dra. Ani Budi Astuti, M.Si
Lecturer(s):	Prof. Dr. Ir. Waego Hadi Nugroho, M.Agr Prof. Dr. Ir. Henny Pramoedyo, MS
Language:	Indonesian
Classification within the curriculum:	Elective Course
Teaching format / class per week during semester:	2 × 50 minutes
Workload:	1.67 hours lectures, 2 hours structural activities, 2 hours individual studies, 16 weeks per semester, and total 90.67 hours per semester 3 ECTS
Credit Points:	2
Requirements:	-
Learning goals / competencies:	General Competence (Knowledge):
	ILO5 The students are able to apply logical, critical, systematic, and innovative thinking independently when applied to science and technology that contain humanities values, based on scientific principles, procedures and ethics with excellent and measurable results.
	ILO6 The students are able to take appropriate decisions to solve the problems expertly, based on the information and data analysis.
	ILO7 The students are able to improve and develop a job networks, then supervise and evaluate the team's performance they lead.
	ILO8 The students are able to apply and internalize the spirit of independence, struggle, entrepreneurship, based on values, norms, and academic ethics of Pancasila in all aspects of life.
	Specific Competence:

	M1	Students are able to understand and explain the characteristics of science, the definition of science from various perspectives and analysis of scientific characteristics associated with Statistics science and case examples (ILO5, ILO6, ILO7, ILO8).
	M2	Students are able to understand and explain various science topics based on the characteristics of science, the interaction of science and technology and how science works which is associated with Statistics (ILO5, ILO6, ILO7, ILO8).
	M3	Students are able to understand and explain matter and energy, energy sources, living things and the environment, the universe and the solar system as well as earth events related to Statistics science and case examples (ILO5, ILO6, ILO7, ILO8).
	M4	Students are able to understand and explain scientific methods, the application of scientific methods to solve science problems in everyday life, covering the fields of Mathematics, Statistics, Physics, Biology, Chemistry, Medicine, Engineering and Economics and emphasize on Statistics science (ILO5, ILO6, ILO7, ILO8).
Contents:	1	The characteristics of science, the definition of science from various perspectives and analysis of scientific characteristics associated with Statistics.
	2	A variety of science topics are based on the characteristics of science, the interaction of science and technology and how science works in relation to Statistics science.
	3	Material and energy, energy sources, living things and their environment, the universe and the solar system and earthly events associated with Statistics.
	4	The scientific method, the application of scientific methods to solve science problems in everyday life, covers the fields of Mathematics, Statistics, Physics, Biology, Chemistry, Medicine, Engineering and Economics and emphasizes Statistics in science.
Soft skill attribute:	Responsible, independently, and discipline	
Study/exam achievement:	Final score (NA) is calculated as follow: 5% Attitude, 10% Assignments, 20% Group Assignment and Presentation, 15% Quizzes, 20% Midterm Exam, 20% Final Exam Final index is defined as follow: A : > 80 - 100	

	<p>B+ : > 75 - 80</p> <p>B : > 69 - 75</p> <p>C+ : > 60 - 69</p> <p>C : > 55 - 60</p> <p>D+ : > 50 - 55</p> <p>D : > 44 - 50</p> <p>E : 0 - 44</p>
Forms of media:	LCD and Projector
Learning methods:	Lecture, assessment, and group discussion
Literature:	Main:
	1. Hewitt, P. G., Lyons, S., Suchocki, J. A., Yeh, J. 2007. Conceptual Integrated Science. San Francisco: Pearson Educations, Inc.
	2. University of California. 2012. Understanding science: How science really work?. Accessed from http://undsci.berkeley.edu/ on August 10, 2012.
	Support:
	1. Erickson, B. H. dan Nosanchuck, T. A. 2002. Understanding Data. Ed. Ke-2. Berkshire: Open University Press.
Notes:	