



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

Module Handbook

Module Name:	Advance Computational Statistics (MAS62134)
Module Level:	Bachelor
Abbreviation, if applicable:	-
Sub-heading, if applicable:	-
Courses included in the module, if applicable:	-
Semester/term:	6th / Third Year
Module Coordinator(s):	Dr. Adji Achmad Rinaldo Fernandes, S.Si, M.Sc
Lecturer(s):	Dr. Adji Achmad Rinaldo Fernandes, S.Si, M.Sc
Language:	Indonesian
Classification within the curriculum:	Elective Course
Teaching format / class per week during semester:	2 × 50 minutes + 100 minutes laboratory session
Workload:	1.67 hours lectures, 2 hours structural activities, 2 hours individual studies for 16 weeks + 1.67 hours laboratory session, 2 hours structural activities, 2 hours individual studies for 8 weeks and total 136 hours per semester 4.50 ECTS
Credit Points:	3
Requirements:	Computational Statistics (MAS61132)
Learning goals / competencies:	General Competence (Knowledge):
	ILO4 The students are able to master at least two statistical softwares, including based on open source.
	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.
	Specific Competence:
	M1 Students are able to design system components (ILO4, ILO5)
	M2 Students are able to build system design.
M3 Create a system that is easy to use for computational statistics.	
Contents:	1 System and components
	2 Flow data charts

	3	Graphical User interface: Components and Design of GUI
	4	Build GUI using R and/or Matlab
	5	Build function for computational statistics
	6	Implementation of GUI system
	7	Case studies of design and implementation of computational statistics
Soft skill attribute:	Responsible, independently, and discipline	
Study/exam achievement:	<p>Final score (NA) is calculated as follow: 10% Post Test, 10% Assignments, 20% Quizzes, 30% Midterm Exam, 30% Final Exam</p> <p>Final index is defined as follow:</p> <p>A : > 80 - 100</p> <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:	Software (R, Matlab), Laptop, LCD projector, whiteboard	
Learning methods:	Lecture, assessments, and discussion	
Literature:	Main:	
	1. Dalgaard, P. 2002. Introductory Statistics with R. Springer-Verlag New York Inc	
	Support:	
	1. Maindonald. 1984. Statistical Computation. Wiley. USA	
	2. Minitab, Inc. 1994. Minitab Reference Manual Release 10.2 For Windows. Minitab Inc, USA	
Notes:		