



UNIVERSITAS GADJAH MADA
 Faculty of Mathematics and Natural Sciences
 Mathematics Department

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Undergraduate Program in Statistics

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MODULE HANDBOOK

Module name	Pengantar Model Probabilitas (Introduction to Probability Modelling)
Module level, if applicable	Bachelor
Code, if applicable	MMS 2410
Subtitle, if applicable	-
Courses, if applicable	Pengantar Model Probabilitas (Introduction to Probability Modelling)
Semester(s) in which the module is taught	3/ second year
Person responsible for the module	Prof. Dr. Sri Haryatmi Kartiko, M.Sc.
Lecture(s)	Dr. Gunardi, DrAbdurakhman, Prof. Dr. Sri HaryatmiKartiko, M.Sc.
Language	Bahasa Indonesia
Classification within the Curriculum	Compulsory course/ Elective Studies
Teaching format /classhours per week during the semester:	3 hours lecture
Workload	3 hours lectures, 3 hours structured activities, 3 hours individual study, 16 weeks per semester (including mid-term and final examinations), 144 hours per semester.
Credit points	3
Requirements	MMS-1102 Kalkulus II (Calculus II)
Module objectives/intended learning outcomes	By the end of this course, you should see improvement in your ability to: CO 1. Calculate probability of event and conditional event CO 2. Obtain the mean, variance, moment generating function of a random variable including random variables with specific distribution CO 3. Calculate quantity concerning with joint distribution CO 4. Obtain the conditional mean and variance CO 5. Obtain the transition probability matrix using Chapman Kolmogorov equation
Content	Sample space and event, Probability, Conditional Probability, Independence, Random Variable, Expectation, Mean and Variance, Moment Generating Function, Jointly distributed random variable, Independent random variable, Conariance and variance of sum of random variable, Contitional mean and conditional variance, Limit theorem, Stochastic processes, Markov chain, Chapman-Kolmogorof equation
Study and examination requirements and forms of examination	The weight of assignments will be as follows: i. Quiz, homework 25% ii. Mid semester exam 35% iii. Final exam 40%

	Grade scale: A: $85 < \text{score} \leq 100$ A-: $80 < \text{score} \leq 85$ A/B: $75 < \text{score} \leq 80$ B+: $70 < \text{score} \leq 75$ B: $65 < \text{score} \leq 70$ B-: $60 < \text{score} \leq 65$ B/C: $55 < \text{score} \leq 60$ C+: $50 < \text{score} \leq 55$ C: $45 < \text{score} \leq 50$ C-: $40 < \text{score} \leq 45$ C/D: $35 < \text{score} \leq 40$ D+: $30 < \text{score} \leq 35$ D: $20 < \text{score} \leq 30$ E: $0 \leq \text{score} \leq 20$
Media employed	Slides and LCD projectors, whiteboards
Reading List	<ul style="list-style-type: none"> Ross, S.M., <i>Introduction to Probability Models</i>, Academic Press, 1997. Bain, L.J and Engelhart, M. <i>Introduction To Probability and Mathematical Statistics</i>, Duxbury Press, 1992.

CO and PLO mapping

	PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7
CO 1	x						
CO 2		x					
CO 3			x				
CO 4			x				
CO 5				x			