



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, Dr. Abdurakhman, Prof. Dr. Sri Haryatmi Kartiko, M.Sc.
Language	Bahasa Indonesia
Classification within the Curriculum	Compulsory course/ Elective Studies
Teaching format / class hours 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, Covariance and variance of sum of random variable, Conditional mean and conditional variance, Limit theorem, Stochastic processes, Markov chain, Chapman-Kolmogorov equation
Study and examination requirements and forms of examination	The weight of assignments will be as follows: i. Quiz, homework 15% ii. Mid semester exam 40% iii. Final exam 45% Grade scale: A 85 ≤ score A/B 75 ≤ score < 85 B 60 ≤ score < 75 B/C 50 ≤ score < 60 C 40 ≤ score < 50 D 20 ≤ score < 40 E score < 20
Media employed	Slides and LCD projectors, whiteboards
Reading List	<ul style="list-style-type: none"> Ross, S.M., <i>Introduction to Probability Models 9th edition</i>, Academic Press, 2007. 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			