

UNIVERSITAS NEGERI PADANG

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Bachelor of Science in Mathematics

MODULE HANDBOOK

Module name:	Developing Mortality Table					
Module level, if applicable:	Bachelor					
Code:	MAT2.62.8004					
Subheading, if applicable:	-					
Classes, if applicable:	Developing Mortality Table					
Semester:	8 th					
Module coordinator:	Head of Lab of Actuarial dan Finance					
Lecturer(s):	Dr. Devni Prima Sari, S.Si., M.Sc, and Dina Agustina, S.Pd., M.Sc.					
Language:	Indonesian Language and English					
Classification within the curriculum:	Elective course in the fourth year (8 th semester) Bachelor Degree					
Teaching format / class hours per week during the semester:	 a. Lectures: by Project Based Learning with methods such as presentations, group, and class discussion. (3 x 50 minutes = 150 minutes) b. Structured assignment: Group project. (3 x 60 minutes = 180 minutes) c. Individual study (3 x 60 minutes = 180 minutes) 					
Workload:	Total workload is 136 hours per semester which consists of 150 minutes lectures, 180 minutes structured activities, and 180 minutes self-study per week for 16 weeks.					
Credit points:	3 SKS = 4.53 ECTS					
Prerequisites course(s):	Actuarial					
Course outcomes:	 After taking this course the students have ability to: CO1. Determine the conditional Measures and Truncated Distributions CO2. Apply the concept of transformed random variable CO3. Analyze the problem related to other functions derives from l_x CO4. Estimated Survival Model from Samples With Incomplete Data (Censored Data) 					

Content:	This course consists of survival data, survival model, estimation						
	for complete survival data, estimation for incomplete survival						
	data, parametric survival data model, non (semi-parametric)						
	survival data model, mortality table formation.						
Study/exam achievements:	The final grade will be weighted as follows:						
	The assessment consists of a final project (40%), a midterm exam (30%), and an assignment (20%) and Class Activities (Participation, Attitude, and Presence)(10%)						
	The final project: students make an article related to the various of models that they have already learned before.						
	Weekly tasks (fixing specific problems) come in two flavors: group and individual.						
	A midterm test is taken to examine whether students understand the theory covered in the half-semester course. After collecting the group task, presentations are held in the classroom and focus on the group members' performances.						
	Attitude assessment is carried out at each meeting by observation and/or self-assessment techniques using the assumption that basically every student has a good attitude. The student is given a value of very good or not good attitude if they show it significantly compared to other students in general. The result of attitude assessment is not a component of the final grades, but as one of the requirements to pass the course. Students will pass from this course if at least have a good attitude.						
Forms of media:	White Board, laptop, Projector, e-learning via						
	elearning2.unp.ac.id, and zoom meeting.						
Literature:	 Klugman, S.A., Panjer, H.H. and Willmot, G.E. (2004). Loss Models: From Data to Decisions, 2nd Edition. New Jersey: John Wiley & Sons. London, D. (1988). Survival Models and Their Estimation, 2nd Ed. Connecticut: ACTEX Publication. 						

PLO and CO mapping

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10
CO1					\checkmark					
CO2						\checkmark				
CO3									\checkmark	
CO4										\checkmark