SEMESTER STUDY PLAN FINAL PROJECT 1 (COMPULSORY COURSE) Case Based Methods



DEPARTMENT OF MATHEMATICS AND DATA SCIENCE FACULTY OF MATHEMATICS AND NATURAL SCIENCES UNIVERSITAS ANDALAS

2024



SEMESTER STUDY PLAN (SSP) BACHELOR PROGRAM OF MATHEMATICS FACULTY OF MATHEMATICS AND NATURAL SCIENCES UNIVERSITAS ANDALAS

Course Name			Course Code	URL I	-Learn	Credits	Semester	Compilation Date					
Final Project 1			MAT60103	https://sci.ilea	arn.unand.ac.id	3	7	12 th May, 2024					
Dorcon in	Charge		Study Plan	n Creator	Head of Resear	ch Group	Head of St	Study Program					
r erson m	Charge		Dr. Ya	anita	Dr. Noverina	Alfiany	Dr. Nove	rina Alfiany					
	Intended	d Learning C	Outcomes										
Intended Learning	ILO-1	Possesses a	good ethics and i	ntegrity									
Outcomes (ILO) and		PI-1: An ab	vility to explain aca	ademic ethics and	l integrity								
Performance		PI-2: An ab	vility to act in accor	rdance with acad	emic ethics								
Indicator (PI)		PI-3: An ab	vility to act in accor	rdance with acad	emic integrity								
	ILO-2	Possesses p	profound knowled	ge of the basic co	ncept mathemati	ics							
		PI-1: An al	oility to explain ba	sic mathematical	concepts								
		PI-2: An al	-2: An ability to provide examples that are relevant to basic mathematical concepts										
		PI-3: An al	bility to determine	solutions to sim	ple problems usi	ng basic ma	thematical conc	cepts					
	ILO-3	An ability	to identify, explair	n and generalize s	simple mathemat	tical							
		PI-1: An ab	vility to identify sim	mple mathematic	al problems								
		PI-2: An ab	vility to explain sin	nple mathematica	al problems								
		PI-3: An ab	vility to generalize	simple mathema	tical problems								
	ILO-4	An ability	to use concept and	d fundamental teo	chnique of mathe	ematics in so	olving simple m	athematical					
		problems	oblems										
		PI-1: An al	bility to choose ap	propriate basic m	nathematical conc	cepts and te	chniques in sol ^y	ving simple					
		math	ematical problems	5									

	PI-2: An ability to illustrate simple mathematical problems based on appropriate basic mathematical concents and techniques
	PL 3: An ability to solve simple mathematical problems using appropriate basic mathematical concents
	and techniques
ILO-5	An ability formally and correctly proves a simple mathematical statement using facts and methods that
	have been studied
	PI-1: An ability to identify the formal structures and analogous forms in mathematics
	PI-2: An ability to use facts and apply methods in proving simple mathematical statements
	PI-3: An ability to present simple mathematical statement proof rigorously (sequentially and conscientious)
	PI-4: An ability to conclude or interpret result of the proving simple mathematical statement
ILO-7	An ability to communicate effectively especially in the area of mathematics in with diverse communities
	PI-1: An ability to convey ideas or study results orally, especially in the field of mathematics
	PI-2: An ability to present ideas or study results in writing, especially in the field of mathematics
	PI-3: An ability to respond to feedback given
ILO-9	An ability to apply knowledge of mathematics in career and involve in lifelong learning
	PI-1: An ability to carry out learning independently to deepen and expand the knowledge that has been
	obtained
	PI-2: An ability to carry out literature studies
	PI-3: An ability to prepare and realize final project plans
	PI-4: An ability to use mathematical concepts in identifying business opportunities
Course I	earning Outcomes
1	An ability to determine the topic of the final project and determine literature related to the final project.
1	(ILO-1: PI-1, PI-2, ILO-2: PI-1, PI-2, PI-3; ILO-3: PI-1, PI-2, PI-3, ILO-7: PI -1, ILO-9: PI-1, PI-2, PI-3)
2	An ability to write research topics in the form of scientific proposals (ILO-1: PI-1, PI-2, ILO-2: PI-1, PI-2,
	PI-3; CPL-3: PI-1, PI-2, PI -3, ILO-4: PI-1, PI-2, PI-3, ILO-7: PI-1, ILO-9: PI-1, PI-2, PI-3)
	An ability to write basic supporting theories of research topics using mathematical principles and scientific
3	writing. (ILO-2: PI-1, PI-2, PI-3; ILO-3: PI-1, PI-2, PI-3, ILO-4: PI-1, PI-2, PI-3, ILO-5: PI-1, PI-2, PI-3 ILO-7:
	PI-1, PI-2, PI-3, ILO-9: PI-1, PI-2, PI-3)

	An ability to solve problems related to research topics using mathematical methods and scientific writing. (ILO-2: PI-1, PI-2, PI-3; ILO-3: PI-1, PI-2, PI-3, ILO-4: PI-1, PI-2, PI-3, ILO-5: PI-1, PI-2, PI-3 ILO-7: PI-1, PI-2, PI-3, ILO-9: PI-1, PI-2, PI-3)											
Brief Description	Final Project 1 is a compulsory cour	se for writing a thesis.										
Course Materials	 Determine the research topic a Make a research proposal Create a thesis draft 	 Determine the research topic and related literature Make a research proposal Create a thesis draft 										
References	Main Related Literature											
Looming Modia	Software :	Hardware :										
	-	-										
Team Teaching	Supervisor											
Assessment	Seminar exam											
Required courses	Three elective courses related to the	e topic final project										
Academic Norms	https://akademik.unand.ac.id/ima 30%20Peraturan%20Rektor%20Nor khusus%20Bab%20II.pdf	ages/2022-03- nor%207%20Tahun%202022%20Penyelenggaraan%20Pendidikan-										

Weekly Study Plan

					Act					
Week/ Meet	Course	Indicator	Assessment	Synch	ronous*	Asynchron	ious**		Subject,	Weight
(1)	Outcomes (2)	(3)	(4)	Face to face Offline (5)	Face to face Online (6)	Individual (7)	Kolaborasi (8)	Media (9)	references (10)	(11)
1, 2	CLO-1 An ability to determine the topic of the final project and determine literature related to the final project. (ILO-1: PI-1, PI-2, ILO-2: PI-1, PI-2, PI-3 ; ILO-3: PI-1, PI-2, PI-3, ILO-7: PI-1, ILO-9: PI-1, PI-2, PI-3)	 Accuracy in determining research topics Accuracy in selecting literature related to the research topic 	Non test	Discussion		Students read and study material related to the research topic that will be used as a thesis.			Related Literature	10%
3, 4, 5	CLO-2 An ability to write research topics in the form of scientific proposals (ILO-1: PI-1, PI-2, ILO-2:	 Accuracy in making research proposals based on scientific principles Accuracy in responding to improvements 	Test : Proposal Seminar	Discussion and presentation		 Student make a research proposal Student respond to improvements provided by the supervisor 			Related Literature	10%

	PI-1, PI-2, PI- 3; CPL-3: PI-1, PI-2, PI -3, ILO-4: PI-1, PI-2, PI-3, ILO-7: PI-1, ILO-9: PI-1, PI-2, PI-3)	proposed by the supervisor						
6,7,8,9	CLO-3 An ability to write basic supporting theories of research topics using mathematical principles and scientific writing. (ILO- 2: PI-1, PI-2, PI-3; ILO-3: PI-1, PI-2, PI- 3, ILO-4: PI-1, PI-2, PI-3, ILO-5: PI-1, PI-2, PI-3 ILO- 7: PI-1, PI-2, PI-3, ILO-9: PI-1, PI-2, PI- 3)	 Accuracy in writing theories related to research Accuracy in responding to suggestions/impr ovements suggested by the supervisor 	Non test	Discussion and presentation	Students work on their thesis: Chapter 1 and Chapter 2		Related Literature	40%
10, 11, 12, 13, 14, 15,16	CLO-4 An ability to solve problems related to	• Accuracy in writing problem	Non test	Discussion and presentation	• Students work on their thesis:		Related Literature	40%

research topics	formulations in		Chapter 3 and			
research topics using mathematical methods and scientific writing. (ILO- 2: PI-1, PI-2, PI- 3; ILO-3: PI-1, PI-2, PI-3, ILO- 4: PI-1, PI-2, PI- 3, ILO-5: PI-1, PI-2, PI-3 ILO- 7: PI-1, PI-2, PI- 3, ILO-9: PI-1, PI-2, PI-3)	 formulations in research Accuracy in writing research problem-solving methods Accuracy in answering/solvi ng research problems Accuracy in writing research conclusions Accuracy in 		Chapter 3 and Chapter 4 • Student do assignment : Final Project Seminar (Assessed in a separate exam (Final project seminar)			
	responding to suggestions/im provements suggested by the supervisor					
					Total Weight	100%

1 credit = 50 minutes face-to-face meeting, 60 minutes structured study, 60 minutes independent study

Matrix of ILO and CLO

		ILO																														
CLO	1		1		1		1 2		2 3			4			5	5				6				7			8	3		9		
CLU	PI		PI		PI		PI			PI		PI		PI			PI			PI												
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	4	1	2	3	4	5	1	2	3	1	2	3	4	1	2	3	4
1																																
2																																
3																																
4																																

Indicators, Criteria, and Assessment Weights

1. Assessment weight for each Assessment

NO	Assessment	Weight (%)
1	Discussing research topics and research literature	10
2	Discussing the contents of the research proposal	10
3	Discuss and evaluate the results of the research proposal seminar	40
4	Discuss final project progress	40
	TOTAL	100

- 2. Assessment weight for Intended Learning Outcome
 - CLO-1: 10 %
 - CLO-2: 10 %
 - CLO-3: 40 %
 - CLO-4: 40 %

Assessment Plan Table

			Asse	essment		
No.	CLO	Discuss research topics and research literature (%)	Discuss the contents of the research proposal (%)	Discuss and evaluate the results of the research proposal seminar (%)	Discuss final project progress (%)	Weight (%)
1	An ability to determine the topic of the final project and determine literature related to the final project. (ILO-1: PI-1, PI-2, ILO-2: PI-1, PI-2, PI-3; ILO-3: PI-1, PI-2, PI-3, ILO-7: PI -1, ILO-9: PI-1, PI-2, PI-3)	10				10
2	An ability to write research topics in the form of scientific proposals (ILO-1: PI-1, PI-2, ILO-2: PI-1, PI-2, PI-3; CPL-3: PI-1, PI-2, PI -3, ILO-4: PI-1, PI-2, PI-3, ILO-7: PI-1, ILO-9: PI-1, PI-2, PI-3)		10			10
3	An ability to write basic supporting theories of research topics using mathematical principles and scientific writing. (ILO-2: PI-1, PI-2, PI-3; ILO-3: PI-1, PI-2, PI-3, ILO-4: PI-1, PI-2, PI-3, ILO-5: PI-1, PI-2, PI-3 ILO-7: PI-1, PI-2, PI-3, ILO-9: PI-1, PI-2, PI-3)			40		40
4	An ability to solve problems related to research topics using mathematical methods and scientific writing. (ILO-2: PI-1, PI-2, PI-3; ILO-3: PI-1, PI-2, PI-3, ILO-4: PI-1, PI-2, PI-3, ILO-5: PI-1, PI-2, PI-3 ILO-7: PI-1, PI-2, PI-3, ILO-9: PI-1, PI-2, PI-3)				40	40
	Total	10	10	40	40	100