



SEMESTER LEARNING PLAN
DEPARTMENT OF GEOMATICS ENGINEERING
FACULTY OF CIVIL, PLANNING, and GEO ENGINEERING

PROGRAM	UNDERGRADUATE	
COURSE NAME	Coastal Processes	CODE RM184945
SEMESTER	Elective Course	CREDITS 2 (two)
LECTURERS	Khomsin	
COURSE MATERIALS	1	The definition of a beach and a beach process
	2	Sea wave
	3	Sea Wave Deformation
	4	Sea level fluctuations
	5	Statistics and forecasting ocean waves
	6	Nearshore and longshore current
	7	Coastal Process
EXPECTED LEARNING OUTCOMES THAT IMPOSED IN THE COURSE	C	Able to identify, formulate, analyze and solve problems in the fields of geodesy, surveying, hydrographic, remote sensing, photogrammetry, and cadastral.
	D	Able to perform spatial data acquisition using modern measurement methods, geospatial data processing, using industry standard software, and making standard designs and analyzes in the fields of geodesy, surveying, hydrography, remote sensing, photogrammetry, and cadastral.
	E	Able to apply information & communication technology and the latest technological developments in the fields of geodesy, surveying, hydrographic, remote sensing, photogrammetry, geographic information systems, and cadastral.
COURSE LEARNING OUTCOMES	1	Students are able to understand the definition of beach and beach processes
	2	Sea wave
	3	Sea Wave Deformation
	4	Sea level fluctuations
	5	Statistics and forecasting ocean waves
	6	Nearshore and longshore current
	7	Coastal Process
ABILITY CATEGORIES	<i>Cognitive Prosecess</i>	<i>Analyse</i>
	<i>Knowledge Domain</i>	<i>Procedural</i>
	<i>Psychomotor</i>	<i>Conscious control</i>
	<i>Affective</i>	<i>Change of attitude</i>

Class	Lesson learning outcome	Criteria dan Assessment Indicator	Weight	Learning Materials	Learning Experience	Learning Methods	Estimated Time
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)

1	Students are able to understand the concepts, theories and definitions of beaches and coastal processes	Material completeness, depth of explanation, effectiveness of communication, accuracy of attitude	5	Definition of coast Type of beach Definition of beach processes Erosion Sedimentation	Lectures Presentation Discussion	Teacher centered learning Students centered learning	K : 2 x 50' R : 1 x 50' TM : 3 x 50'
2	Students are able to understand the concepts of coastal geomorphology	Material completeness, depth of explanation, effectiveness of communication, accuracy of attitude	5	Definition of coastal geomorphology Coastal sediment sources Coastal sediment analysis Distribution of coastal sediments	Lectures Presentation Discussion	Teacher centered learning Students centered learning	K : 2 x 50' R : 1 x 50' TM : 3 x 50'
3 - 4	Students are able to understand the sea waves	Material completeness, depth of explanation, effectiveness of communication, accuracy of attitude	15	Small amplitude wave theory Some definitions of waves Equations and classifications of waves Speed, pressure and wave energy	Lectures Presentation Discussion	Teacher centered learning Students centered learning Problem solving	K : 4 x 50' R : 2 x 50' TM : 6 x 50'
5 - 6	Students are able to understand about wave deformation	Material completeness, depth of explanation, effectiveness of communication, accuracy of attitude	15	Wave deformation Refraction, diffraction and reflection wave Breaking waves	Lectures Presentation Discussion	Teacher centered learning Students centered learning Problem solving	K : 4 x 50' R : 2 x 50' TM : 6 x 50'
7	Students are able to understand the sea level fluctuations	Material completeness, depth of explanation, effectiveness of communication, accuracy of attitude	10	Tsunami Sea level rise due to waves and wind Tidal sea level Definition and types of sea level elevation	Lectures Presentation Discussion	Teacher centered learning Students centered learning	K : 2 x 50' R : 1 x 50' TM : 3 x 50'
8	Mid Semester Exam						
9 - 10	Students are able to understand the statistics and forecasting of waves	Material completeness, depth of explanation, effectiveness of communication, accuracy of attitude	20	Wave statistics Wave forecasting Wave generation	Lectures Presentation Discussion	Teacher centered learning Students centered learning Problem solving	K : 4 x 50' R : 2 x 50' TM : 6 x 50'
11 - 12	Students are able to understand about nearshore and longshore current	Material completeness, depth of explanation, effectiveness of communication, accuracy of attitude	15	Nearshore current Longshore current Longshore transport	Lectures Presentation Discussion	Teacher centered learning Students centered learning	K : 4 x 50' R : 2 x 50' TM : 6 x 50'

13 - 15	Students are able to understand about nearshore and longshore current	Material completeness, depth of explanation, effectiveness of communication, accuracy of attitude	15	Coastal shape Coastal sediment properties Sediment transport mechanism by waves Coastal sediment transport Model Coastline change	Lectures Presentation Discussion	Teacher centered learning Students centered learning Problem solving	K : 6 x 50' R : 3 x 50' TM : 9 x 50'
TOTAL							100