



Bachelor Program in Geophysics

Faculty of Mathematics and Natural Sciences

HASANUDDIN UNIVERSITY

32. Coastal Dynamics

Module Name	:	Coastal Dynamics								
Module Level	:	Bachelor								
Code, if applicable	:	23H06132302								
Subtitle, if applicable	:	-								
Courses, if applicable	:	Coastal Dynamics								
Semester(s) in which the module is taught	:	V (Fifth Semester)								
Module coordinator(s)	:	Dr. Sakka, M.Si.								
Lecturer(s)	:	Dr. Sakka, M.Si.								
Language	:	Bahasa (Indonesian language)								
Relation to curriculum	:	Compulsory course in the third year for Bachelor Degree in Geophysics								
Type of teaching, contact hours	:	This course is delivered through Lectures (i.e., Project/Case-based learning), complemented by structured assignments (paper review, project/case evaluation) and independent study. Contact hours consist of 100 minutes lectures per week, plus 120 minutes per week for each of the following: structured assignments and independent study								
Workload	:	Total workload is 90 hours per semester, consisting of 28 hours for lectures, and 31 hours each for structured assignments and independent study								
Credit points	:	2 SKS (3.2 ECTS)								
Requirements according to the examination regulations	:	Students are eligible to attend the examination if their absences are less than 20% of the lectures								
Recommended prerequisites	:	-								
Module objectives/intended learning outcomes	:	After completion of this module, students will be able to: CLO 1. Students are able to analyze and model processes that occur in coastal areas such as changes in beach morphology, sediment transport, abrasion and accretion in coastal areas. The following is the mapping of the ILO and the CLO of this course: <table><tr><td></td><td>ILO 8</td><td>ILO 9</td><td>ILO 11</td></tr><tr><td>CLO 1</td><td>✓</td><td>✓</td><td>✓</td></tr></table>		ILO 8	ILO 9	ILO 11	CLO 1	✓	✓	✓
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Content	:	1. Beach Morphology 2. Nearshore Currents 3. Physical Characteristics of Beach Sediments 4. Sediment Transport 5. Beach Erosion 6. Beach Management																														
Study and examination requirements		Participants are marked based on their performance in theory: Case Study (80%), Written Examination (20%). Students are marked based on their percentage of points obtained and based on the following grade scale: <table border="1"> <thead> <tr> <th>Percentage of Achievement</th><th>Grade</th><th>Conversion Value</th></tr> </thead> <tbody> <tr> <td>85 – 100</td><td>A</td><td>4.00</td></tr> <tr> <td>80 - <85</td><td>A-</td><td>3.75</td></tr> <tr> <td>75 - < 80</td><td>B+</td><td>3.5</td></tr> <tr> <td>70 - < 75</td><td>B</td><td>3.0</td></tr> <tr> <td>65 - < 70</td><td>B-</td><td>2.75</td></tr> <tr> <td>60 - < 65</td><td>C+</td><td>2.5</td></tr> <tr> <td>50 - < 60</td><td>C</td><td>2.00</td></tr> <tr> <td>40 - < 50</td><td>D</td><td>1.00</td></tr> <tr> <td>< 40</td><td>E</td><td>0.00</td></tr> </tbody> </table>	Percentage of Achievement	Grade	Conversion Value	85 – 100	A	4.00	80 - <85	A-	3.75	75 - < 80	B+	3.5	70 - < 75	B	3.0	65 - < 70	B-	2.75	60 - < 65	C+	2.5	50 - < 60	C	2.00	40 - < 50	D	1.00	< 40	E	0.00
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Exams and assessment formats		The case study is conducted in a group or individually and requires students to apply theoretical concepts to analyze and solve a problem, culminating in a written report that is evaluated and may be revised after feedback. The written examination (<i>closed-book</i>, written) evaluates students' understanding of fundamental concepts covered by CLO 1.																														
Reading list	1.	1. Baart, S., Ebbens, R., Nammuni-Krohn, J. and Verhagen, H.J., 2010. Toe rock stability for rubble mound breakwaters. Proc. 32nd ICCE 2010, Sjanghai, China.																														



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	2. Horikawa K. 1988. Nearshore dynamics and coastal processes. Japan: University of Tokyo Press. 3. Komar PD. 1983. CRC Handbook of coastal processes and erosion. Florida: CRC Press. Inc. Boca Raton. 4. USACE (US Army Corps of Engineers). 1984. Shore protection manual. Washington DC: Department of the Army. US. Army Corp of Engineers. 5. USACE (US Army Corps of Engineers). 2003a. Meteorology and wave climate. Part II. Washington DC. Department of the Army. US. Army Corp of Engineers. USACE (US Army Corps of Engineers). 2003b. Coastal sediment processes. Part III. Washington DC: Department of the Army. US. Army Corp of Engineers
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