UNIVERSITÀ DEGLI STUDI DI BARI ALDO MORO

DIPARTIMENTO JONICO IN "SISTEMI GIURIDICI ED ECONOMICI DEL MEDITERRANEO: SOCIETÀ, AMBIENTE, CULTURE"

General information		
Academic subject	***Marine Geomorphology***	
Degree course	*Scienze e gestione delle attività marittime*	
Academic Year	*III – I*	
European Credit Transfer and Accumulation System (ECTS)		6 CFU
Language	*Italian*	
Academic calendar (starting and ending date)		
Attendance	*Strongly recommended*	

Professor/ Lecturer	
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Virtual headquarters	**Teams rt2901k**
Tutoring (time and day)	**Wednesday (1100-1300)** **Thursday (1400-1600)**

Syllabus	
Learning Objectives	*The course is aimed at learning the basics and the deepening at the level of the three-year degree of the general principles that describe the dynamics of the sea and of the landforms of the seabed and coastal area.*
Course prerequisites	*Basic knowledge of Earth Sciences and Physical Geography*
Contents	*Credit No.1 (6 hours)* *(6 hours) The planet earth: the form. The energy of the planet: endogenous energy, exogenous energy. Weather and climate; The water cycle, the hydrological balance. Relief energy concept: potential energy and kinetic energy, the basic level.* *Credit No. 2 (8 hours)* *(4 hours) The internal structure of the earth; formation, evolution and classification of continental margins, oceanic crust, mid-oceanic ridge.* *(4 hours) The shapes of the earth: morphosculptures, morphostructures, geosutures, continental plates and ocean basins. The ipsographic curve. Endogenous and exogenous landforms, primary and secondary landforms.* *Credit No. 3 (8 hours)* *(4 hours) Morphology of the seabed: continental shelf and continental slope, abyssal plains, oceanic ditches, mid-oceanic dorsal, guyot and pitons, hot spots.* *(4 hours) Physical landscape modeling processes: endogenous and exogenous agents and processes. Morphogenetic (action - process - form) and morphoclimatic systems (climate - process - form): active, inactive, relict and fossil landforms; polygenetic forms. Polygenetic landscapes, polycyclic landscapes.* *Credit 4 (12 hours)* *(6 hours) Definition of the sea level: long-cycle sea level Changes (eustatism). instantaneous sea level changes: tsunamis and storm surge.*

	(6 hours). The movements of the sea: currents, tides, waves and sesse; cause of the currents, tides, wave motion, sesse. Wave characters: fetch; the wave motion in deep and shallow water: reflection, refraction, diffraction. *Credit No. 5 (14 hours)* *(2 hours) The coastal environment, the shore line and the coastline. Classification of coasts and transition environments.* *(4 hours) The rocky coasts. Cliff and high rocky coasts, low rocky coasts: zoning of the rocky coasts; the dynamics of a cliff. Coral reefs* *(4 hours) The beaches. Classification.* *(4 hours) Tidal flats, lagoons and river mouths.*
Books and bibliography	*Lupia Palmieri E., Parlotto M. (2008) Il Globo terrestre e la sua evoluzione. Zanichelli.* *Ciccacci S. (2015) Le Forme del Rilievo. Atlante Illustrato di Geomorfologia. Mondadori* *Pranzini E. (2004) La forma della costa. Zanichelli*
Additional materials	*Books are integrated with indication of:* *ì - scientific articles and examples of geomorphological cartography;* *ìì - of web pages;* *ìiì - audiovisual*

Work schedule			
Total	Lectures	Hands on (Laboratory, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
Hours			
100	*48*		*52*
ECTS			
12,5	*6*		*6,5*

Teaching strategy	
	The teaching course is not delivered in e-learning mode; complementary marshals will be able to follow the recorded lessons. *Frontal lessons are supported by:* *ì - presentations with PPT;* *ìì - recorded lessons;* *ìiì - audiovisual;* *ìv - proposition of problems to be solved individually and in groups;* *v - seminars.*
Expected learning outcomes	
Knowledge and understanding on:	Acquisition of knowledge for the study of the physical marine and coastal landscape, its evolution and its dynamics. Acquisition of the basic knowledge and basic concepts of geomorphology through: ì - classification and definition of genetic processes and landforms; ìì – recognition, identification and naming of landforms; ìiì - understanding of the relationships between the endogenous and the exogenous dynamics active in our planet
Applying knowledge and understanding on:	ì - the correlation of different processes for the definition of a landscape and its components; ìì - the definition of different morphogenetic and morphoclimatic world systems; ìiì - the interactions of physical processes with anthropic activity; ìv – the acquisition of knowledge regarding the applicative aspect of geomorphology in the context of proper management of the marine and coastal environment.
Soft skills	• *Autonomy of judgment* *At the end of the course the student must be able to apply his / her critical ability with respect to the available knowledge in order to identify the most suitable investigation techniques for:*

	ì - the critical study and classification of the forms of the marine and coastal relief and of the environments that characterize it; *ìì - the identification of their dynamics in relation to anthropic activities* • *Communication skills* *At the end of the course the student must be able to:* *ì - explain orally or in written and graphic form the fundamental principles and concepts of the study topics;* *ìì - describe the techniques and procedures for acquiring, processing and interpreting data with clarity and language properties.* • *Ability to learn independently* *At the end of the course, the student must be able to deepen their understanding of geomorphological concepts by developing autonomous reasoning aimed at identifying the links and differences between the various topics of the course of study.*

Assessment and feedback	
Methods of assessment	*The final exam is divided into two phases:* *The first test phase includes 30 multiple choice questions (5 answers of which only one is correct) and 3 questions to be answered with a diagram / drawing.* *Each answer to the multiple choice questions is assigned a grade of one or zero if the answer is correct or not.* *The written test is passed, and it is possible to access to the oral phase, if student reports a grade equal to or greater than 18/30 limited to the 30 questions (minimum grade = 0/30; sufficient grade = 18/30; maximum grade = 30/30).* *The oral exam is based on the critical comment on the schemes / drawings; if the student has not produced all the required schemes / drawings, a corresponding number of questions will be proposed to be answered with a scheme / drawing.* *To pass the oral part of the exam, it is necessary to have a total score of at least 18/30; in the absence of any answer, the negative judgment will not allow you to pass the exam even in the case of a grade of 30/30 in the test.*
Evaluation criteria	• *Knowledge and understanding* *The student must be able to use, correlating them, the basic knowledge acquired to describe and classify the landforms of the marine and coastal landscape and the processes, past and still active that have shaped them.* • *Synthesis skills* *The student must show that he is able to synthesize complex concepts in texts and figures of which he is the author.* • *Making judgement* *The student must be able to identify the most appropriate methodological choices to solve a problem* • *Communication skills* *The student must demonstrate to be able to transmit the level of understanding of principles and methods of investigation with clarity and properties of language, which do not give rise to ambiguity or misunderstanding.* • *Learning skills* *The student must demonstrate that he is able to enrich the understanding of the topics through individual in-depth courses that show his ability to gain further knowledge starting from the base of the contents transmitted during the course.*
Criteria for assessment and attribution of the final mark	*The final grade is expressed out of thirdy with possible honours.* *Contribute to the final grade: the evaluation of the tests and the evaluation of the oral interview focused on the critical comment of the schemes / figures produced*
Additional information	