Università degli Studi della Basilicata
Scuola di Ingegneria

COURSE: Maritime Engineering

TEACHER: Michele Greco

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Language Italian

ECTS: 6	n. of hours:54	Academic year: 2017-2018	Campus:Potenza	Semester: II

TOPICS
Maritime climate characteristics;
Short and long wave dynamics;
Wave propagation;
Sediment transport;
Maritime infrastructures;

TEACHING METHODS (please tick one or more options)
x Theoretical lessons
x Tutorials in classroom
□ Tutorials in laboratory
□ Project works
□ Technical visits
Other activities (please specify) _____

TEXTBOOKS
- Appunti delle Lezioni di Idraulica Marittima, Costruzioni Marittime del Prof. Amatucci;
- Manuale di Ingegneria Portuale e Costiera – Ugo Tommasicchio ed. BIOS
- Lineamenti di Costruzioni Marittime – Giuseppe Matteotti ed. SGEditoriale Padova

ON-LINE EDUCATIONAL MATERIAL
web address:

LEARNING OUTCOMES
Students graduating will be able to: explore and understand maritime engineering problems related to maritime climate characteristic both offshore and in shallow water, mainly addressed to assess coastal morphological dynamics as well as preliminary design of maritime and coastal infrastructures;

REQUIREMENTS
Fluid Mechanics;

EVALUATION METHODS (please tick one or more options)
□ Intermediate verifications
□ Written examination
□ Discussion of a project work
□ Practical test
x Oral examination
Other methods (please specify) _____

DETAILED CONTENT
- Oceanography, wind generation, maritime physical domain;
- Direct and indirect analyses for wave condition evaluation;
- First order theory for short wave and touching on second and third order theories;
- Wave propagation, refraction, diffraction, reflecting and breaking;
- Offshore and breaking zone dynamics;
- Coastal and beach dynamics;
- Longshore and transverse sediment transport;
- Maritime infrastructures for coastal protection and defence;

Marina infrastructures;

SEMINARS BY EXTERNAL EXPERTS YES x NO □

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FURTHER INFORMATION

Opportunity to carry on thesis work on topics related to Maritime Engineering, theoretically and experimentally both physical and numerical, even connected to other courses. The main topics refer to coastal dynamics, monitoring and modelling of wave climate and propagation, coastal defence, protection and management as well as planning, assessment and management of coastal risk.