COASTAL SYSTEM MODELLING

Credits: 5,0 ECTS

Brief description of contents:

- Basic concepts of numerical modelling: basic concepts and implementation techniques
- Diagnosis and prognosis models. Data representation. Comparison
- Tide and current models. Analysis and interpretation
- Wave models: characterisation and applications. Generation and propagation
- Coupled models for sediment transport
- Models for short, medium and long term coastal evolution
- Chemical reactivity prediction models
- Models for mass transfer between environmental compartments in coastal systems
- Environmental forcing of biological processes
- Trophic dynamics in coastal communities. Ecosystem models
- Coupled biological-hydrodynamic models. Interdependencies and applications
- Basic concepts of numerical modelling: basic concepts and implementation techniques (practical classes)
- Diagnosis and prognosis models. Data representation. Comparison (practical classes)
- Tide and current models. Analysis and interpretation (practical classes)
- Wave models: characterisation and applications. Generation and propagation (practical classes)

Evaluation system:

SYSTEM	WEIGHT
Written or oral exams	$30 - 50$
Written projects and reports	$20 - 40$
Presentation of exercises, topics and projects	$20 - 40$