MODULE SPECIFICATION

Part 1: Information			
Module Title	Coastal and Port Engineering		
Module Code	UBGMU7-15-M	Level	Level 7
For implementation from	2019-20		
UWE Credit Rating	15	ECTS Credit Rating	7.5
Faculty	Faculty of Environment & Technology	Field	Geography and Environmental Management
Department	FET Dept of Geography & Envrnmental Mgmt		
Module type:	Standard		
Pre-requisites	None		
Excluded Combinations	None		
Co- requisites	None		
Module Entry requirements	None		

Part 2: Description

Educational Aims: This module will be delivered by means of a series of lectures, tutorials, workshops and site visits.

Outline Syllabus: Coastal Environment: Introduction to the dynamic coastal environment, Tides, Wave generation by wind, Random waves, Probabilistic description of ocean waves, Wave propagation and forecasting, Wave measurements.

Coastal Hydraulics: Deterministic wave theories, Small amplitude wave theory, Near-shore processes.

Coastal Processes and Coastal Protection: Sediment transport, Beaches, Coastal erosion, Coast Protection Systems, Artificial, natural and hybrid methods, Case histories.

Coastal Zone Management in Sri Lanka: Development of CZM in Sri Lanka, Coastal Hazards and Vulnerability, Environmental Problems and their management, Environmental impact assessment for development projects.

Port and Harbour Engineering: Planning and Design of Fishery harbors and Commercial Ports.

Coastal and Harbour Structures: Classification, Important aspects of wave-structure interaction, Rock and concrete armoured breakwaters, Design of Rock armoured rubble mound breakwaters. Experimental investigations to support the design process. Wave forces on cylindrical piles and vertical walls.

Teaching and Learning Methods: Scheduled learning includes lectures, seminars, tutorials, project supervision, demonstration, practical classes and workshops; fieldwork; external visits; work based learning; supervised time in studio/workshop.

Independent learning includes hours engaged with essential reading, case study preparation, assignment preparation and completion etc.

Student time will be allocated as follows:

Lectures: 54 hours
Tutorials/Workshop: 18 hours
Directed learning: 09 hours
Summative assessment: 23 hours
Self directed learning: 46 hours

Total student hours: 150 hours

Part 3: Assessment

Assessment is based on a written examination and a project report.

The strategy has been chosen to ensure that fundamental engineering principles are assessed under controlled conditions, while a more open ended research based assignments are used to encourage wider engagement and reflection on this topic.
Learning outcomes related to the principles and analysis of Coastal & Port Engineering topics are assessed with the 2.5 hr examination. Learning outcomes related to planning, design, management and applications are assessed by a project report and students are expected to submit individual reports.

Formative feedback for the exam is available via tutorial worksheets. For the project formative feedback is available via introductory and follow-up tutorials.

Students are encouraged to attend all tutorial sessions and project sessions, which provide them the opportunity to gain formative feedback.

First Sit Components	**Final Assessment**	**Element weighting**	**Description**
Project - Component B		50 %	Project report (3000 words)
Examination - Component A	✓	50 %	Examination (150 minutes)
Resit Components	**Final Assessment**	**Element weighting**	**Description**
Project - Component B		50 %	Project report (3000 words)
Examination - Component A	✓	50 %	Examination (150 minutes)

Part 4: Teaching and Learning Methods

Learning Outcomes

On successful completion of this module students will achieve the following learning outcomes:

Module Learning Outcomes	Reference
Demonstrate an in-depth knowledge on the dynamic coastal environment and the associated hydraulic regimes.	MO1
Critically analyse the impact of near shore processes and in response design rock armoured rubble mound structures and compute forces on piled vertical structures.	MO2
Demonstrate an in-depth knowledge of the principles of Coastal Zone Management and its application.	MO3
Critically analyse coast protection schemes and select from a range, appropriate coast protection schemes for given hazard scenario.	MO4
Demonstrate the ability to plan and layout harbours and select appropriate structures.	MO5

Contact Hours

Independent Study Hours:	
Independent study/self-guided study	78
Total Independent Study Hours:	78
Scheduled Learning and Teaching Hours:	
Face-to-face learning	72
Total Scheduled Learning and Teaching Hours:	72
Hours to be allocated	150
Allocated Hours	150

Reading List

The reading list for this module can be accessed via the following link:

https://uwe.rl.talis.com/index.html

Part 5: Contributes Towards

This module contributes towards the following programmes of study: