

**FACULTY OF ENGINEERING TECHNOLOGY
UNIVERSITI MALAYSIA PAHANG**

1	Course Code and Name	BET4733 – Introduction to Coastal Infrastructure
2	Semester and Year Taught	Semester 1 Year 4
3	Name(s) of academic staff	Noor Asiah Binti Mohamad
4	Rationale for the inclusion for the course/module in the programme	There are various coastal infrastructures along the coastline of Malaysia
5	Program Level/Category	Degree/Program Elective
6	Unit	3 Credits
7	Prerequisite Course	Nil
8	Contact Hours	Lecture: 2 hours X 14 weeks Practical: 2 hours X 14 weeks Laboratory: 0 hours X 14 weeks
9	Course Synopsis	Introduction to theories and practical applications of the coastal hydrodynamic systems and processes. Coastal environment parameters: waves, tides, currents. The tidal cycle and tide levels. Wave mechanics. Wave transformation: shoaling, refraction, diffraction, reflection. Various types of nearshore currents. Littoral Processes: coastal sediment transport and morphology, erosion and accretion. Coastal structures: revetments, groynes, breakwaters, and other methods of managing coastal erosion. Coastal impact assessment: effects of coastal structures, reclamation and dredging. Application of analytical and numerical techniques in solving coastal engineering problems.
10	Course Outcomes	By the end of semester, students should be able to: CO1: Analyze the principles of wave mechanics, littoral processes and coastal sediment transport in methods of shore protection and coastal infrastructures CO2: Application of computer program in coastal infrastructures project. CO3: Assess environmental impact of a coastal infrastructure development.
11	Transferable Skills	Critical thinking, technical skills and environmental awareness
12	Learning References	<ol style="list-style-type: none"> 1. Kamphuis, J. William, Introduction to Coastal Engineering and Management, Advanced Series on Ocean Engineering-Volume 30, World Scientific, 2010. 2. Reeve D., Chadwick A. and Fleming C. Coastal Engineering-Processes, Theory and Design Practice, CRC Press, 2015. 3. Kim Y.C., Design of Coastal Structures and Sea Defences, World Scientific, 2015. 4. US Army Corps of Engineers. Coastal Engineering Manual, Washington, 1998-now