

Course Syllabus

PORT CONSTRUCTION

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Program: Oceanographic Engineering

1. Course number and name

OCEG1031 - PORT CONSTRUCTION

2. Credits and contact hours

3 credits and 3 contact hours

3. Instructor's course or coordinator's name

JONATHAN MARCELO CEDEÑO OVIEDO

4. Text book, title, author, and year

- Fuentes, César. Ingeniería Portuaria (1era Edición)
 - a. Other supplemental materials
- Macdonel, Guillermo, J. Pindter, L. Herrejón, J. Pizá, H. López. Ingeniería Marítima y Portuaria (4ta Edición)
- Gaythwaite, John W.. Design of Marine Facilities: Engineering for Port and Harbor Structures (3rd Edition)
- Puertos del Estado España. Recomendaciones de Obras Marítimas ROM (Normativa española en proyectos portuarios) (1era Edición)

5. Specific course information

- a. Brief description of the content of the course (catalog description)

This professional training and advanced level course addresses issues related to ports, allowing design of infrastructure elements (piles, heads, retaining walls, sheet piles, breakwaters) and superstructure (slabs, beams, screens and dikes, fenders, crane rails) of a port work.
- b. Prerequisites

REINFORCED CONCRETE DESIGN - CIVG1045
PORT DIMENSIONING - OCEG1033
- c. This course is: Required

6. Specific goals for the course

- a. Specific outcomes of instruction
 - 1.- Calculate different types of structural elements acting loads for the design of ports.
 - 2.- Compare different port equipment to determine moving loads acting on port structural elements.
 - 3.- Analyze port structures by using calculation methods, for their adequate design.
 - 4.- Design structural elements, in reinforced concrete, to be used in ports

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b. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course

- An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

7. Brief list of topics to be covered

- 1.- Evaluation activities
- 2.- Previous studies
- 3.- Cargo and port equipment
- 4.- Infrastructure elements
- 5.- Superstructure elements