

Course Syllabus

PORT DIMENSIONING

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Program: Oceanographic Engineering

1. Course number and name

OCEG1033 - PORT DIMENSIONING

2. Credits and contact hours

2 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)
 - Dirección General de Puertos México. Manual de Dimensionamiento Portuario ()
 - Puertos del Estado España. Recomendaciones de Obras Marítimas ROM (Normativa española en proyectos portuarios) (1era Edición)
 - Ministerio de Transporte y Obras Públicas Ecuador. Normas que regulan los servicios portuarios en el Ecuador ()

5. Specific course information

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

This professional training course covers topics related to ports that will allow students to analyze maritime transport characteristics. It also covers different criteria, methods and recommendations to determine port dimensions, considering ship operation and load handling, as well as procedures for port construction.

- b. This course is: Required

6. Specific goals for the course

- a. Specific outcomes of instruction

- 1.- Analyze the different types of ports, ships and environmental factors that affect ports, to understand their influence on operation and functionality.
- 2.- Differentiate production/consumption nodes, their trade corridor and the means of transport for handling goods between nodes.
- 3.- Analyze the different criteria and recommendations that are considered in port sizing for application in their design.
- 4.- Examine construction procedures of different infrastructure elements and superstructure of ports to select the best option taking into account the optimization of available resources.

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

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- An ability to identify, formulate, and solve complex oceanographic engineering problems by applying principles of engineering, science, and mathematics.

7. Brief list of topics to be covered

- 1.- Evaluation activities
- 2.- Ports and Maritime Transport
- 3.- Production nodes and modes of transport
- 4.- Dimensioning. General Ports.
- 5.- Port Construction. Construction procedures.