

Course Syllabus

DREDGING

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Program: Oceanographic Engineering

1. Course number and name

OCEG1015 - DREDGING

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

- Bray, Richard N.. Dredging, a handbook for engineers (2nd Edition)
 - a. Other supplemental materials
- Abbott, Michael M.. Coastal, estuarial, and harbour engineers' reference book ((alk. paper))

5. Specific course information

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

The course transfers basic theoretical and practical knowledge to begin and perform adequately in the planning, execution, monitoring and management of dredging works especially associated with the coastal zone. The topics that are addressed are related to the characterization of the dredging and deposit site, including the sizing of the site to be dredged, depth of dredging, hydraulic conditions. Likewise, classification of dredges and auxiliary equipment, uses of dredged material, planning of dredging, and associated environmental aspects. Some cases of dredging are analyzed and complemented with the visit in the field of dredging works executed with different methodologies.

- b. Prerequisites

SOIL MECHANICS - CIVG1014

MARINE GEOLOGY - OCEG1005

- c. This course is: Required

6. Specific goals for the course

- a. Specific outcomes of instruction

1.- Recognize the need for dredging works in channels and ports of Ecuador with secondary data published and relate them to the hydraulic-sedimentary conditions of the site.

2.- Technically organize dredging projects integrating the different characteristics of the site as part of the process of selecting the dredging equipment.

3.- Support in the decision making and planning of dredging with engineering and environmental techniques for the "solution" of lack of depth.

4.- Relate the necessary dredging equipment according to the characteristics of the



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project and the environmental aspects of the environment as elements in the selection of the sediment deposit site.

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

7. Brief list of topics to be covered

- 1.- State of the art in Ecuador, definitions and stages of a dredging
- 2.- Planning a dredging
- 3.- Classification of the dredgers
- 4.- Discharge of dredged material
- 5.- Uses of dredged material
- 6.- Environmental aspects

