

Course Syllabus

PLANNING AND CONSTRUCTION

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Program: Oceanographic Engineering

1. Course number and name

OCEG1045 - PLANNING AND CONSTRUCTION

2. Credits and contact hours

2 credits and 2 contact hours

3. Instructor's course or coordinator's name

JONATHAN MARCELO CEDEÑO OVIEDO

4. Text book, tittle, author, and year

- Sapag, N., & Sapag, R.. Preparación y evaluación de proyectos (6ta. Ed.)
 - a. Other supplemental material
 - Guerrero Macías, Gustavo. Proyectos de inversión (Primera edición)
 - Díaz, A., Aguilera, V. M.. Matemáticas Financieras (6ta Edición)

5. Specific course information

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

This professional training course reviews the state of the art of the subject Dragados in Ecuador, some definitions and the stages that define it. It studies the application of hydrography and acoustics as an indispensable support in a necessary bathymetry in a dredging in estuarine environments and coastal zone. The objectives of each one of the stages of the planning of a dredging are analyzed, the factors that affect their performance and the design of a dredging area is practiced. Finally, the knowledge of the types of dredges in general is presented. The course is strengthened with observation practices of field work aboard a dredge and the elaboration of a technical report of the field visit.

- b. Prerequisites
PORT DIMENSIONING - OCEG1033

- c. This course is: Required

6. Specific goals for the course

- a. Specific outcomes of instruction

1.- Describe the main factors of financial mathematics for understanding the measures of profitability of a project

2.- Apply the Net Present Value, IRR and Capital Recovery Period for the selection of the most profitable project

3.- Combine the best options of the projects with their respective social benefits in order to determine the most convenient one.

4.- Use the various planning diagrams for the execution of a viable project considering

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time and financial resources.

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

- An ability to recognize the need to undertake, and the skills to become an entrepreneur.

7. Brief list of topics to be covered

- 1.- Evaluation activities
- 2.- Formulation and editing of the project proposal
- 3.- Costs
- 4.- Economic and profitability evaluation of the project
- 5.- Planning, programming and control methods
- 6.- Social evaluation of projects