

## Course Syllabus

### OCEANOGRAPHIC ENGINEERING CAPSTONE

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Program: Oceanographic Engineering

#### 1. Course number and name

OCEG1043 – OCEANOGRAPHIC ENGINEERING CAPSTONE

#### 2. Credits and contact hours

3 credits and 4 contact hours

#### 3. Instructor's course or coordinator's name

Andrade Garcia Gina Maria

#### 4. Text book, title, author, and year

Does not apply

#### 5. Specific course information

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

In this capstone course, students conduct a project applying oceanography, engineering and coastal resources management. The project shows a process of creativity, organization and relevance that involves students in a professional design experience. In the first part of the course, the needs of a client/user/ public are identified. Then, the problem/opportunity is defined, data is collected and critical factors are analyzed. In the second part, alternative solutions are created framed within regulations and restrictions defined each user. It concludes with the design and/or implementation of a feasible solution or elaboration of prototype as well as an analysis and validation of results.

##### b. Prerequisites

Complete all internship hours and have 7 curriculum credits max to be finished.

##### c. This course is: Required

#### 6. Specific goals for the course

##### a. Specific outcomes of instruction

- a. Identify a problem/need through an evaluation of requirements defined by a client, user or public.

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- b. Analyze different critical factors to approach a solution to an identified problem/need
- c. Design alternative solutions and/or prototypes using Oceanographic engineering methodologies

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d. Generate a feedback process for the chosen designed solution.

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#### 7. Brief list of topics to be covered

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1. Definition of a problem/need/opportunity
2. Information analysis
3. Value proposals
4. Analysis and validation of results.