UNIVERSITY OF SOUTH ALABAMA

Department of Civil, Coastal, & Environmental Engineering
Graduate Certificate in Coastal Engineering

The Department of Civil, Coastal, & Environmental Engineering offers a Graduate Certificate in Coastal Engineering. This is a specialty area of Civil Engineering that accounts for the unique processes of water levels, waves, erosion, and climate changes that affect the design of civil works projects in the coastal environment. With a large percentage of the US population living in coastal counties and watersheds and a high concentration of infrastructure, coastal engineers will play increasingly important roles in the sustainability, resilience, and adaptation of our nation's coastal areas. This Graduate Certificate requires successful completion (grade B or higher) of four graduate-level courses that introduce the fundamentals of coastal engineering.

Required courses:

A minimum of 12 credit hours, or four 3-credit courses, is required. These courses are required:

- **CE 503 Introduction to Coastal Engineering** (required), and
- **CE 566 Coastal & Harbor Engineering** (required), and
- **two** courses chosen from the following list:
  - **CE 560 Coastal Hydrodynamics**, or
  - **CE 561 Littoral Processes**, or
  - **CE 563 Numerical Modeling of Coastal Hydrodynamics**, or
  - **CE 590 Numerical Modeling of Coastal Morphodynamics**, or
  - **CE 590 Coastal Hazards**, or
  - **CE 590 Nature-based Solutions**, or
  - other graduate courses related to Coastal Engineering approved by the student's graduate committee.

Students may apply these courses towards a full graduate degree (e.g., MSCE or PhD).

Background:

This Coastal Engineering Certificate Program responds to the regional engineering community's need for additional technical expertise (beyond what is available in almost all BSCE curricula in the U.S.A.) in the area of Coastal Engineering. Offered in a fully-online format, this Certificate program supports a geographically diverse community of Civil Engineers seeking to understand the fundamentals of coastal engineering and how coastal processes impact their designs.

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