FLORIDA ATLANTIC UNIVERSITY

NEW/CHANGE PROGRAM REQUEST
Undergraduate Programs

UUPC Approval 1/29/24
UFS Approval _____
Banner Posted _____
Catalog _____

Department Ocean & Mechanical Engineering

College COECS

Program Name

Undergraduate Certificate Program in ~~Naval Archiecture~~ Underwater Acoustics

☐ **New Program**

☑ **Change Program**

Effective Date
(TERM & YEAR)

Fall 2024

Please explain the requested change(s) and offer rationale below or on an attachment

This undergraduate certificate program (a total of 15 credits) in Underwater Acoustics offered by O&ME Department is designed to combine broad engineering disciplines with knowledge of engineering principles specific to underwater acoustics. This program is in support of preparing students to work at companies and governmental agencies that specialize in underwater acoustics. The proposed changes in the requirements will provide more flexibility to the students.

Faculty Contact/Email/Phone

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Consult and list departments that may be affected by the change(s) and attach documentation

Approved by	***Date***
Department Chair Pierre Philippe Beaujean	1/5/2024
College Curriculum Chair Hongbo Su	1/16/2024
College Dean	1-16-24
UUPC Chair Korey Sorge	1/29/24
Undergraduate Studies Dean Dan Meeroff	1/29/24
UFS President	
Provost	

Email this form and attachments to mjenning@fau.edu one week before the UUPC meeting so that materials may be viewed on the UUPC website prior to the meeting.

Proposed Program: Undergraduate Certificate Program in Underwater Acoustics

This undergraduate certificate program (a total of 15 credits) in Underwater Acoustics offered by the OME Department is designed to combine broad engineering disciplines with knowledge of engineering principles specific to underwater acoustics. This program is in support of preparing students to work at companies and governmental agencies that specialize in underwater acoustics.

Curriculum

To earn this certificate, a student must successfully complete the following:

a) Two required courses (6 credits) in the field of underwater acoustics:
   - EOC 3306 Acoustics for OE (3 credits)
   - EOC 4307C Underwater Acoustics (3 credits) or EOC 6312 Ocean & Seabed Acoustics (3 credits)

b) One course (3 credits) from the following:
   - EOC 4124 Ship Hydrodynamics (3 credits) or EOC 6515 Hydrodynamic Aspects of Ship Design (3 credits)
   - EOC 4412 Ocean Structures (3 credits) or EOC 6432 Offshore Structures (3 credits)

c) One course (3 credits) from the following list:
   - EOC 4600 Introduction to Ocean Instrumentation (3 credits) or EOC 6625 Ocean Instrumentation (3 credits)
   - EGN 4915 DIR (3 credits)
   - IDS 3949 Internship (3 credits in related areas)
   - EGM 4350 Finite Element Analysis in Engineering Design (3 credits)

d) A faculty-mentored design project with elements of underwater acoustics (3 credits):
   RI: OE Systems Control and Design (EOC4804) course (3 credits)

Current Program:

UNDERWATER ACOUSTICS
UNDERGRADUATE CERTIFICATE

(Minimum of 15 credits required)

The undergraduate certificate in Underwater Acoustics, offered by the Ocean and Mechanical Engineering Department, is designed to combine broad engineering disciplines with knowledge of engineering principles specific to underwater acoustics. The program supports the preparation of students to work at companies and governmental agencies that specialize in underwater acoustics.

Curriculum

To earn this certificate, a student must successfully complete the following 15 credits:

1. **Two courses (6 credits) in the field of underwater acoustics:**

Acoustics for Ocean Engineers	EOC 3306
Underwater Acoustics	EOC 4307C
Special Topics in Ocean Engineering	EOC 5934

and two courses (6 credits) from the following list:

Finite Element Analysis for Engineering Design	EGM 4350
Innovative Sensing and Actuation Technologies	EGN 4670C
Ship Hydrodynamics	EOC 4124
Special Topics in Ocean Engineering	EOC 5934
Ocean Structures	EOC 4412
Special Topics in Ocean Engineering	EOC 5934
Introduction to Ocean Instrumentation	EOC 4620
Ocean Instrumentation	EOC 6625

2. **A faculty-mentored design/research project with elements of underwater acoustics (3 credits), carried out either as part of:**

RI: Ocean Engineering Systems Control and Design	EOC 4804
Directed Independent Research in Engineering and Computer Science	EGN 4915
Directed Independent Study	EOC 4905