

 FLORIDA ATLANTIC UNIVERSITY	NEW/CHANGE PROGRAM REQUEST Graduate Programs	UGPC Approval _____ UFS Approval _____ Banner Posted _____ Catalog _____
	Department Ocean and Mechanical Engineering College Engineering and Computer Science	
Program Name PhD in Ocean Engineering, PhD in Mechanical Engineering	<input type="checkbox"/> New Program <input checked="" type="checkbox"/> Change Program	Effective Date (TERM & YEAR) Spring 2020
Please explain the requested change(s) and offer rationale below or on an attachment <p>This proposal requests changing the minimum number of credits of the PhD program from 84 to 72. Students entering the PhD program with a master's degree (which counts as 30 credits) will be required to take a minimum of 18 credits of graduate course work (reduced from 21 credits) and a minimum of 24 dissertation credits (reduced from 33 credits). This reduction in the number of credits will not impact the quality of the PhD program, while reducing the student cost.</p>		
Faculty Contact/Email/Phone Dr. Francisco Presuel-Moreno, fpresuel@fau.edu, 954.924.7236	Consult and list departments that may be affected by the change(s) and attach documentation None	
Approved by Department Chair _____ College Curriculum Chair _____ College Dean _____ UGPC Chair _____ UGC Chair _____ Graduate College Dean _____ UFS President _____ Provost _____	Date _____ _____ _____ _____ _____ _____	

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

Ocean Engineering

DOCTORAL PROGRAM

Doctor of Philosophy with Major in Ocean Engineering

Degree Requirements

The degree of Doctor of Philosophy in Ocean Engineering will be conferred on candidates who have fulfilled the following requirements:

1. Completed a minimum of ~~42~~ 54 credits of course and dissertation work after the M.S. degree for students transferring 30 credits (~~84~~ 72 credits for those admitted to the Ph.D. directly after the B.S. degree). Of the ~~54~~ 42 credits, ~~24~~ 18 credits must be coursework;
2. Of the ~~24~~ 18-credit minimum of coursework, at least 12 credits must be from the Ocean, Mechanical*, Civil* or Geomatics* Engineering programs. No more than 3 credits of directed independent study may be used to satisfy the ~~24~~ 18-credit minimum;
3. A minimum of ~~33~~ 24 dissertation credits. No more than ~~39~~ 30 dissertation credits may be counted toward the total credit requirement for the Ph.D. degree; Students admitted to the Ph.D. directly after the B.S. degree must take a minimum of 30 dissertation credits;
4. Must complete two semesters of EML 5937, Graduate Seminar (0 credits) with grade of Satisfactory ("S").
5. A major program of research and advanced studies in ocean engineering;
6. Unless otherwise stated, a minimum of 9 credits in advanced mathematics or equivalent beyond the B.S. degree;
7. Successful completion of General Examination 1, a written comprehensive examination of coursework;
8. Successful completion of General Examination 2, a dissertation proposal defense;
9. Prior to the defense, the student is required to have published or have accepted for publication a refereed research paper in a field of study deemed acceptable by the dissertation committee. A journal article is preferred, but a peer-reviewed conference paper is also acceptable;
10. Submitted and defended a dissertation based on original research in the student's area of specialization. The supervisory committee, the department chair and the Graduate College must have approved the dissertation;
11. Complied with the University's Graduate Policies and Regulations and satisfied the University's Graduate Degree Requirements.

* Only available for the Sustainable Infrastructure Engineering option.

[Top](#)

Core Course Requirements

All graduate students, regardless of option or specialty, must complete the following core courses or must offer a satisfactory substitute course of similar content from another university or an appropriate substitute consistent with the student's specialty preference for approval by the supervisory committee.

Core Courses - 15 credits <i>Select 9 credits from the following</i>	
Mathematical Methods in Ocean Engineering 1	EOC 5172
Engineering Data Analysis	EOC 6635
Physical Aspects of Oceanography	OCP 6050 or*
Offshore Structures*	EOC 6431

GRADUATE COLLEGE

OCT 18 2019

Mechanical Engineering

DOCTORAL PROGRAM

Doctor of Philosophy with Major in Mechanical Engineering

Degree Requirements
A central requirement for the Ph.D. degree in Mechanical Engineering is submission and defense of a dissertation based upon original research in an area of focus acceptable to the student's supervisory committee. The completed dissertation must be approved by the committee, the department chair and the Graduate College.

A minimum of 72 graduate credits is required beyond a bachelor's degree. A master's degree in a related field is considered equivalent to 30 credits. Additional requirements are:

1. A minimum of 64-42 credits of coursework beyond the baccalaureate degree, or a minimum of 18-24 credits beyond the master of science degree;

B.S. to Ph.D. Program
A student with outstanding scholastic achievement who holds only a baccalaureate degree (B.S.) may be admitted directly to the Ph.D. program in Ocean Engineering. The student with a B.S. will be required to complete a total of 84-72 credits of course and dissertation work for the Ph.D. Out of the minimum of 42 credits of graduate coursework, at least 18-27 of the credits must be taken from the Ocean Engineering list of courses, and all core course requirements must be satisfied. A minimum of 33-30 credits of doctoral dissertation research will be required. No more than 39 dissertation credits may be counted toward the 84-72-credit requirement. The remaining credits may be selected from the listing of OE courses, advanced mathematics courses, elective courses, directed independent study (DIS) or dissertation. A minimum of 9 credits of graduate-level mathematics must be satisfied.

* Only available for the Sustainable Infrastructure Engineering option.

In addition, two of the following courses must be taken:	
EOC 6185	Advanced Hydrodynamics 1
EOC 6216C	Corrosion 1
EOC 6317C	Engineering Principles of Acoustics
EOC 6934	Special Topics
EGM 6533 or	Advanced Strength of Materials* or
CES 6107	Advanced Mechanics of Materials*
EGM 5351 or	Introduction to Finite Element Methods* or
CES 6119	Finite Element Methods in Civil Engineering*
CGN 6616	Infrastructure Maintenance and Management*
CGN 6930	Special Topics*
Electives - 6-3 credits (for students entering with a master's degree)	
Select 6-3 credits at the 5000 or 6000 level from the College of Engineering and Computer Science or the College of Science	
Electives - 3-6 credits (for students entering with a bachelor's degree)	
Select 3-6 credits at the 5000 or 6000 level from the College of Engineering and Computer Science or the College of Science. Complete a minimum of 18 credits at the 6000 level and no more than 9 credits of Directed Independent Study (EOC 6908).	
Dissertation - 33-24 credits (minimum) (for students entering with a master's degree)	
EOC 7980	Dissertation (may be taken over multiple terms)

2. No more than 3 credits of directed independent study may be used to satisfy the minimum ~~24~~ 18 credits of coursework;

3. A minimum of 12 credits must be in Mechanical Engineering courses, including two of the following three core courses. In addition a graduate-level Engineering Mathematics course is required, which may include, but not limited to, EOC 5172, Mathematical Methods in Ocean Engineering 1 or PHZ 5115, Mathematical Physics.

Core courses (select two of the following three courses)		
Advanced Strength of Materials	EGM 6533	3
Advanced Fluid Dynamics	EML 6726	3
Mechanical Vibrations	EML 6223 or	3
Advanced Control Systems	EML 6317	3
Mathematics		
One Engineering Mathematics course, graduate level		

4. Must complete two semesters of EML 5937, Graduate Seminar (0 credits) with grade of Satisfactory ("S").

5. Doctoral thesis research of ~~not less than 33~~ at least 24 credits for students entering with a master's degree, and at least 30 credits for students entering with a bachelor's degree;

6. Successful completion of General Examination 1;

7. Successful completion of General Examination 2;

8. Prior to the defense, the student is required to have published or have accepted for publication a refereed research paper in a field of study deemed acceptable by the dissertation committee. A journal article is preferred, but a peer-reviewed conference paper is also acceptable;

9. Submitted and defended a dissertation based on original research in the student's area of specialization. The supervisory committee, the department chair and the Graduate College must have approved the dissertation;

10. Satisfaction of all University regulations and requirements for the Ph.D. degree;