FLORIDA ATLANTIC UNIVERSITY

NEW/CHANGE PROGRAM REQUEST
Graduate Programs

UGPC Approval _____
UFS Approval _____
Banner _____
Catalog _____

Department Ocean and Mechanical Engineering

College Engineering and Computer Science

Program Name

BS OE to MS OE combined program
BS ME to MS ME combined program
BS ME to MS AI combined program

☐ **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 proposal increases the maximum number of credits that can be double counted in the combined BS-MS programs in the OME department from 9 credits to 12 credits.
Since the GRE is not required any longer for admisson to MS Ocean Engineering and MS Mechanical Engineering programs, we change "the GRE requirement is waived" to "the GRE is not required".

*All new programs and changes to existing programs must be accompanied by a catalog entry showing the new or proposed changes.

Faculty Contact/Email/Phone

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

NA

Approved by	***Date***
Department Chair Pierre Philippe Beaujean	2/15/2024
College Curriculum Chair Masoud Jahandar Lashaki	2/20/2024
College Dean M Cardei	2/26/2024
UGPC Chair	
UGC Chair	
Graduate College Dean	
UFS President	
Provost	

Email this form and attachments to UGPC@fau.edu 10 days before the UGPC meeting.

OCEAN AND MECHANICAL ENGINEERING

OCEAN ENGINEERING

COMBINED PROGRAMS

BIOLOGICAL AND PHYSICAL SCIENCES TO MECHANICAL ENGINEERING
BACHELOR OF ARTS (B.A.) OR BACHELOR OF SCIENCE (B.S.) TO MASTER OF SCIENCE (M.S.)
COMBINED PROGRAM

BIOLOGICAL AND PHYSICAL SCIENCES TO OCEAN ENGINEERING
BACHELOR OF ARTS (B.A.) OR BACHELOR OF SCIENCE (B.S.) TO MASTER OF SCIENCE (M.S.)
COMBINED PROGRAM

The B.A. or B.S. degree is completed at the Wilkes Honors College (WHC), and students then receive their bachelor's degree from WHC. Students complete their master's degree work in one of two majors in the Department of Ocean and Mechanical Engineering in the College of Engineering and Computer Science (COECS) and receive their master's degree from COECS.

These combined programs are offered in partnership with the Wilkes Honors College:

B.A. or B.S. with Major in Biological and Physical Sciences to M.S. with Major in Mechanical Engineering

B.A. or B.S. with Major in Biological and Physical Sciences to M.S. with Major in Ocean Engineering

Details for each combined program are listed in the Wilkes Honors College section.

OCEAN ENGINEERING
BACHELOR OF SCIENCE IN OCEAN ENGINEERING (B.S.O.E.) TO

MASTER OF SCIENCE (M.S.)
COMBINED PROGRAM

The Department of Ocean and Mechanical Engineering offers a combined Bachelor of Science in Ocean Engineering to Master of Science degree program. For students taking the thesis or non-thesis option, up to ~~9~~ 12 credits of graduate coursework (5000 level or higher) in the B.S.O.E. program may be counted for both the B.S.O.E. and M.S. degrees. With an approximate duration of five years, this combined program provides an attractive way for students to continue their graduate work.

Prerequisite Coursework for Transfer Students
Students transferring to Florida Atlantic University must complete both lower-division requirements (including the requirements of the Intellectual Foundations Program) and requirements for the college and major. Lower-division requirements may be completed through the A.A. degree from any Florida public college, university or community college or through equivalent coursework at another regionally accredited institution. Before transferring and to ensure timely progress toward the baccalaureate degree, students must also complete the prerequisite courses for their major as outlined in the *Transition Guides* .

All courses not approved by the Florida Statewide Course Numbering System that will be used to satisfy requirements will be evaluated individually on the basis of content and will require a catalog course description and a copy of the syllabus for assessment.

Admission Requirements
To be eligible for the joint B.S.O.E./M.S. program, students should:

1. Have an overall GPA of above 3.0 and a GPA of above 3.25 in the last 60 credits of coursework completed at the time of admission. The GPA must be maintained until graduation from the B.S. degree;
2. Formally apply to the joint program, completing the admissions process at least one semester prior to the beginning of the M.S. portion of their program;
3. Choose either the thesis or non-thesis option for the M.S. part of the program.

Once admitted to the program, students begin taking graduate courses in their senior year that would apply to both the bachelor's and master's degree

programs. A maximum of ~~9~~ 12 credits of elective courses can be applied to both programs. Students in the joint program must maintain enrollment to remain in good standing. Students must also meet all the degree requirements of the graduate program, including core courses and prerequisites. Those students who complete the M.S. degree program within one year after the completion of their B.S.O.E. degree program will be presented with a certificate of recognition.

MECHANICAL ENGINEERING

COMBINED PROGRAMS

BIOLOGICAL AND PHYSICAL SCIENCES TO MECHANICAL ENGINEERING
BACHELOR OF ARTS (B.A.) OR BACHELOR OF SCIENCE (B.S.) TO MASTER OF SCIENCE (M.S.) COMBINED PROGRAM

The B.A. or B.S. degree is completed at the Wilkes Honors College (WHC), and students then receive their bachelor's degree from WHC. Students complete their master's degree work in one of two majors in the Department of Ocean and Mechanical Engineering in the College of Engineering and Computer Science (COECS) and receive their master's degree from COECS.

These combined programs are offered in partnership with the Wilkes Honors College:

B.A. or B.S. with Major in Biological and Physical Sciences to M.S. with Major in Mechanical Engineering

B.A. or B.S. with Major in Biological and Physical Sciences to M.S. with Major in Ocean Engineering

Details for each combined program are listed in the Wilkes Honors College section.

MECHANICAL ENGINEERING TO ARTIFICIAL INTELLIGENCE
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING (B.S.M.E.) TO MASTER OF SCIENCE (M.S.) COMBINED PROGRAM

The College of Engineering and Computer Science (COECS) offers a combined Bachelor of Science in Mechanical Engineering to Master of Science in Artificial Intelligence degree program. The Bachelor of Science in Mechanical Engineering degree is completed and received from the Ocean and Mechanical Engineering (OME) department. Students complete the Master of Science in

Artificial Intelligence in the Department of Electrical Engineering and Computer Science.

The bachelor's degree with major in Mechanical Engineering requires a minimum of 128 credits. This combined program requires two extra leveling courses for the M.S. in Artificial Intelligence: COP 3035, Introduction to Programming in Python, and COP 3410, Data Structures and Algorithm Analysis with Python. Students must take the leveling courses at the beginning of the graduate program. The two leveling courses do not qualify for financial aid. The graduate degree requires a minimum of 30 credits at the graduate level. This program does not increase the number of credits in the undergraduate degree.

Students may count up to ~~9~~ 12 credits of approved graduate coursework (5000 level or higher) toward both their bachelor's and master's degrees. These graduate courses will replace the technical elective courses in the bachelor's program.

This combined program provides an attractive way for students to continue their graduate work. Students complete the undergraduate program first. The combined program can be completed in approximately five years.

Admission Requirements

The GRE ~~requirement is waived~~ is not required for this combined program. To be eligible for the combined program, baccalaureate students should:

1. Have a cumulative FAU GPA of 3.25 or better at the end of their junior year. Note that the cumulative FAU GPA of at least 3.25 must be maintained until the completion of the bachelor's degree.
2. Formally apply to the combined program, completing the admissions process at least one semester prior to the beginning of the M.S. portion of their program.

Students in the combined program must maintain continuous enrollment to remain in good standing. Students must also meet all the degree requirements of the graduate program they have chosen, including prerequisite courses.

Degree Requirements

To be eligible for the combined B.S.M.E. in Mechanical Engineering to M.S. in Artificial Intelligence, students must fulfill the following requirements:

1. Completion of the requirements for the B.S. in Mechanical Engineering program and other requirements stipulated by the University and College
2. Completion of all requirements for the M.S. in Artificial Intelligence program, using either the thesis or non- thesis option.

MECHANICAL ENGINEERING
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING (B.S.M.E.) TO MASTER OF SCIENCE (M.S.) COMBINED PROGRAM

Thesis Option

Candidates seeking a combined program leading to both Bachelor of Science in Mechanical Engineering and Master of Science degrees with the thesis option must complete an approved program of at least 30 credits. Out of those 30, ~~9~~ 12 credits of graduate coursework (5000 level or higher) will count toward both the bachelor's and master's degrees, as long as the following criteria are met:

1. The student has met the minimum 120 credits for the bachelor's degree; and
2. The student has taken a minimum of 30 credits in 5000 level or higher courses for the master's program.

A maximum of ~~9~~ 12 credits may then be counted for both the bachelor's and master's programs if the total number of credits exceeds 150.

Prerequisite Coursework for Transfer Students
Students transferring to Florida Atlantic University must complete both lower-division requirements (including the requirements of the Intellectual Foundations Program) and requirements for the college and major. Lower-division requirements may be completed through the A.A. degree from any Florida public college, university or community college or through equivalent coursework at another regionally accredited institution. Before transferring and to ensure timely progress toward the baccalaureate degree, students must also complete the prerequisite courses for their major as outlined in the *Transition Guides* .

All courses not approved by the Florida Statewide Course Numbering System that will be used to satisfy requirements will be evaluated individually on the

basis of content and will require a catalog course description and a copy of the syllabus for assessment.

Degree Requirements
Candidates must complete the following:

1. Three core courses (9 credits): EGM 6533, Advanced Strength of Materials; EML 6223, Mechanical Vibrations or EML 6317, Advanced Control Systems; and EML 6716 , Advanced Fluid Dynamics;

2. A math course (3 credits): EOC 5172, Mathematical Methods in Ocean Engineering 1;

3. Four technical electives (12 credits at the 5000 level or higher;
4. Must complete one semester of EML 5937, Graduate Seminar (0 credits) with grade of Satisfactory ("S");
5. Up to ~~three~~ four courses may be taken while the student is an undergraduate;
6. Before the end of the student's third semester of full-time enrollment, a written thesis proposal must be submitted to the supervisory committee and defended in an oral examination;
7. A master's thesis (6 credits), which must be defended at an oral examination;
8. At least one-half of the credits must be at the 6000 level or above;
9. At least one-half of the credits must be from the list of Mechanical Engineering courses shown in the Engineering and Computer Science Course Descriptions section.

MECHANICAL ENGINEERING
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING (B.S.M.E.) TO MASTER OF SCIENCE (M.S.) COMBINED PROGRAM

Non-Thesis Option

Candidates seeking a combined program leading to both Bachelor of Science in Mechanical Engineering and Master of Science degrees with the non-thesis option must complete an approved program of at least 30 credits. Out of those 30, ~~9~~ 12 credits of coursework (5000 level or higher) will count toward both the

bachelor's and master's degrees.

Prerequisite Coursework for Transfer Students
Students transferring to Florida Atlantic University must complete both lower-division requirements (including the requirements of the Intellectual Foundations Program) and requirements for the college and major. Lower-division requirements may be completed through the A.A. degree from any Florida public college, university or community college or through equivalent coursework at another regionally accredited institution. Before transferring and to ensure timely progress toward the baccalaureate degree, students must also complete the prerequisite courses for their major as outlined in the *Transition Guides* .

All courses not approved by the Florida Statewide Course Numbering System that will be used to satisfy requirements will be evaluated individually on the basis of content and will require a catalog course description and a copy of the syllabus for assessment.

Degree Requirements
Candidates must complete the following:

1. Three core courses (9 credits): EGM 6533, Advanced Strength of Materials; EML 6223, Mechanical Vibrations or EML 6317, Advanced Control Systems; and EML 6716, Advanced Fluid Dynamics;

2. A math course (3 credits): EOC 5172, Mathematical Methods in Ocean Engineering 1;

3. Six technical electives (18 credits);

4. Up to ~~three~~ four courses, at the 5000 level or higher, may be taken while the student is an undergraduate;
5. Must complete one semester of EML 5937, Graduate Seminar (0 credits) with grade of Satisfactory ("S");
6. At the time of application for degree, students must submit a portfolio to their advisor consisting of four graduate projects from 10 courses in their program of study. The portfolio will be reviewed by the student's supervisory committee;
7. At least one-half of the credits must be at the 6000 level or above;

8. At least one-half of the credits must be from the list of Mechanical Engineering courses shown in the Engineering and Computer Science Course Descriptions section.

MECHANICAL ENGINEERING
BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING (B.S.M.E.) TO MASTER OF SCIENCE (M.S.) COMBINED PROGRAM

Non-Thesis Option/Business Minor

Candidates seeking a combined program leading to both Bachelor of Science in Mechanical Engineering and Master of Science degrees with the non-thesis option and with a minor in Business must complete an approved program of at least 36 credits. Out of those 36, ~~9~~ 12 credits of coursework (5000 level or higher) will count toward both the bachelor's and master's degrees.

Prerequisite Coursework for Transfer Students
Students transferring to Florida Atlantic University must complete both lower-division requirements (including the requirements of the Intellectual Foundations Program) and requirements for the college and major. Lower-division requirements may be completed through the A.A. degree from any Florida public college, university or community college or through equivalent coursework at another regionally accredited institution. Before transferring and to ensure timely progress toward the baccalaureate degree, students must also complete the prerequisite courses for their major as outlined in the *Transition Guides* .

All courses not approved by the Florida Statewide Course Numbering System that will be used to satisfy requirements will be evaluated individually on the basis of content and will require a catalog course description and a copy of the syllabus for assessment.

Degree Requirements
Candidates must complete the following:

1. Three core courses (9 credits): EGM 6533, Advanced Strength of Materials; EML 6223, Mechanical Vibrations or EML 6317, Advanced Control Systems and EML 6716, Advanced Fluid Dynamics;

2. A math course (3 credits), Mathematical Methods in Ocean Engineering 1;
3. Three technical electives (9 credits) at the 5000 or 6000 level from the list of Mechanical Engineering courses shown in the Engineering and Computer Science Course Descriptions section;
4. Up to ~~three~~ four courses at the 5000 level or higher, may be taken while the student is an undergraduate;
5. Must complete one semester of EML 5937, Graduate Seminar (0 credits) with grade of Satisfactory ("S");
6. Five business courses (15 credits) as described at the beginning of this College of Engineering and Computer Science section;
7. At the time of application for degree, students must submit a portfolio to their advisor consisting of four graduate projects from 12 courses in their program of study. The portfolio will be reviewed by the student's supervisory committee;
8. At least one-half of the credits must be at the 6000 level or above;
9. At least one-half of the credits must be from the list of Mechanical Engineering courses shown in the Engineering and Computer Science Course Descriptions section.