



## New Combined Degree Program Request

UUPC Approval 10/8/18  
 UGPC Approval \_\_\_\_\_  
 UFS Approval \_\_\_\_\_  
 Banner Posted \_\_\_\_\_  
 Catalog \_\_\_\_\_

### New Combined Degree Program Request

Proposed Program: BA, BS in Liberal Arts and Sciences with Biology, Biological Chemistry, Chemistry, Marine Biology, Physics, Neuroscience Concentrations / MS in Bioengineering CIP: \_\_\_\_\_ Effective Date (Term/Year): Spring/2019

Proposed Combined Program Information	Undergraduate	Graduate
Degree Level (e.g. B.A., B.S., M.A., M.S., etc.)	B.A or B.S.	MS
Program Name (e.g. Physics, Engineering, etc.)	Liberal Arts and Sciences	Bioengineering
College	Wilkes Honors College	Engineering and Computer Science
Department	NA	Computer and Electrical Engineering and Computer Science
Program Description (provide a brief description of the program, including thesis or non-thesis option)	The BA, BS in Liberal Arts and Sciences with Biology, Biological Chemistry, Chemistry, Marine Biology, Physics, Neuroscience Concentrations/MS in Bioengineering combined program will enable outstanding students in the Honors College to continue their study with an MS in Bioengineering in the College of Engineering and Computer Science. Students complete the prerequisite coursework for the master's degree while pursuing their bachelor's degree at the Wilkes Honors College. Students complete a minimum of 120 credits for the undergraduate degree and a minimum of 30 credits in the master's degree. Prospective students must formally apply to the program and meet all admission requirements.	

### Curriculum Requirements

**GPA Requirements:** Departments must establish a minimum undergraduate GPA for students to be admitted to a combined program. *Note: Please attach explanation.*  
 Cumulative FAU GPA of at least 3.25

**List courses to be shared:** Up to twelve (12) credit hours of graduate courses (5000 level or above course work) may be shared between the graduate and undergraduate degree for a combined program. *Note: Please attach explanation:*

- Academic justification for shared credits and catalog language
- List the undergraduate course that will be replaced by graduate courses.

Faculty Submitting Request	Name	Signature	Email	Date
	Dr. Valentine Aalo		aalo@fau.edu	9/19/2018

Approved by	Date
Department Chair: <u></u>	<u>9/20/2018</u> <u>9/20/2018</u>
College Dean: <u></u>	<u>9/24/2018</u> <u>9/28/18</u>
College Curriculum Chair: <u></u>	<u>9-24-2018</u> <u>9/25/18</u>
UUPC Chair: <u></u>	<u>10-8-18</u>
Undergraduate Studies Dean: <u></u> <small>(Note: Forward approved form to <a href="mailto:UGPC@fau.edu">UGPC@fau.edu</a>)</small>	<u>10/9/18</u>
UGPC Chair: _____	_____
UGC Chair: _____	_____
Graduate College Dean: _____	_____
UFS President: _____	_____
Provost: _____	_____

Email this form and supporting documents to [mjenning@fau.edu](mailto:mjenning@fau.edu) seven (7) business days before the UUPC meeting.

For questions, contact the Graduate College at [ugpc@fau.edu](mailto:ugpc@fau.edu)

**GRADUATE COLLEGE**  
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### Academic Justification

The Wilkes Honors College (WHC) and the College of Engineering and Computer Science (COECS) propose a new combined program, where students will complete the BA or BS degree with Biology, Biological Chemistry, Chemistry, Marine Biology, Physics, Neuroscience Concentration in Liberal Arts and Sciences in the WHC and then continue with an MS degree in Bioengineering in the COECS. The program requires at least 120 credits in the bachelor's degree and at least 30 credits in the MS degree. The students will take the prerequisite courses while pursuing the bachelor's degree, ensuring a smooth transition into the MS in Bioengineering program.

The combined program preserves and enhances the quality of both degrees. WHC students in any of the concentrations: Biology, Biological Chemistry, Chemistry, Marine Biology, Physics, and Neuroscience can apply to this program, but they will have to take prerequisite courses which will improve their background in bioengineering, see Table 1. This combined program is open to talented students who have a cumulative FAU GPA of 3.25 or better. Students can apply to the MS program at the end of their junior year (e.g. after completing at least 90 credits). Bachelor students who take graduate courses (5000 – level or higher) in the department of Computer and Electrical Engineering and Computer Science (CEECS) may count up to 9 credits of approved graduate coursework (5000 level or higher) toward both their bachelor's and master's degrees as long as the combined program totals a minimum of 150 credits.

**Table 1. Prerequisite courses to be completed during the bachelor's degree**

MS Bioengineering prereqs	College taken at
COP 2220	CEECS (online)
CHM 2210 H Organic Chem I CHM 2204 H Organic Chem I Lab CHM 2211 H Organic Chem II CHM 2205 H Organic Chem II Lab	HC
BCH 3033/L H Biochemistry with lab	HC
PCB 3063 H Genetics	HC
PHY 2048/L H Physics I with lab	HC
MAC 2312 H Calculus II	HC

GRADUATE COLLEGE

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## CATALOG SPECIFICATIONS

### **B.A or B.S. in Liberal Arts and Sciences with Biology, Biological Chemistry, Chemistry, Marine Biology, Physics, Neuroscience Concentrations to M.S. in Bioengineering Degree Program**

The Wilkes Honors College (WHC) and the College of Engineering and Computer Science (COECS) offer a combined Bachelor of Arts or Bachelor of Science in Liberal Arts and Sciences with Biology, Biological Chemistry, Chemistry, Marine Biology, Physics, Neuroscience Concentrations to Master of Science in Bioengineering degree program. The Bachelor of Arts or Bachelor of Science in Liberal Arts and Sciences will be completed in the WHC at FAU and the students will receive the bachelor's degree from the WHC. Students will do the Master of Science in Bioengineering in the Department of Computer and Electrical Engineering and Computer Science at FAU and will receive the master's degree from the COECS.

Students may count up to 9 credits of approved graduate coursework (5000 level or higher) toward both their bachelor's and master's degrees as long as the combined program totals a minimum of 150 credits and:

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.

This program is open to WHC students in one the following concentrations: Biology, Biological Chemistry, Chemistry, Marine Biology, Physics, and Neuroscience. Students must complete the prerequisite coursework for the master's degree while pursuing the bachelor's degree at the WHC. In addition to the prerequisite coursework listed under the M.S. in Bioengineering program, the following deficiency courses must be taken:

- Students in the Chemistry concentration must take BCH 3033/L H Biochemistry I/Lab, BSC 1010 H Biological Principles, and BSC 1010L H Biological Principles Lab.
- Students in the Marine Biology, Physics, and Neuroscience concentrations must take Honors Organic Chemistry I and II with labs and BCH 3033/L H Biochemistry I/Lab.

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 for this combined program. To be eligible for the combined program, the bachelor's students in the WHC 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 in the WHC.
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.A or B.S. in Liberal Arts and Sciences to M.S. in Bioengineering Degree Program, students must fulfill the following requirements:

1. Completion of the requirements for the B.A or B.S. in Liberal Arts and Sciences in the WHC Sciences with Biology, Biological Chemistry, Chemistry, Marine Biology, Physics, Neuroscience Concentration, and other requirements stipulated by the University and College
2. Completion of all requirements for the M.S. in Bioengineering program in the CEECS department, on either the thesis or non-thesis option.