



**FLORIDA
ATLANTIC
UNIVERSITY**

**New Combined Degree
Program Request**

UUPC Approval 2-28-22

UGPC Approval _____

UFS Approval _____

Banner Posted _____

Catalog _____

New Combined Degree Program Request

BA,BS in Biological & Physical Sciences/2nd BS in CEGE/MS in Civil Engineering

Proposed Program: _____ CIP: _____ Effective Date (Term/Year): Spring / 2022 (e.g. Fall/2020)

| Proposed Combined Program Information | Undergraduate | Graduate |
|---|--|-------------------|
| Degree Level (e.g. B.A., B.S., M.A., M.S., etc.) | BA or BS, 2nd BS | MS |
| Program Name (e.g. Physics, Engineering, etc.) | Biological and Physical Sciences, CEGE | Civil Engineering |
| College | Wilkes Honors College/CoE&CS | CoE&CS |
| Department | NA/CEGE | CEGE |
| Program Description (provide a brief description of the program, including thesis or non-thesis option) | This is a combined program with BA or BS in Biological and Physical Sciences in the Honors College, with a 2nd Bachelors degree in CEGE to a BS/MS in Civil Engineering. Students complete the BA or BS first, obtain the 2nd Bachelors in CEGE and then up to 9 credits of graduate coursework can be double counted. for 2nd BS and MS | |

GPA Requirements: Departments must establish a minimum undergraduate GPA for students to be admitted to a combined program. *Note: Please attach explanation.*

Cumulative GPA of the last 60 credits must be 3.25 or above

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 |
|----------------------------|----------------|-----------|------------------|---------|
| | Daniel Meeroff | | dmeeroff@fau.edu | 9/20/21 |

| Approved by | Date |
|---|-----------|
| Department Chair: <u>Jan Gong</u> William O'Brien | 1/28/2022 |
| College Dean: <u>Jan Gong</u> | 11/31/22 |
| College Curriculum Chair: <u>Dan Meeroff</u> | |
| UUPC Chair: <u>Ethlyn Williams</u> | 2-28-22 |
| Undergraduate Studies Dean: <u>Daniel Meeroff</u> | 2-28-22 |
| UGPC Chair: _____ | _____ |
| UGC Chair: _____ | _____ |
| Graduate College Dean: _____ | _____ |
| UFS President: _____ | _____ |
| Provost: _____ | _____ |

Email this form and supporting documents to mjennning@fau.edu seven (7) business days before the UUPC meeting.

Academic Justification

The Wilkes Honors College (WHC) and the College of Engineering and Computer Science (CoE&CS) propose a new combined program, where students will complete the BA or BS degree in Biological and Physical Sciences in the WHC and then obtain a 2nd BS in one of the CEGE undergraduate programs (Civil Engineering, Environmental Engineering, or Geomatics Engineering) and then continue with an MS degree in Civil Engineering. The program requires at least 120 credits in the bachelor's degree, 30 credits in the 2nd BS, 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 Civil Engineering program. The 2nd BS in engineering is required for students to pursue licensure. The pre-requisites for will be obtained while pursuing the bachelor's degree. Students in any concentration in the WHC can apply to this program, but they will have to take prerequisite courses, see Table 1. This combined program is open to talented students who have a cumulative FAU GPA of 3.25 or better in the last 60 credits prior to applying. 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 Civil, Environmental & Geomatics Engineering (CEGE) may count up to 9 credits of approved graduate coursework (5000 level or higher) toward both their 2nd bachelor's and master's degrees as long as the combined program totals a minimum of 150 credits. These graduate courses will replace the upper-level elective courses in the 2nd bachelor's program.

Table 1.

| Course Taken in WHC | Substitute for BSCV | Substitute for BSEV | Substitute for BSGE |
|-----------------------|--------------------------------------|-----------------------------|--|
| STA2023 | Statistics Elective | Statistics Elective | Statistics Elective |
| MAC2313 | Physical & Natural Sciences Elective | CHM2046/L | Physical & Natural Sciences Elective |
| PHY2049/L | Physical & Natural Sciences Elective | Biological Science Elective | Physical & Natural Sciences Elective |
| | EGN3311 | EGN3311 | GEO2200C |
| MAP2302 | MAP3305 or MAP 2302 | MAP3305 or MAP 2302 | GIS Elective |
| | EGN3321 | Earth Science Elective | SUR3103/L |
| | EGN3331 | EGN3331 | CCE4031 |
| | CGN3501C | EGN3343 | SUR3141/L |
| | CWR3201C | CWR3201C | SUR3643 |
| Upper level electives | See Table 2 | See Table 3 | Business elective (3) Additional electives (15) |

Table 2 Upper Level Electives for pursuing 2nd BS in Civil Engineering

| Course Name | Course No. | Credits |
|--|-------------------|----------------|
| Geomatics | SUR 3103 | 2 |
| Geomatics Lab | SUR3103L | 1 |
| Construction Project Management | CCE 4031 | 3 |
| Soil Mechanics | CEG 3011C | 3 |
| Environmental Engineering and Science | ENV3001C | 3 |
| Analysis of Structures | CES 3102C | 3 |
| Introduction to Transportation Engineering | TTE3004C | 3 |
| TOTAL | | 18 |

Table 3 Upper Level Electives for pursuing 2nd BS in Environmental Engineering

| Course Name | Course No. | Credits |
|---------------------------------------|-------------------|----------------|
| Soil Mechanics | CEG 3011C | 3 |
| Environmental Engineering and Science | ENV3001C | 3 |
| Hydrologic Engineering | CWR4202 | 3 |
| Additional Electives | | 9 |
| TOTAL | | 18 |

Remaining Coursework for 2nd Bachelors

| BSCV | Course No. | Credits | BSEV | Course No. | Credits | BSCV | Course No. | Credits |
|--------------------------------|------------|-----------|--|------------|-----------|---|------------------|-----------|
| Structural Design Core | | 3 | Intro to Pollution Prevention and Sustainability | ENV4072 | 3 | Geodesy and Geodetic Positioning | SUR4530 | 3 |
| Geotechnical Design Core | | 3 | Air Pollution & Control Systems with Lab | ENV4112C | 4 | Eng & Construction Surveying | SUR3205/L | 2+1 |
| Transportation Design Core | | 3 | Solid/Haz Waste & Site Remediation | ENV4341 | 3 | Cadastral Principles and Legal Aspects | SUR4403 | 3 |
| Water Resources Core | | 3 | Env Fate & Transport | ENV4053 | 3 | Reality Capture Core | | 6 |
| Subdivision Design | SUR4463 | 2 | Subdivision Design | SUR4463 | 2 | Subdivision Design/Land Subdivision Lab | SUR4463/SUR3463L | 2+1 |
| RI: CEGE Design 1 | CGN4803C | 3 | RI: CEGE Design 1 | CGN4803C | 3 | RI: CEGE Design 1 | CGN4803C | 3 |
| RI: CEGE Design 1 | CGN4804C | 3 | RI: CEGE Design 1 | CGN4804C | 3 | | | |
| Internship | | 1 | | | | | | |
| Water and Wastewater Treatment | ENV5510 | 3 | Water and Wastewater Treatment | ENV5510 | 3 | | | |
| 5000 level graduate electives | | 6 | 5000 level graduate electives | | 6 | 5000 level graduate electives | | 9 |
| TOTAL | | 30 | | | 30 | | | 30 |

BS/MS Degree

| | | |
|---------------------------------------|--|-----------|
| BS/MS | | |
| Concentration Core | | 6 |
| 5000 Graduate Electives from BS | | 9 |
| Electives | | 9 |
| Master Thesis or Additional Electives | | 6 |
| Total | | 30 |

CATALOG SPECIFICATIONS

B.A or B.S. in Biological and Physical Sciences, 2nd BS in Civil, Environmental or Geomatics Engineering to M.S. in Civil Engineering Degree Program

The Wilkes Honors College (WHC) and the College of Engineering and Computer Science (CoE&CS) offer a combined Bachelor of Arts or Bachelor of Science in Biological and Physical Sciences with 2nd Bachelors in CEGE to Master of Science in Civil Engineering degree program. The Bachelor of Arts or Bachelor of Science degree will be completed and received from the WHC. The 2nd Bachelor's degree will be completed from CoE&CS. Students will do the Master of Science in Civil Engineering in the Department of Civil, Environmental & Geomatics Engineering (CEGE) at FAU and will receive the master's degree from the CoE&CS. Students may count up to 9 credits of approved graduate coursework (5000 level or higher) toward both their 2nd bachelor's and master's degrees. These graduate courses will replace the upper-level elective courses in the bachelor's program. The combined program totals a minimum of 150 credits:

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

Students must complete the prerequisite coursework for the master's degree while pursuing the bachelor's degree. 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 in their last 60 credits. 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 must meet all the degree requirements of the graduate program they have chosen, including prerequisite courses.

Degree Requirements To be eligible for this combined program, students must fulfill the following requirements:

1. Completion of the requirements for the B.A or B.S. in Biological and Physical Sciences in the WHC, and other requirements stipulated by the University and College
2. Completion of all requirements for the 2nd B.S. in Civil, Environmental or Geomatics Engineering program in the CEGE department as a second bachelor's degree
2. Completion of all requirements for the M.S. in Civil Engineering program in the CEGE department, on either the thesis or non-thesis (courses only) option