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Proposal for a Bachelor of Science Degree Program in Civil and Ocean Engineering

University of Rhode Island Faculty Senate

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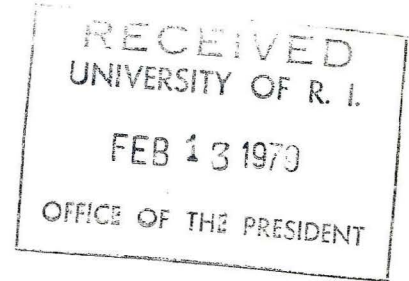
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UNIVERSITY OF RHODE ISLAND
Kingston, Rhode Island

FACULTY SENATE
BILL

Adopted by the Faculty Senate



TO: President Frank Newman

FROM: Chairperson of the Faculty Senate

1. The attached BILL, titled Proposal for a Bachelor of Science Degree Program in Civil and Ocean Engineering

is forwarded for your consideration.

2. The original and two copies for your use are included.
3. This BILL was adopted by vote of the Faculty Senate on February 8, 1979 (date).
4. After considering this bill, will you please indicate your approval or disapproval. Return the original or forward it to the Board of Regents, completing the appropriate endorsement below.
5. In accordance with Section 8, paragraph 2 of the Senate's By-Laws, this bill will become effective on March 1, 1979 (date), three weeks after Senate approval, unless: (1) specific dates for implementation are written into the bill; (2) you return it disapproved; (3) you forward it to the Board of Regents for their approval; or (4) the University Faculty petitions for a referendum. If the bill is forwarded to the Board of Regents, it will not become effective until approved by the Board.

February 12, 1979
(date)

Dorothy F. Donnelly
Dorothy F. Donnelly
Chairperson of the Faculty Senate

ENDORSEMENT

TO: Chairperson of the Faculty Senate

FROM: President of the University

1. Returned.
2. a. Approved _____.
- b. Approved subject to final approval by Board of Regents _____.
- c. Disapproved _____.

*Approved by Bd. of Regents
3/5/81*

2/26/79
(date)

F. Newman
President

ADD: Bachelor of Science Degree In Civil and Ocean Engineering

A. Proposal

1. Concentration requirements:

Students enrolled in this curriculum will follow the program of study for civil and environmental engineering during the freshman and sophomore years. The program requires a minimum of 130-133 credits with 15 credits in ocean related courses.

Suggested Course Sequence:

Junior Year

First Semester: 17 credits
CVE 322 (2), 352 (3), 303 (0), MCE 354 (3), OCG 401 (3), approved science elective¹ (3), and general education elective in Division A, C, or D (3).

Second Semester: 17 credits
CVE 323 (2), 374 (3), 380 (3), 304 (0), CVE (OCE) 401 (3), mathematical science elective² (3), and general education elective in Division A, C, or D (3).

Senior Year

First Semester: 16 credits
Required CVE core course(s)³ (6), CVE (OCE) 411 (3), elective(s) or ocean related engineering elective⁴ (6), CVE 305 (0), 491⁵ (1)
Second Semester: 18 credits
CVE (OCE) 403 (3), elective(s) or ocean related engineering elective⁴ (12), CVE 306 (0), and general education elective in Division A, C or D (3).

1. From a list approved by the department.
2. 400 level or above in mathematics, statistics or operations research.
3. Additional required Core Courses (6 credits) CVE 353 and either 396 or 495.
4. Electives shall include 6 credits of free electives and at least 3 credits of ocean related electives chosen by the candidate in consultation with the adviser.
5. Proposal and preparation for project course CVE 403.

2. New Courses:

- *a. CVE (or OCE) 401 Introduction to Coastal and Ocean Engineering (11,3)
Wave theory and forecasting, beach erosion, sediment transport, wave forces, effect of pollutants on water quality, materials for ocean construction. (Lec. 3) Pre: Junior standing in Civil Engineering. Not for graduate program credit. Staff
- *b. CVE (or OCE) 403 Project in Ocean Engineering (11,3) Independent study, design project or research project on an approved topic related to the ocean environment. Pre: 491 or permission of instructor. Not for graduate program credit. Staff
- *c. CVE (or OCE) 411 Basic Coastal Measurements (1,3) Basic coastal measuring exercises from boats, in-situ, and on laboratory samples. Included will be measurement of current and tide, sediment transport and erosion, sediment testing, water testing, and bottom profiling. (Lec. 1, Lab. 3) Pre: advanced standing in Civil Engineering or permission of instructor. Not for graduate program credit. Staff

B. Rationale

1. Purpose:

Civil engineers are increasingly becoming involved in design construction and operation of many types of ocean and coastal facilities. Activities involve the full range of civil engineering disciplines including structural, transportation, geotechnical, hydraulic, environmental, and construction engineering. It is readily apparent that these ocean engineering activities will continue to expand in the future and that there will be a concurrent increased demand for civil engineers to work in the ocean environment. Most specialized ocean and coastal engineering education is, and should continue to be at the graduate level in programs which build on traditional engineering undergraduate programs. However, it is both possible and

desirable to introduce interested and qualified undergraduate students to some of the basic principles and background which are essential to understanding engineering problems in the ocean environment. With this in mind the Civil and Ocean Engineering undergraduate program has the following principal objectives:

1. familiarize students with ocean related engineering activities with primary focus on the civil engineering aspects.
2. provide a base of ocean related courses, built on the basic civil engineering curriculum, to prepare graduates for entrance directly into a professional engineering career oriented toward the ocean environment.
3. provide an educational base from which to continue work toward a graduate degree.

2. Staff and Facilities:

No new facilities are required. A small addition to library acquisitions will be requested for CVE (or OCE) 403. Teaching load will be shared by CVE and OCE faculty and staff. Project supervision will be distributed among faculty, with some activities associated with on-going research.

3. Cost:

There is minimal cost associated with the program. The departments intend to use existing resources to fund the program, however, there may be need for an additional \$500 per year to cover boat rental.