

Submission Deadlines: Fall - October 11, 2005 Spring - February 14, 2006

TITLE Changes to the requirements for the degree of B. S. in Civil & Env. Engineering

Sponsor(s) Yusuf A. Mehta e-mail: mehta@
Ralph A. Dusseau e-mail: dusseau@
e-mail:

DEPARTMENT Civil and Environmental Engineering
College Engineering

If LAS -check: _____ History/Humanities _____ Social/Behavioral Sciences
_____ Math/Science

UNDERGRADUATE _____ GRADUATE

_____ New non gen-ed _____ Major

_____ Short-Term non gen-ed

Minor curricular changes (fewer than three) to:

Existing non gen-ed course

_____ Non gen-ed degree requirements

_____ Major

_____ Minor, specialization, concentration, track, certificate program

Signatures Required: representing approval before submission to Office of the Senate

Department Chair: _____ Date: 9/8/05
Department CURRICULUM Chair: _____ Date: 09/12/05
Academic DEAN: _____ Date: 9/20/05

COLLEGE CURRICULUM COMMITTEE: *Requires adjunct support for additional workload*
Open Hearing Date: 1/27/06
Approved:
Not Approved: _____

Signature: College Curriculum Chair _____

Signature: SENATE CURRICULUM CHAIR _____
Date: 1/27/06

Comments: _____

Signature: Executive Vice President/Provost: _____
Date: 1/19/06

Signature: REGISTRAR _____
Date: 5/30/06
Course Description Received & Approved
Hegis Taxonomy & Course #

Notification Forward:
 SCC CHAIR
 IR
 CAP
 Registrar
 Academic Dean
 Department Chair
 VP/Student Affairs
 Other-

Minor Curricular Change: Civil Engineering Degree Requirements

1. Details

A) *Description of Changes:* The following changes to the requirements for the degree of B. S. in civil engineering are proposed.

- 1) The course Computer Science and Programming (0704.103) is removed from the list of required courses.
- 2) A "Computing Elective" is added to the degree requirements. This is a computer-intensive elective that must be filled by a course or courses totaling three or more semester-hours. Acceptable courses for satisfying this requirement are:
Introduction to Scientific Programming (0701.104) 2
Computer Science and Programming (0704.103) 4
Transfer credit for comparable course at other college or university

Sponsor:

Ralph Dusseau, Chair, Civil and Environmental Engineering

Yusuf Mehta, Chair, Civil and Environmental Engineering Curriculum Committee

2. Rationale

A) *Need for Change:*

The College of Engineering previously has a "common first year," a sequence of courses required for all freshman engineering students. A major component of the rationale for the common first year was that students could defer selecting a major, or change major within engineering, until the end of their first year without falling behind. The Computer Science and Programming (CS&P) course is currently a civil engineering degree requirement, as it is part of the spring semester of the common first year. Many of the students enrolled in the CS&P course do not have the required background knowledge entering the course. Note that while students have more exposure to computers in high school, it often is not programming. Nowadays that experience is working with spreadsheets, word processors, web pages, etc and not traditional programming. The department of civil engineering has an extensive Assessment plan that includes gauging student opinions through surveys and focus groups, surveying employers of summer interns and graduates from the department, and obtaining feedback from our Industrial Advisory Board. The advisory board mentioned that their engineers mostly use application based software programs. The employers are also reporting that they do not program but used already programmed applications. When they do write their own routines it is most likely to be in a spreadsheet or be a macro programmed with Visual Basic that ties into the spreadsheet. This type of programming is closer to what is taught in Intro to Scientific Programming. The programming they do themselves is typically to write spreadsheet programs to solve specific problems.

B) *Description of Curricular Effect*

This change does not affect our curriculum. The overall credits required for graduation will remain the same because one-credit decrease requested in the proposal is balanced by one credit increase in Surveying and Engineering Graphics. However, the new distribution of credits is an effective response to several issues raised by our assessment data and is consistent with national trends and the recommendation of our Industrial Advisory Board, as explained in the previous section.

3. **Results of Consultation:** Dr. Jennifer Kay, Chair Department of Computer Science.

Mehta, Yusuf A.

From: Jennifer Kay [kay@elvis.rowan.edu]
Sent: Monday, February 07, 2005 12:21 PM
To: Mehta, Yusuf A.
Cc: Stephen J. Hartley; Jennifer Kay; Nancy Tinkham; Adrian Rusu; Khaled Amer; Dusseau, Ralph A.
Subject: Re: Request for Consultation

To: Yusuf Mehta, Civil Engineering
From: Computer Science Curriculum Committee
Re: Minor change to CE degree requirements

We support your proposal to offer CE students the option of taking either Computer Science & Programming or Intro to Scientific Programming. We recognize that this will mean a higher demand in Introduction to Scientific Programming and we will change one section of Introduction to Programming to be Introduction to Scientific Programming starting in Spring 06.

--

Jennifer Kay, Chair
Rowan University
Computer Science Department
201 Mullica Hill Road
Glassboro, NJ 08028

email: kay@elvis.rowan.edu
voice: 856-256-4806
fax: 856-256-4741
web: <http://www.rowan.edu/~kay/>

This form ***MUST BE COMPLETED FOR NEW COURSE or PROGRAM PROPOSALS, and EXTENSIVE CHANGES TO A COURSE or PROGRAM.***

The purpose of this form is to provide a channel of communication between the Campbell Librarians and faculty when submitting new course or program proposals, or making extensive changes to existing courses or programs. The information will be used to assess the resources available in the library, and to identify resources the library should acquire to support the new courses/programs, or extensive changes to same. The information will also provide the rationale for institutional support for library acquisitions. This form should be completed in a coordinated effort between the course sponsor(s) and the academic department liaison librarian.

Note: Sponsor(s) complete parts A & B
If assistance is required to complete, please notify the librarian liaison.
Forward this form to the librarian who will complete parts C, D & E

When form is completed, attach to the original curriculum proposal before submitting to the Senate office.

A. College: Engineering

Department: Civil and Environmental Eng

Proposed by: Ralph Dusseau

Date: 9/8/2005

COURSE TITLE: Intro to Scientific Programming

Anticipated Date for Course/Program Offering:

B. *List specific resources that should be acquired to support this course.*

NO ADDITIONAL RESOURCES NEEDED

C. *Describe the resources available in the library to support this course/program, including reference, monographic, electronic databases, audio-visual materials, etc. A summary statement is sufficient.*

D. *List key periodicals available in the library to support this course/program.*

E. *Librarian comments & recommendations:*

LIBRARIAN LIAISON: _____

Signature: _____

Rowan University
Campbell Library

Library Resources Form

Department/School: College of Engineering/ Dept. of Civil and Environmental
Engineering

Proposed by: Drs. Yusuf Mehta and Ralph Dusseau

Program Title: Minor Curricular Change: Civil Engineering Degree Requirements:

- 1) Computer Science and Programming (0704.103) removed from required list.
- 2) "Computing Elective" added to degree requirements (options include:
Introduction to Scientific Programming (0701.104); Computer Science and
Programming (0704.103); Transfer credit for comparable course at other college
or university).

Anticipated Date for Course/Program Offering: Spring 2006

Resources that should be acquired

No additional resources are needed at this time.

Resources available in Campbell Library

The library has significant holdings in the broad L.C. subject areas of Civil Engineering. An engineering approval plan is utilized to provide current materials in the engineering disciplines.

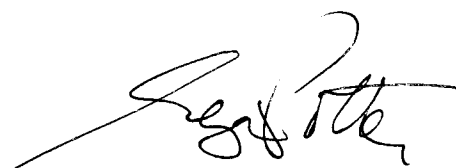
List key periodical resources

Campbell Library is fortunate to have access to online journal databases in a large number of academic subjects, including civil engineering, mathematics, and the physical sciences.

Of particular significance is the ASME database (American Society of Mechanical Engineers), which contains relevant full-text articles. In addition, both Engineering Village and Elsevier Science Direct provide journal articles, many full-text, on science and engineering. Also, MathSci + provides comprehensive coverage of international research in mathematics and mathematically related research in statistics, computer science, physics, operations research, engineering, biology, and related disciplines. Almost 2,000 journals are represented.

Librarian remarks

Given the library's current book holdings and online journal access, this change can be supported.

A handwritten signature in black ink, appearing to read "Gregory C. Potter". The signature is fluid and cursive, with a long horizontal stroke extending to the left.

Gregory C. Potter
Library Liaison

9/13/05