PROPOSAL SCC #01-02- 419

CURRICULUM PROPOSAL FORM 2001-2002

NON-GENERAL EDUCATION PROCESS A

***DEADLINES: Deadline dates for 2001/2002 submissions: Regular proposals: October 19, 2001 to be implemented in Fall 2002; Short-Term proposals: December 7, 2001 to be implemented in Fall, 2002; Regular proposals February 15, 2002 to be implemented in Spring, 2003; March 22, 2002 for short-term courses to be implemented in Spring 2003.**

PROPOSAL TITLE: Pollutant Fate and Transport

SPONSOR(S): Kauser Jahan x5323

DEPARTMENT: Civil and Environmental Engineering

COLLEGE: Engineering

IF LAS CHECK ONE: ___ History/Humanities ___Math/Sciences ___Social/Behavioral Sciences

Check one: ___Undergraduate ___X Graduate

THE ATTACHED ***NON-GEN-ED*** PROPOSAL IS BEST DESCRIBED BY THE ITEM(S) CHECKED.

____New non-gen-ed course

____Short-term non-gen-ed course

_X__Minor curricular changes (fewer than three) to:

__X__existing non-gen-ed course

_____non-gen-ed degree requirements

_____major

_____ minor, specialization, concentration, track, certificate program

DEPARTMENT

(Signature indicates approval)

Dept. Curriculum Chair / Date

Dept. Chairperson / Date

ACADEMIC DEAN

Approved ✓ Not Approved ____ Comments: No additional resources in excess of base budget funding are required.

Dean's Signature/Date

COLLEGE CURRICULUM COMMITTEE

Date of open hearing (if necessary) 4/26/02 Approved X Not Approved ______

Comments:

Signature of College Chair/Date: [signature]

UNIVERSITY CURRICULUM COMMITTEE

Date Received/Processed ______

Comments:

Curriculum Chair Signature [signature] 7/25/02 Date Announced At Senate ______ 7/17/02

EXECUTIVE VICE PRESIDENT/PROVOST

Approved ✓ Not Approved ______ If no, reasons are as follows:

Student Credit Hours ______ Faculty Load Hours ______ Equalized Credit Hours ______

Official Copy & Approval Sheet Filed (Date): ______ Executive VP/Provost Signature/Date [signature]

REGISTRAR

Date Approved Course Description Received ______ Hegis Taxonomy & Course Number Assigned [illegible]

Registrar Signature/Date [signature] 11/5/02

NOTIFICATION FORWARD

✓ Senate Curriculum Committee Chairperson ✓ Academic Dean(s)

✓ Department Chairpersons ✓ Registrar ______ Sponsor(s)

Scott Koch 11-22-02

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Course Proposal:

1. Details:

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Course Title: **Pollutant Fate and Transport (0908.532)**

b) Sponsor: Dr. Kauser Jahan, Civil Engineering, x5323

c) Credit Hours: 3 credit hours

d) Course Level: Graduate (0908.532)

e) Prerequisites: Graduate standing or permission of instructor.

f) Suggested Time: One section during fall semesters

g) Curricular Effect: None – This proposal modifies an existing course (Groundwater and Soil Remediation, 0908.532).

h) Resources (No change from current course)
- Faculty: Existing faculty can teach this course.
- Library: Library acquisitions will be required.
- Equipment: Existing laboratory facilities and equipment are adequate for this course.
- Computers: Computer laboratory access will be required.

i) Library Resources: Library acquisitions will be required at same level as current course.

2. Rationale:

Minor modifications to an existing course (Groundwater and Soil Remediation, 0908.532) are required because of proposed curriculum changes (see curriculum modification proposal). The course description will be modified, as the new curriculum requires a new sequence of environmental topics.

3. Essence of the Course

a) Objectives:

Upon completion of the course, students will be familiar with:

Characteristics and Properties of Organic Pollutants
Aquatic Chemistry
Transport Mechanisms for Pollutants (Adsorption, Retardation, Attenuation, Volatilization, Biodegradation)
Groundwater (Properties, Flow Equations, Transport in Porous Media)
Modeling

b) Topical Outline:

The topical outline of the course may vary to some extent depending on the interests of the instructor and the students, and on advances in environmental engineering technology. The topics initially planned include:

Introduction to Organic Pollutants
- Structure
- Properties

Aquatic Chemistry
- pC-pH Relationships
- Redox Reactions

Groundwater/Soil
- Properties
- Darcy's Law
- Well Hydraulics

Transport Processes
- Adsorption
- Volatilization
- Biodegradation
- Natural Attenuation

Transport in Porous Media
Groundwater Modeling

c) Evaluation and Grading Procedure of Students:

Student grades will be based on individual and/or group examinations, individual homework, design projects, and lab reports. **In addition, students will complete a major mathematical modeling project on a pollutant of their choice.**

d) Course Evaluation:

The proposed course will be assessed based on student evaluations and curriculum review by engineering faculty.

4. Results of Consultations:

The proposed course is a minor modification to an existing course entitled "Groundwater and Soil Remediation " (0908.532) which is part of the current Engineering Curriculum approved by the University Senate. Consultations were submitted with the original proposal as specified by the Curriculum Committee.

Catalog Description:

Pollutant Fate and Transport (0908.532)

Prerequisites: Graduate standing or permission of instructor.

(Offered every other fall semester) Topics include Characteristics and Properties of Organic Pollutants, Aquatic Chemistry, Transport Mechanisms for Pollutants (Adsorption, Retardation, Attenuation, Volatilization, Biodegradation), Groundwater (Properties, Flow Equations, Transport in Porous Media) and Mathematical Modeling .

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ROWAN UNIVERSITY

Biological Sciences

TO: Dr. Jeff Everett
Civil and Environmental Engineering

FROM: Dr. Patricia Mosto
Chair and Professor, Biology Department

RE: Changes to Civil and Environmental major

DATE: October 7, 2002

Jeff, thanks for the opportunity to review the changes you have proposed for the Civil and Environmental Engineering B.S. degree. I have carefully reviewed your proposal and I support your changes. This changes will not have any significant impact in the Biological Sciences program and we do not have any objection to them.

201 Mullica Hill Road • Glassboro, New Jersey • 08028-1701 • Phone (856) 256-4833 • Fax (856) 256-4921

Cleary, Douglas B.

From: Everett, Jess W.
Sent: Wednesday, October 09, 2002 10:54 AM
To: Cleary, Douglas B.
Subject: FW: Consultations

TEXT.htm

Doug,

Will this do? If so I'll print the email and give it to you.

Jess

-----Original Message-----
From: Dahm, Kevin D.
Sent: Wednesday, October 09, 2002 10:50 AM
To: Everett, Jess W.
Subject: Re: Consultations

I am writing this letter in support of the several related curriculum proposals put forward last year by the Civil and Environmental Engineering department, refining their curriculum and consolidating the two parallel tracks into one. I will not attempt to comment on the proposals individually as I have already endorsed them as chair of the college curriculum committee. I am writing this letter simply to confirm that these changes were discussed at a chemical engineering department meeting and my department supports them unanimously. Chemical engineering students on occassion have interest in taking civil engineering courses as electives but these opportunities remain available with the proposed changes. The civil engineering students will be well served by these changes and we support their implementation.

Sincerely,
Kevin Dahm

Kevin Dahm
Assistant Professor of Chemical Engineering
Rowan University
dahm@groupwise.rowan.edu
(856) 256-5318