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PROPOSAL SCC #99/00-432

99-00-432

CURRICULUM PROPOSAL FORM 1999-2000

ROWAN UNIVERSITY SENATE

NON-GENERAL EDUCATION PROCESS A

*DEADLINES: Deadline dates for 1999/2000 submissions: Regular proposals: October 22, 1999 to be implemented in Fall 2000; Short-Term proposals: December 10, 1999 to be implemented in Fall, 2000; Regular proposals February 18, 2000 to be implemented in Spring 2001; March 24, 2000 for short-term courses to be implemented in Spring 2001

PROPOSAL TITLE: Integrated Solid Waste Management (0908.533)

SPONSOR(S): Jess W. Everett

DEPARTMENT: Civil Engineering

COLLEGE: Engineering

IF LAS CHECK ONE: History/Humanities Math/Science Social/Behavioral Sciences

Check one: Undergraduate Graduate

0908 533

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

Minor curricular changes (fewer than three) to:

- 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 Ravi Prithi Rameshchandra 2/24/00

Dept. Chairperson/Date [Signature] 2/24/00

ACADEMIC DEAN

Approved Not Approved Comments:

Dean's Signature/Date [Signature] 2/24/00

COLLEGE CURRICULUM COMMITTEE

Date of open hearing (if necessary) 2/25/01 Approved Not Approved

Comments:

Signature of College Chair/Date: [Signature] 2/25/01

UNIVERSITY CURRICULUM COMMITTEE

Date Received/Processed 5/9/01

Comments:

Curriculum Chair Signature: [Signature] Date Announced At Senate 5/9/01

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] 6/5/01

REGISTRAR

Date Approved Course Description Required _____

Hegis Taxonomy & Course Number Assigned _____

Registrar Signature/Date: [Signature] 6/5/01

NOTIFICATION FORWARD

Senate Curriculum Committee Chairperson Academic Dean(s) 8-13-01

Department Chairpersons Registrar _____ Sponsor(s) _____

Course Proposal:

1. Details:

- a) Course Title: Integrated Solid Waste Management (0918.533)
- b) Sponsor: Dr. Jess W. Everett & College of Engineering Curriculum Committee
- c) Credit Hours: 3 credit hours
- d) Course Level: Graduate
- e) Curricular Effect: Part of M.S. Curriculum in Civil and Environmental Engineering
- f) Prerequisites: Graduate standing or permission of instructor
- g) Suggested Time/
Scale of
Implementation: One section during fall semesters
- h) Resources
 - Faculty: Existing faculty can teach this course.
 - Library: No library acquisitions will be required.
 - Equipment: No laboratory equipment will be required.
 - Computers: Computer laboratory access will be required.

2. Rationale:

The proposed course is an elective course for all graduate civil and environmental engineering students. The inclusion of this course in the civil engineering curricula is consistent with the goals of the Civil Engineering Masters program.

The course introduces students to the theories and principles of integrated solid waste management as applied to real-world analysis and design problems.

3. Essence of the Course:

a) Objectives:

Upon completion of the course, graduate students will be able to solve civil engineering analysis and design problems including the ability to perform the following tasks:

- Design of municipal solid waste facilities and programs, such as landfills, composting facilities, transfer stations, collection programs, and drop-off centers; and
- Planning of integrated systems for municipalities, counties, and regions.
- Presenting research papers on solid waste topics, in oral and written form.
- Presenting engineering reports on solid waste topics, in oral and written form.
- Developing novel solutions to solid waste problems.
- Collecting and evaluating solid waste data.

b) Topical Outline:

The topical outline of the course may vary to some extent depending on the interests of the instructor and the students. Topics to be covered include the following:

- Introduction to integrated solid waste management
- Sources, types, and quantities
- Legislation and Regulation (Presentation by Graduate Students)
- Physical, chemical, and biological properties
- Statistical analysis of solid waste data
- Source activities
- Collection
- Transport
- Landfilling
- Combustion
- Separation and processing
- Source reduction, reuse, recycling
- Composting
- Planning
- Presentation of Research Topics (by Graduate Students)
- Presentation of Engineering Report (by Graduate Students)
- Presentation of Data collection and assessment activities (by Graduate Students)

c) Evaluation and Grading Procedure of Students:

Student grades will be based on individual examinations, individual and group homework, research papers, engineering reports, oral presentations, and data collection and assessment activities.

d) Course Evaluation:

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

4. Results of Consultations:

The proposed course is an elective course in the Civil Engineering Masters program. Consultations were made with Biology and Chemistry. The course does not appear to overlap with existing courses.

Catalog Description:

Integrated Solid Waste Management (0908.533)

(Prerequisites: graduate standing or permission of the instructor)

The course deals with the theories and principles of integrated solid waste management as applied to real-world analysis and design problems. The course covers the design of facilities and programs, such as landfills, composting facilities, transfer stations, collection programs, and drop-off centers, and planning of integrated systems for municipalities and counties.

Computer applications are included. Students are expected to develop novel solutions to solid waste problems, write and present research and engineering reports, and collect and assess solid waste data.