

CURRICULUM PROPOSAL FORM 1999-2000

**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

0905.433

PROPOSAL TITLE: Principles of Integrated Solid Waste Management

SPONSOR(S): Jess W. Everett

DEPARTMENT: Civil and Environmental Engineering

COLLEGE: Engineering

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

Check one:  Undergraduate  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

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)

*Jess W. Everett* 02/10/2000

Dept. Curriculum Chair/Date

*Jess W. Everett* 2/17/00

Dept. Chairperson/Date

ACADEMIC DEAN

Approved  Not Approved  Comments:

Dean's Signature/Date

*Jill Tracey* 2/18/00

COLLEGE CURRICULUM COMMITTEE

Date of open hearing (if necessary) 12-8-99 Approved  Not Approved

Comments:

Curriculum Chair Signature/Date: Ravi Puthan Paramachandran 02/24/2000

UNIVERSITY CURRICULUM COMMITTEE

Date of open hearing (if necessary) \_\_\_\_\_ Approved \_\_\_\_\_ Not Approved \_\_\_\_\_

Comments:

Curriculum Chair Signature/Date: Mark DeLong 2/5/00 Date Announced At Senate 2-28-00

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 C. J. Johnson 3/2/00

REGISTRAR

Date Approved Course Description Received \_\_\_\_\_ Hegis Taxonomy & Course Number Assigned 0908.433

Registrar Signature/Date Robert A. Debot 3/16/00

NOTIFICATION FORWARD

\_\_\_\_ Senate Curriculum Committee Chairperson \_\_\_\_\_ Academic Dean(s)  
\_\_\_\_ Department Chairpersons \_\_\_\_\_ Registrar \_\_\_\_\_ Sponsor(s)

## Course Proposal:

### 1. Details:

- a) Course Title: Principles of Integrated Solid Waste Management (0918.433)
- b) Sponsor: Dr. Jess W. Everett & College of Engineering Curriculum Committee
- c) Credit Hours: 3 credit hours
- d) Course Level: Senior
- e) Curricular Effect: Elective for undergraduate civil engineering students
- f) Prerequisites: Senior 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 undergraduate civil engineering students. The inclusion of this course in the civil engineering curricula is consistent with the goals of the original civil engineering curricula which were approved by the University Senate in December 1994 and which were subsequently revised and approved in May 1996 and May 1997.

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, civil engineering 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.

#### 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
- 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

c) Evaluation and Grading Procedure of Students:

Student grades will be based on individual examinations and individual and group homework.

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 additional elective course that supplements the civil engineering curricula and is consistent with the original civil engineering curricula which were approved by the University Senate in December 1994 and which were revised and approved in May 1996 and May 1997. Consultations were made with Biology and Chemistry.

Catalog Description:

Principles of Integrated Solid Waste Management (0908.433)

(Prerequisites: senior 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.