

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.

090542

PROPOSAL TITLE: Site Remediation Engineering Principles

SPONSOR(S): Jess W. Everett (x 5328)

DEPARTMENT: Civil and Environmental Engineering

COLLEGE: Engineering

IF LAS CHECK ONE: History/Humanities Math/Sciences 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)

Larry B. King 2/15/02

Dept. Curriculum Chair / Date

Kaiser Jabbar 2/15/02

Dept. Chairperson / Date

ACADEMIC DEAN

Approved

Not Approved

Comments:

No additional resources in excess of base budget funding are required.

Dean's Signature/Date

Dianne Durland

COLLEGE CURRICULUM COMMITTEE

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

Comments:

Signature of College Chair/Date: Kevin D. John

UNIVERSITY CURRICULUM COMMITTEE

Date Received/Processed _____

Comments:

Curriculum Chair Signature Philip A. Lewis
Senate _____

Date Announced At
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 Kevin D. John 10/19/02

REGISTRAR

Date Approved Course Description Received _____ Hegis Taxonomy & Course Number

Assigned C9CS 422

Registrar Signature/Date E. C. Egan 10/10/02

NOTIFICATION FORWARD

Senate Curriculum Committee Chairperson

Academic Dean(s)

CPH
Just Rich
10/16/02

Department Chairpersons

Registrar

Sponsor(s)

Course Proposal:

1. Details:

421

- a) Course Title: **Site Remediation Engineering Principles (0908.422)**
- b) Sponsor: Dr. Jess W. Everett, Civil Engineering, x5326
- c) Credit Hours: 3 credit hours
- d) Course Level: Undergraduate, Senior-level (0908.422)
- e) Prerequisites: Senior standing or permission of instructor.
- f) Suggested Time: One section during fall semesters in odd-numbered years
- g) Curricular Effect: None – This proposal modifies an existing course (Advanced Wastewater Treatment for Seniors, 0908.422).
- 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 (Advanced Wastewater Treatment for Seniors, 0908.422) 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:

- Site Characterization
- Site Safety
- Modeling
- Feasibility Studies
- Remediation Design

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
 - Regulations
 - Fundamentals
- Site Characterization
 - Field Analysis
 - Laboratory Analysis
- Site Safety
- Modeling
- Feasibility Studies
- Remediation Design
 - Pump and Treat
 - Stabilization
 - Containment
 - Treatment Walls
 - Natural Attenuation and Bioremediation
 - Bioventing, Soil Vapor Extraction, and Air Sparging
 - Enhanced Bioremediation
 - Phytoremediation
 - Oxidation and other chemical treatments
 - Chemical Dehalogenation
 - In Situ Soil Flushing and Soil Washing
 - Soil Vapor Extraction and Air Sparging
 - Solvent Extraction

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.

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 an existing course entitled “Advanced Wastewater Treatment for Seniors” (0908-422) 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:

Site Remediation Engineering Principles (0908.422)

Prerequisites: Senior standing or permission of instructor.

(Offered fall semesters in odd-numbered years) Topics in site remediation engineering, including site characterization, site safety, modeling site conditions, conducting feasibility studies, and designing remediation systems, such as pump and treat, stabilization, containment, treatment walls, natural attenuation, enhanced bioremediation, phytoremediation, oxidation, soil flushing, and soil vapor extraction.

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