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PROPOSAL NUMBER: 99- 469

### CURRICULUM PROPOSAL FORM

**\*DEADLINES:**

REGULAR COURSE PROPOSALS: OCTOBER 23, 1998 FOR FALL, 1999 AND FEBRUARY 19, 1999 FOR SPRING, 2000  
SHORT-TERM COURSE PROPOSALS: DECEMBER 11, 1998 FOR FALL, 1999 AND MARCH 26, 1998 FOR SPRING 2000

PROPOSAL TITLE: SEMINAR: ENGINEERING FRONTIERS

SPONSOR/S: S MANDAYAM AND J.L. SCHMALZER & ECE CORP. CO.

DEPARTMENT: ENGINEERING

C969.448

CHECK ALL THAT APPLY:

UNDERGRADUATE  GRADUATE

COLLEGE: ENGINEERING

If LAS:  History/Humanities  
 Math/Sciences  
 Social/Behavioral Sciences

\*\*\*\*\*

TYPE OF PROPOSAL (Check ALL that Apply)

<input type="checkbox"/> General Education	<input checked="" type="checkbox"/> New Course (NOT Gen. Ed.)
<input type="checkbox"/> New Course in _____ Bank	<input type="checkbox"/> Name Change (Dept., School, Major)
<input type="checkbox"/> Existing course, Add To _____ Bank	<input type="checkbox"/> Changes in Degree Requirements
<input type="checkbox"/> Multicultural/Global Designation	<input type="checkbox"/> Changes Involve Gen. Ed. requirements
<input type="checkbox"/> Writing Intensive Designation	<input type="checkbox"/> Minor Changes to Existing Courses
<input type="checkbox"/> New Minor/Concentration/Specialization	<input type="checkbox"/> Course is NOT General Education
<input type="checkbox"/> New Major/Degree Program	<input type="checkbox"/> Course IS General Education
<input type="checkbox"/> Short Term Course Proposal	

DEPARTMENT (SIGNATURE INDICATES APPROVAL)

Ravi Subh Ramachandran 03/01/99 J. L. Schmalzer 06 June 98

DEPT. CURRICULUM CHAIR / DATE DEPT. CHAIRPERSON / DATE

COLLEGE CURRICULUM COMMITTEE

DATE OF OPEN HEARING (if necessary) \_\_\_\_\_

APPROVED

NOT APPROVED

Comments:

Robert K. Herketh 4/20/99

SIGNATURE DATE

ACADEMIC DEAN (& GRADUATE DEAN, for New Graduate Programs Only)

APPROVED

NOT APPROVED

Comments:

[Signature] 3/9/99

SIGNATURE (Academic Dean) DATE

SIGNATURE (Graduate Dean) DATE

UNIVERSITY CURRICULUM COMMITTEE

DATE OF OPEN HEARING (if necessary) 4/20/99 (College level only)

----- APPROVED

----- NOT APPROVED

Comments:

San Jose State 5/5/99

SIGNATURE DATE

SENATE

Date announced at Senate 4/30/99

Voted upon at Senate: \_\_\_\_\_ Approved \_\_\_\_\_ Not Approved \_\_\_\_\_ Date: \_\_\_\_\_

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): \_\_\_\_\_

DATE/SIGNATURE EXECUTIVE VICE PRESIDENT/PROVOST [Signature] 5/24/99

REGISTRAR

DATE APPROVED COURSE DESCRIPTION RECEIVED \_\_\_\_\_

HEGIS TAXONOMY & COURSE NUMBER ASSIGNED 0909.49E

DATE/SIGNATURE OF REGISTRAR Robert A. Kulat 6/16/99

NOTIFICATION FORWARD:

1/1 SENATE CURRICULUM COMMITTEE CHAIRPERSON

1/1 DEPARTMENT CHAIRPERSONS

1/1 ACADEMIC DEAN(S)

\_\_\_\_ REGISTRAR

\_\_\_\_ SPONSOR(S)

T.H. 1/10/99

## Course Proposal

### 1. Details:

a) Course Title:	Seminar: Engineering Frontiers (0909.498)
b) Sponsor:	Dr. Shreekanth Mandayam and Dr. John L. Schmalzel, Electrical & Computer Engineering
c) Credit Hours:	1 credit hour
d) Course Level:	Senior
e) Curricular Effect:	Seminar course available to electrical & computer engineering seniors
f) Prerequisites:	Concurrent enrollment in Senior Engineering Clinic II (0909.402)
g) Suggested Time/ Scale of Implementation	Spring 2000 One section
h) Resources	Faculty will be hired and laboratory equipment obtained consistent with Engineering School multi-year budget. Library acquisitions will be required.

### 2. Rationale:

The proposed course is a senior level Electrical and Computer Engineering seminar course. The goal of this proposed course is to provide engineering students on the brink of graduation, exposure to topical cutting edge technology and research in any one area chosen by the instructor. Faculty members in the department will formulate guidelines for each year's course offering. Course content and topics will change with each offering to maintain currency with the frontiers of engineering technology and will reflect faculty expertise and interest.

### 3. Essence of the Course:

#### a) Objectives:

As part of the engineering frontiers seminar, students will be required to

1. Conduct a thorough literature search and review.
2. Participate in panel discussions of seminar topics.
3. Make periodic presentations of seminar topics assigned.
4. Provide a written report of their activities.

#### b) Topical Outline:

Prior to each semester's offering, the instructor, in consultation with faculty in the department, will assess advances in engineering technology frontiers and design the course subject matter to maintain requisite content and currency. In broad terms, the topical outline of the course consists of:

1. Introduction to the technology frontier topic.
2. Current practices and issues.

3. Assignments of sub-topics for student research and study.
4. Panel discussions.
5. Student presentations.

**c) Evaluation and Grading Procedures:**

Student grades will be based on participation in the seminar via written and oral technical communication.

**d) Course Evaluation:**

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

**4. Results of Consultations:**

**a) Consulted Departments:** None

**b) Consultants and Consultant Statements:** (N/A)

**c) Written Consultations:** (N/A)

## **5. Catalog Description:**

### **Seminar: Engineering Frontiers (0909.498)**

The Seminar in Engineering Frontiers will provide students with a glimpse into contemporaneous cutting edge technology and research in electrical and computer engineering. Course content and topics will change with each offering to maintain currency with the frontiers of engineering technology.

Co-requisite: Concurrent registration in Senior Engineering Clinic II (0901.402) required.