Course Change Proposal
Form A

Academic Group (College): Engineering & Computer Science
Academic Organization (Department): Electrical & Electronic Engineering
Date: 09/14/09

Type of Course Proposal:
New ___ Change _x_ Deletion ___

Department Chair: Suresh Vadhva
Submitted by: Preetham B. Kumar

Does this course fulfill a requirement for single-subject or multiple subject credential students? Yes ___ No _x_
For Catalog Copy: Yes _x_ No ___
CCE (Extension): Yes ___ No _x_
Semester Effective: Fall ___ Spring _x___, 2010___

This course replaces experimental course Subject Area (prefix) and Catalog Nbr (course number): EEE 296P
If changing an existing course, should new version be considered a repeat of the original version? If so, the same Course ID will be maintained. If not, a new Course ID will be assigned. Note: In PeopleSoft terminology, the Course ID is the unique system identifier, not the Catalog Nbr. Yes _x_ No ___

Subject Area (prefix) & Catalog Nbr (course no.): EEE 296P
Title: Advanced Topics in Wireless Communications
Units: 3

Subject Area (prefix) & Catalog Nbr (course no.):
EEE 264
Title: Advanced Topics in Wireless Communications
Units: 3

JUSTIFICATION:

Wireless personal communications has become one of the fastest growing fields in the engineering world. Presently more than 2 billion (about 35%) of the world’s population are wireless users, and that number is expected to approach 50% by the year 2010. Hence there is a need for qualified engineers, with an exposure to the latest design developments in wireless communications. This course is an advanced sequel to the basic Wireless Communication course (EEE 262) offered by the department, and will be prepared by input from faculty, students and industry personnel.

This course has been offered several times in the past: Spring 2009 (27 students), Fall 2006 (6 students), Spring 2004 (19 students). Presently, we need to assign a permanent number to the course.

NEW COURSE DESCRIPTION: (Not to exceed 80 words, and language should conform to catalog copy. See http://www.ccsus.edu/umanual/acad.htm - Guidelines for Catalog Course Description)

Advanced theoretical and practical aspects of modern wireless communications. Specific topics will include: advanced cellular concepts, modern small-scale and large-scale propagation models, complex equalization and diversity system design, 3G (third generation) wireless networks, Bluetooth and Personal Area Networks (PANs), GPRS (General Packet Radio Service) and wireless measurement techniques.

Note:

Prerequisite: EEE 262: Wireless Communication Systems or permission of instructor
Enforced at Registration: Yes _x_ No ___

Corequisite:
Enforced at Registration: Yes ___ No ___

Graded: Letter _x_ Credit/No Credit ___
Instructor Approval Required? Yes ___ No _x_

Course Classification (e.g., lecture, lab, seminar, discussion): Title for CMS (not more than 30 characters)
**Description of the Expected Learning Outcomes:** Describe outcomes using the following format: “Students will be able to: 1), 2), etc.” See the example at [http://www.csus.edu/acaf/example.htm](http://www.csus.edu/acaf/example.htm)

1. Students will be able to analyze advanced and current thrust areas in Wireless communications.
2. Students will keep currency in a very rapidly evolving technology, in topics such as: 3G (third generation) wireless networks such as W-CDMA (Wideband Code Division Multiple Access), cdma2000, UWB (Ultra Wideband), Bluetooth and Personal Area Networks (PANs), GPRS (General Packet Radio Service), and wireless measurement techniques.
3. Students to enter the industry with a working knowledge of current state-of-the-art wireless communications.

**Assessment Strategies:** A description of the assessment strategies (e.g., portfolios, examinations, performances, pre- and post-tests, conferences with students, student papers) which will be used by the instructor to determine the extent to which students have achieved the learning outcomes noted above:

- Midterm I: 20%
- Midterm II: 20%
- Finals: 30% (comprehensive)
- Project: 20%
- Homework: 10% (once every two weeks)

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**For whom is this course being developed?**

Majors in the Dept. _x_  Majors of other Depts ____  Minors in the Dept ____  General Education ____  Other ____

Is this course required in a degree program (major, minor, graduate degree, certificate)? Yes __ No __

If yes, identify program(s):

Does the proposed change or addition cause a significant increase in the use of College or University resources (lab room, computer facilities, faculty, etc.)? Yes ___ No ____

If yes, attach a description of resources needed and verify that resources are available.

Indicate which department or programs will be affected by the proposed course (if any). __________________________________________________________________________

**The Department Chair’s signature below indicates that affected programs have been sent a copy of this proposal form.**

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**Approvals:** If proposed change, new course or deletion is approved, sign and date below. If not approved, forward without signing to the next reviewing authority, and attach an explanatory memorandum to the original copy.

<table>
<thead>
<tr>
<th>Signatures:</th>
<th>Date</th>
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<tbody>
<tr>
<td>Department Chair:</td>
<td>11/6/2009</td>
</tr>
<tr>
<td>College Dean or Associate Dean:</td>
<td>11/16/2009</td>
</tr>
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<td>CPSP (for school personnel courses ONLY)</td>
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