SACRAMENTO STATE

Program Proposal
Form B

Academic Group (*College*): ECS	**Date of Submission to College Dean: February 8, 2011**
Academic Organization (*Department*): Computer Science	**Requested Effective: Fall_X_, Spring___, 20_11_.**
Department Chair: Cui Zhang	**Contact if not Department Chair:**

Title of the Program (*Please be specific; indicate minor, undergraduate or graduate degree, etc.*)**:**
Computer Science Graduate Certificate in Computer Engineering

Type of Program Proposal:

___X___ **Modification in Existing Program:**
     _X_ **Substantive Change**
     ___ **Non-Substantive Change**
     ___ **Deletion of Existing Program**

_____ **New Programs**
     ___ **Initiation (Projection) of New Program on to Master Plan**
     ___ **New Degree Programs**
          ___**Regular Process**
          ___**Fast Track Process**
          ___**Pilot Process**
     ___ **New Minor, Concentration, Option, Specialization, Emphasis**
     ___ **New Certificate Program**

PLEASE NOTE: Form B is to be used only as a Cover Form. Additional information is requested for each of the above as noted in the corresponding procedure in the Policies and Procedures for Initiation, Modification, Review and Approval of Courses and Academic Programs found at http://www.csus.edu/umanual/acad.htm

Briefly describe the program proposal (new or change) and provide a justification.

Proposal: to revise the existing certificate in Computer Engineering. This is a substantive revision including changing the required courses to reflect currency and reduction of 3 units.

Justification: Revising the course requirements to reflect currency and relevance to Computer Engineering. Also, reducing the number of units required to 9 for consistency with other 9-unit CSC certificates.

Approvals:

Department Chair:		Date: 2/8/2011
College Dean:		Date: 2/15/11
University Committee:		Date: 3/8/11
Associate Vice President and Dean for Academic Affairs:		Date: 4/11/11

1. **Form B:** Attached.

2. **Programmatic or Fiscal Impact on Other Academic Units' Programs.**

    N/A

3. **Fiscal Analysis of Proposed Changes.**

    a. **How will the proposed changes be accommodated within department/college existing fiscal resources?**

        No additional resources are needed.

    b. **If the proposed changes will require additional resources, describe the level and nature of additional funding the college will seek.**

        N/A.

    c. **What additional space, equipment, operating expenses, library, computer, or media resources, clerical/technical support, or other resources will be needed? Estimate the cost and indicate how these resource needs will be accommodated.**

        N/A.

4. **New/Old Program Requirements**

    See the next page.

Proposed Changes:

Reduction of 3 units;
Requiring a course in Operating Systems due to the significance of the area in Computer Engineering;
Removing CSC 142 requirement due to the coverage of advanced computer organization topics in the revised CSC 205, Computer Systems Structure, which is a core course required for all Computer Science graduate students.

NEW PROGRAM REQUIREMENTS	OLD PROGRAM REQUIREMENTS
Required Courses (9 units)	**Required Courses (12 units)**
+++	(3) CSC 142 Advanced Computer Organization (CSC 137 or equivalent)
(3) Select one of the following:	(3) Select one of the following:
CSC 237 Microprocessor Systems Architecture (CSC 205)	CSC 237 Microprocessor Systems Architecture (CSC 205)
++	CSC 275 Advanced Data Communications Systems (CSC 138 or CPE 138 or CSC 205)
CSC 280 Advanced Computer Architecture (CSC 205 and fully classified graduate status in Computer Science or Software Engineering)	CSC 280 Advanced Computer Architecture (CSC 205 and fully classified graduate status in Computer Science or Software Engineering)
++	CSC 288 Special Topics in Computer Science – Computer Architecture/Computer Engineering (fully classified graduate status in Computer Science or Software Engineering)
EEE 285 Micro-Computer System Design I (CPE 185 or EEE 174)	+++
(3) Select one of the following:	(3) Select one of the following:
CSC 242 Computer Aided Design Methodology for Computer Systems (CSC 205 or CSC 273)	CSC 242 Computer Aided Design Methodology for Computer Systems (CSC 205 or CSC 273)
CSC 273 Hierarchical Digital Design Methodology (CSC 205 or CPE 64 or equivalent)	CSC 273 Hierarchical Digital Design Methodology (CSC 205 or CPE 64 or equivalent)

(3) Select one of the following:	+++++++++++++++++
CSC 159 Operating System Pragmatics (CSC 139)	+++ +++++++++++++
CSC 239 Advanced Operating Systems Principles (CSC 205)	+++ +++++++++++++
	(3) Select one of the following:
	EEE 285 Micro-Computer System Design I (CPE 185 or EEE 174)
	EEE 286 Micro-Computer System Design II (CPE 186 or EEE 285)