California State University San Marcos • NEW COURSE • FORM C

ORIGINATOR'S SECTION:

1. College:

☐ **CHABSS** ☐ **CoBA**
☐ **CoEHHS** ☒ **CSM**

Desired Term and Year of Implementation (e.g., Fall 2008):

Fall 2019

2.Course is to be considered for G.E.? (If yes, also fill out appropriate GE form*) ☐ Yes ☒ No

3. Course will be a variable-topics (generic) course? ☐ Yes ☒ No
("generic" is a placeholder for topics)

4. Course abbreviation and Number:* EE 491A

5. Title: ***(Titles using jargon, slang, copyrighted names, trade names, or any non-essential punctuation may not be used.)***
Senior Project Planning

6. Abbreviated Title for PeopleSoft:
(no more than 25 characters, including spaces)
Sen Proj Plan

7. Number of Units: 1

8. Catalog Description: (***Not to exceed 80 words; language should conform to catalog copy. Please consult the catalog for models of style and format; include all necessary information regarding consent for enrollment, pre- and/or corequisites, repeated enrollment, crosslisting, as detailed below. Such information does not count toward the 80-word limit.)***

Design and planning stage of a senior electrical engineering design and laboratory project. Student(s) will work under the guidance of a faculty member to design and plan project activities for implementation in EE 491B.

9. Why is this course being proposed?

EE 499A is required for the BS degree in Electrical Engineering.

10. Mode of Instruction*

For definitions of the Course Classification Numbers:
http://www.csusm.edu/academic_programs/curriculumscheduling/catalogcurricula/DOCUMENTS/Curricular_Forms_Tab/Instructional%20Mode%20Conventions.pdf

Type of Instruction	Number of Credit Units	Instructional Mode (Course Classification Number)
Project	1	C-05
Activity		
Lab		

11. Grading Method:*
☒ Normal (N) *(Allows Letter Grade +/-, and Credit/No Credit)*
☐ Normal Plus Report-in-Progress (NP) *(Allows Letter Grade +/-, Credit/No Credit, and Report-in-Progress)*
☐ Credit/No Credit Only (C)
☐ Credit/No Credit or Report-in-Progress Only (CP)

12. If the (NP) or (CP) grading system was selected, please explain the need for this grade option.

13. Course Requires Consent for Enrollment? ☐ Yes ☒ No

☐ Faculty ☐ Credential Analyst ☐ Dean ☐ Program/Department - Director/Chair

14. Course Can be Taken for Credit More than Once? ☐ Yes ☒ No
If yes, how many times? (including first offering)

15. Is Course Crosslisted: ☐ Yes ☒ No

If yes, indicate which course and check "yes" in item #22 below.

16. Prerequisite(s): ☐ Yes ☒ No

17. Corequisite(s): ☐ Yes ☒ No

* If Originator is uncertain of this entry, please consult with Program/Department Director/Chair.

18. Documentation attached:
☒ Syllabus ☐ Detailed Course Outline

19. If this course has been offered as a topic, please enter topic abbreviation, number, and suffix:*

20. How often will this course be offered once established?* Once per Academic Year.

PROGRAM DIRECTOR/CHAIR - COLLEGE CURRICULUM COMMITTEE SECTION:
(Mandatory information – all items in this section must be completed.)

21. Does this course fulfill a requirement for any major (i.e., core course or elective for a major, majors in other departments, minors in other departments)? ☒Yes ☐ No

If yes, please specify:
EE 499A is required for the Electrical Engineering major.

22. Does this course impact other discipline(s)? (*If there is any uncertainty as to whether a particular discipline is affected, check "yes" and obtain signature.)* ☐ Yes ☒ No

If yes, obtain signature(s). Any objections should be stated in writing and attached to this form.

MATH
Discipline _____ _____ _____Support _____Oppose
Signature Date

Discipline _____ _____ _____Support _____Oppose
Signature Date

SIGNATURES : (COLLEGE LEVEL) :

D. Schaafsma 12/10/16
1. Originator (please print or type name) Date

2. Program Director/Chair Date

3. College Curriculum Committee Date

4. College Dean (or Designee) Date

(UNIVERSITY LEVEL)

5. UCC Committee Chair Date

6. Vice President for Academic Affairs (or Designee) Date

7. President (or Designee) Date

EE 491A: Senior Project Planning
Syllabus

Course Description: Design and planning stage of a senior electrical engineering design and laboratory project. Student(s) will work under the guidance of a faculty member to design and plan project activities for implementation in EE 491B.

Textbook: None

Each design team is required to select its own project proposal. Students are strongly encouraged to select projects that involve hardware and software design. Each team will develop a plan for project in this course EE 491A. At the completion of the project in EE 491B, a demonstration of a hardware prototype and a detailed design report that clearly documents all aspects of the design process need to be provided. The final design project report must also address issues, as appropriate, that are related to manufacturability, engineering economics, and environmental, as well as ethical issues.

Tentative Course Schedule:

Week	Topic
1-3	Discuss and research project ideas – define problem to be solved; intro to product lifecycle managment
4-5	Outline possible solution methods and define engineering studies to be undertaken (validation)
6-8	Perform studies/measurements and evaluate approaches, select one
9-10	Define requirements for approach – complete Product Requirements Specification (PRS)
11	Identify resources need to complete the project (equipment, tools, time, and cost)
12	Define design targets – complete Product Design Specification (PDS)
13	Create milestones, flow/Gantt chart, test plan
14-15	Identify software/hardware/document deliverables and responsibilities of roles of team members

Student Learning Outcomes:

1. Design, build, and test complex electronic circuits/systems that meet the desired specifications
2. Function as a member of the engineering design team
3. Utilize external resources to gather technical information necessary to complete the design
4. Write technical documents of the project results
5. Use techniques, skills, and modern engineering tools necessary for engineering practice
6. Demonstrate the ability to communicate projects results in a presentation

Topic	PTS
Discuss and research project ideas – define problem to be solved	10
Outline possible solution methods and define engineering studies to be undertaken	10
Perform studies/measurements and evaluate approaches, select one	20
Define requirements for approach – complete Product Requirements Specification (PRS)	15
Identify resources need to complete the project (equipment, tools, time, and cost)	10
Define design targets – complete Product Design Specification (PDS)	15
Create milestones, flow/Gantt chart, test plan	10
Identify software/hardware/document deliverables and responsibilities of roles of team members	10
TOTAL	100

This class will be graded on a credit/no-credit basis (CR/NC). A score of 80 or better, as defined by the above table, will be considered a passing grade.

Pedagogic Methodology:

This class is the capstone for the EE program. EE491A/B will challenge the student to use the knowledge they have gained in other EE classes to design, build and test a product of their own definition. In addition, they will work in teams as will be the norm in a professional setting. The first semester (491A) will introduce them to product lifecycle management, including documentation such as the Product Requirements Specification and Product Design Specification, and allow them to draft a plan to build and test their design in the second semester.

Academic Honesty Policy:

Students are responsible for honest completion and representation of their work. Students will be expected to adhere to standards of academic honesty and integrity, as outlined in the Student Academic Honesty Policy. All assignments must be original work, clear and error-free. All ideas/material that are borrowed from other sources must have appropriate references to the original sources. Any quoted material should give credit to the source and be punctuated accordingly.

CSUSM Writing Requirement

The homework and/or laboratory/activity segment of this course fulfills the CSUSM writing requirement.

Civility Statement

The Civility Campaign, an effort led by the Dean of Students Office, defines civility to reflect the community values of CSUSM. The university strives to be a community demonstrating respect for oneself and for others, treatment of others with dignity, and behaviors which promote a physically and psychologically safe, secure and supportive climate enabling all community members to engage as full and active participants where the free flow of ideas are encouraged and affirmed.

Cougar Care Network (CCN)

Our campus has implemented a new early alert system to support and promote students' academic and personal success. I may refer you through the Cougar Care Network (CCN) to get connected to campus support and resources to assist you.

Students with Disabilities

Students with disabilities who require reasonable accommodations must be approved for services by providing appropriate and recent documentation to the Office of Disabled Student Services (DSS). This office is located in Craven Hall 4300, and can be contacted by phone at (760) 750-4905, or TTY (760) 750-4909. Students authorized by DSS to receive reasonable accommodations should meet with me to ensure accommodations are met.