Assessment ID : 53

Name : Milica Markovic

Contact : Phone : Email : milica@ecs.csus.edu

Department : Electric and Electrical Engineering

Mission : The mission of the Electrical & Electronic Engineering department at CSUS is to provide high quality education that will transform students into professional engineers who are prepared to meet the needs of society and adapt to rapidly changing technology.

Outcome : All students of the E&EE program at CSUS are expected to have:
1. A knowledge of mathematics through differential and integral calculus, differential equations, physics and chemistry (Program Criteria)
2. A knowledge of basic engineering sciences including statics and dynamics (Program Criteria)
3. The ability to apply knowledge of mathematics, science and engineering to solve problems in E&EE (Engineering Criterion 3(a))
4. A knowledge of core E&EE topics in circuits, electronics, communications, control systems, microprocessors, electromagnetics, and electric machines (Program Criteria)
5. Depth in at least one area of E&EE out of Analog/Digital Electronics, Control Systems, Communications and Power. (Program Criteria)
6. Knowledge of probability, and statistics and applications to E&EE. (Program Criteria)
7. The ability to integrate knowledge gained from the core curriculum to solve a complex design problem. This includes the identification, specification, design and implementation of products/components and/or systems that meet desired safety, economic and performance criteria. (Criterion 3(c, e ), Program Criteria)
8. The ability to use contemporary engineering techniques, and tools for analysis and design. (Engineering Criterion 3(k))
9. The ability to work with modern instrumentation, software and hardware, design and perform experiments, and analyze and interpret the results. (Engineering Criterion 3(b), Program Criteria)
10. The ability to communicate effectively through written technical papers and/or project reports. (Engineering Criterion 3(g))
11. The ability to engage in "life-long" learning. (Engineering Criterion 3(i))
12. An understanding of professional and ethical responsibility and a broad education to appreciate the impact of engineering solutions in the societal context. (Engineering Criterion 3(f, h, j))
13. Recognition of the need for and an ability to function on multi-disciplinary teams and exercise leadership to accomplish project goals. (Engineering Criterion 3(d))
14. The ability to communicate effectively through written technical papers and/or project reports. (Engineering Criterion 3(g))
15. The ability to integrate knowledge gained from the core curriculum to solve a complex design problem. This includes the identification, specification, design and implementation of products/components and/or systems that meet desired safety, economic and performance criteria. (Criterion 3(c, e ), Program Criteria)

Description :

a. Standardized exams. YR 2006 Fall semester we contacted National Council of Examiners for Engineering and Surveying to provide us with data to compare our students to students from other universities across the nation. This data will be used as a direct measure of our student's performance. b. Locally developed exams. In YR2004 we have developed an online exam using WebCT. The exam has been distributed to students and some data is available today. We have tested our seniors last semester. They are tested within the last few weeks of their last semester at Sacramento State. This is another direct measure of the program objectives. c. Focus groups. In YR 2005/2006 we have had several focus groups that involved faculty teaching courses in electronics. The minutes are taken. This is an indirect measure of student learning outcomes and program objectives. d. Two Industrial sites visits where we had focused meetings with our former graduates and their supervisors. We have visited PG&E Oakland in YR 2006, and Rabbit Semiconductor in YR 2005. The department reviews data from the visits at a specially scheduled department meeting. This is another indirect measure of the program objectives. e. Department has developed a questionnaire to distribute to our former students in YR2004. Currently the assessment committee is reviewing this document and improving the questions. Institutional Studies will be contacted to review the questions. f. Exit interviews. The department has conducted exit interviews in the past. Currently the assessment committee is developing a new way to conduct these interviews. g. Portfolios. Course level assessment with focused examinations to evaluate specific SLO are available in the department Office. The course level assessment portfolios have been updated in 2004 during our last ABET visit.

Date and Time : spring 2005 and spring 2006

Result: We are currently revamping our department's web site. As part of this effort we are updating the assessment web site: http://www.ecs.csus.edu/eee/portfolio/index.htm All the information about the site is currently posted and will be often updated. a. Standardized Exams. We have received the FE reports for the previous few years for our students. b. Locally Developed exams. The data from the exams are available upon request. c. Focus groups. Focus groups
identified some lack of coverage and overlapping of topics in electronics classes E17-EEE109.  
d. Industrial Visits. See industrial visits report on department assessment web-site.  
e. Questionnaire in development.  
f. Exit interview is in development.  
g. Portfolios are available in the dept. office.  

**program_change**: Department meetings will be organized to analyze program results. During one of the previous focus groups the faculty decided to carefully look into curriculum. Curriculum committee has been charged to oversee the process as discussed in the next section.  

**procedure**: Results from assessments in future years will inform us as to whether our efforts have led to increased performance on the targeted writing standards. Current results will be used as a baseline for measuring improvement in learning outcomes. Department has charged the curriculum committee with the following tasks: In order to facilitate faculty participation in curriculum planning, design, presentation, and quality control, the Curriculum Committee performs the following functions:  
a. Consideration of findings and recommendations of the Assessment Committee regarding the need for changes to improve the curriculum and increase student achievement of objectives.  
b. Periodic self-study of the curriculum to consider needs for updating and revising courses in view of developments in the discipline.  
c. Regular examination of course syllabi and requirements to ensure appropriate level, currency, and consistency with curriculum goals.  
d. Facilitation of faculty review of proposals for new courses and course changes.  
Curriculum committee and assessment committee will work closely on evaluating assessment results and implementing program changes.  

**academic_change:**

**Upcoming_year**: We will 1. establish or update various assessment procedures and form a baseline for the future comparisons.  
2. analyze data from various assessment strategies  
3. continue with focused group work  

**NotEngage:**