De Anza College **SLO ARCHIVE**

Student Learning Outcomes for ENGR 37
Introduction to Circuit Analysis

Team Members:

Team Leader:
George Krestas (8574) in ENGR

Other members:

1. George Krestas (x8574) ENGR

Additional team members/notes about team:

George V. Krestas

Additional Notes:

Outcomes:

Outcome 1 Phase I: Statement

The student will be able to analyze circuits containing resistive, capacitive, inductive passive elements, along with op-amps interconnected to voltage and current sources.

Outcome 1 Phase II: Assessment Strategy Used:

Assessment Quarter: Winter 2011
Assessors: George V. Krestas
Assessment Tools: *No tools assigned*.
Sections being assessed: 61

Outcome 1 Phase III: Reflect & Enhance

Number of people involved in Phase III: 1

Changes:

Methods:
I used exams and quizzes to assess this outcome. Three midterm exams, six quizzes, six homework assignments, and a comprehensive final. The lowest of the midterms, quizzes, and homework is disregarded.I give partial credit to make sure that the student is not

penalized for minor arithmetic errors.

Findings and Conclusions:
Students performance was strongest in using formulas. They needed more practice in incorporating formulas toward the analysis of a circuit. Students met my "expectations of student proficiency or student success."Students who were unsuccessful, although on paper had the prerequisite math background, their math skills were not at the level required for success in this class.

Enhancement (Planned Actions)
Part I:
Undergraduate Circuit Analysis is more intuitive than theoretical. I've developed a series of visuals not only to enhance the student understanding but to allow me to present many more problems than if I had to draw the circuits on the board.The first day of classes I give a "Math background" test of the math needed for success in this class. The purpose of this test is to make the student aware of any potential Math deficiencies he/she may have.

Part II:
The "Math Background" test is not graded.Student tutors are needed at the Student Success Center specifically trained for assisting engineering students.

Outcome 2 Phase I: Statement

The student will be able to use circuit laws and network theorems to solve DC steady state circuits, RC, RL, and RLC DC circuit transients and sinusoidal AC steady state circuits.

Outcome 2 Phase II: Assessment Strategy Used:

Assessment Quarter: Spring 2011
Assessors:
Assessment Tools: *No tools assigned*.
Sections being assessed: 61

Outcome 2 Phase III: Reflect & Enhance

Number of people involved in Phase III: 1

Changes:

Methods:
Same as Outcome 1

Findings and Conclusions:
Same as outcome 1

Enhancement (Planned Actions)
Part I:
Same as outcome 1

Part II:

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