Assessment, Improvement, Measurement (AIM) Report: 04/03/2013

Plan Year: 2011-2012
Unit: Engineering and Electronics Technology
Coordinator(s): Kevin Dunn, Karman Wheeler, Paul Turner
Reviewer: Paul Turner

Objective or Outcome	Measure(s)				
	Measure Text	**Achievement Target**	**Results**	**Achievement Target Result**	**Use of Findings/Next Steps**
Students will demonstrate an understanding of Frequency Modulation transmitters and receivers. Skills will be demonstrated by the completion of an FM transmitter and receiver kit during the Communications Electronics course. The project will be graded on how well the kits are soldered, layout of components, and operation of the circuits.	Completion and operation of a basic FM transmitter and receiver.	The project will be graded on how well the kits are soldered, layout of components, and operation of the circuits. This goal will be met when 100% of students complete an operational FM transmitter and receiver kit.	100% of students completed an operational FM transmitter and receiver kit.	Met	We are not offering this course in near future.
SLO 1 - Students will demonstrate the design, construction, and troubleshooting of simple circuits using combinatorial and sequential logic. Calculating, designing, drawing, simulating, and creating a design portfolio of a BCD to 7-segment decoder circuit in the Digital course, will complete student demonstration. The project will be graded on a 100 point scale based on how well the circuit is designed, drawn as a schematic, built as a simulated circuit, and	Project - The project will be graded on a 100-point evaluation instrument based on how well the circuit is designed, drawn as a schematic, built as a simulated circuit, and described in a written portfolio. This goal will be met when 90% of students score a 80 or higher on the BCD to 7-segment decoder circuit rubric.	90% of students will score a 80 or higher on the project.	100% of students scored an 80 or higher on the project.	Met	All of the students scored 80 or higher. In 2012-13 we plan to focus additional attention on design skills. Note - in Fall 2012 a national "exit" exam will used to improve the assessment of student learning outcomes for the program. This assessment (NOCTI) will be in direct alignment with the program outcomes and will enhance our assessment of student outcomes. In addition, increased time will continue to be spent in

described in a written portfolio. Note additional time will be devoted to demonstrating and using the software used.					demonstrating the proper use of the software, enabling students to continue to improve upon the project.
SLO 2 - Students will demonstrate an understanding of Amplitude Modulation transmitters and receivers to include focus on their soldering skills. Skills will be demonstrated by the completion of an AM transmitter and receiver kit during the Communications Electronics course. The project will be graded on a 5-point rubric based on how well the kits are soldered, layout of components, and operation of the circuits.	Project - The project will be graded on a 5-point rubric based on how well the kits are soldered, layout of components, and operation of the circuits. This goal will be met when 90% of students score a 4 or higher on the AM transmitter and receiver kit rubric.	This goal will be met when 90% of students score a 4 or higher on the AM transmitter and receiver kit rubric.	100% of students scored a 4 or higher on the AM transmitter and receiver kit rubric.	Met	Increased focus on soldering skills led to fewer burned out components and no need to repair traces on the circuit boards. In 2012-13 we will continue to develop soldering skills and will increase emphasis on circuit tuning. Note - in Fall 2012 a national "exit" exam will used to improve the assessment of student learning outcomes for the program. This assessment (NOCTI) will be in direct alignment with the program outcomes and will enhance our assessment of student outcomes.
SLO 3 - Students will calculate, construct, plot, and measure RL and RC series circuit and phase shift circuits. Calculating, accurately plotting, measuring the phase between voltage and current at different frequencies, and describing a RL and RC series circuit with increased emphasis on the operation of the circuits.	Project - The project will be graded on a 100-point scale based on how accurately the circuit is calculated, built as a live circuit (operational), and described in a written paper. This goal will be met when 90% of students score an 80% or higher on the RL and RC series Circuit	90% of students score an 80% or higher on the RL and RC series Circuit	90.8% of the students scored an 80% or higher on the projects.	Met	The increased emphasis in lecture and lab experiments on the basics of operational circuits led to improved circuit calculation and construction. While the score remained basically the same, the students level of skill in calculating and constructing the circuit increased. In 2012-2013, we will continue to work with students to increase their ability to design

					and construct basic DC/AC circuits. Note - in Fall 2012 a national "exit" exam will used to improve the assessment of student learning outcomes for the program. This assessment (NOCTI) will be in direct alignment with the program outcomes and will enhance our assessment of student outcomes.