Course Assessment Summary
COE 308 Computer Architecture (3-0-3)
Term 061

Course Learning Outcomes

1. Ability to apply knowledge of mathematics, probability, and statistics in computer analysis and design.
2. Ability to design the datapath and control of a processor.
3. Ability to identify, formulate, and solve computer architecture problems.
4. Ability to use simulator tools.
5. Ability to engage in self-learning.

Section#	Source of Outcome Data	Outcome1	Outcome2	Outcome3	Outcome4	Outcome5
2	Instructor Evaluation	63.7%	62.1%	59.5%	69.7%	69.7%
	Student Survey	85.6%	87%	79.7%	65.5%	88%
3	Instructor Evaluation	63.7%	69.5%	72.8%	56.1%	61.8%
	Student Survey	67.3%	78.8%	65.4%	38.45%	73%
Overall	Assessment Rating	Needs Improvement	Achieved	Needs Improvement	Needs Improvement	Achieved

Observations:

1. Outcome 1, 3, and 4 need improvement while other outcomes are satisfactory.

Recommendations:

1. In order to improve outcome 4, a set of Mini-Projects involving the use of Simulator Tools is to be adopted for all course sections. The simulator tools deal with developing some experience with MIPS assembly language as well as the design of a processor datapath using both single-cycle and multi-cycle designs. The mini-projects will be rated 25%, of which 5% for the use of tools, 15% for the design, and 5% for engaging in life-long learning. The students are provided guidance and need to learn on their own the use of the above tools.
2. In order to improve the achievement of outcome 1 and 3, it is decided to reinforce the use of math and probabilities in Computer Arithmetic and Computer Performance. Tradeoffs aspects needs to be emphasized more specially when dealing with problems that admit more than one solution like multiplier, divider, datapath design versus available resources, cache memory performance versus cold start, capacity, and conflict misses and corresponding approaches leading to some performance improvements.