

**Course Assessment Summary**  
**COE 202 Fundamentals of Computer Engineering (3-0-3)**  
**Term 061**

**Course Learning Outcomes**

1. Ability to use math and Boolean algebra in performing computations in various number systems and simplification of Boolean algebraic expressions.
2. Ability to design efficient combinational and sequential logic circuit implementations from functional description of digital systems.
3. Ability to use CAD tools to simulate and verify logic circuits.

Section#	Source of Outcome Data	Outcome1	Outcome2	Outcome3
1 & 2	Instructor Evaluation	76%	44.1%	42.2%
	Student Survey	90.3%	66.56%	53.75%
3	Instructor Evaluation	60.8%	59.6	37.3
	Student Survey	73.75	66%	46.5%
4	Instructor Evaluation	68.2%	48.5%	25%
	Student Survey	76.9%	67.8%	53.3%
Overall	Assessment Rating	Achieved	Needs Improvement	Not Achieved

**Observations:**

1. Outcome 1 is achieved for all sections as assessed by both instructors & students
2. From students' perspective, outcome 2 is achieved. From instructors' perspective, O2 is marginally achieved with two sections. The main problem for students is the sequential logic part compared to combinational logic part (as shown by student survey of sections 1 & 2).
3. From students perspective, outcome 3 is marginally achieved. From instructors' perspective, O3 has not been achieved. Simulation tools were introduced late in the course, after sequential logic which did not allow proper mastering of the tools.

**Recommendations:**

1. More help sessions are needed for sequential logic. Introducing simulation tools earlier may help students better understand design of sequential logic
2. CAD tools should be introduced earlier, e.g. right after introducing Combinational logic.