

**Course Assessment Summary**  
**COE 341 Data and Computer Communications (3-0-3)**  
**Term 061**

**Course Learning Outcomes**

1. Ability to apply knowledge of mathematics to understand basic concepts in communication engineering.
2. Ability to design basic communication systems, components, and algorithms.
3. Ability to identify, formulate, analyze, and solve basic communication engineering problems.
4. Ability to use programming tools and skills for the simulation, analysis, and design of basic communication systems and components.
5. Ability to demonstrate self learning skills and aptitudes.

Section#	Source of Outcome Data	Outcome1	Outcome2	Outcome3	Outcome4	Outcome5
Dr. Radwan	Instructor Evaluation	64.8%	61.4%	63.3%	68%	74%
	Student Survey	65%	62.5%	62.5%	67.5%	75%
Dr. Marwan	Instructor Evaluation	40.8%	65.8%	71.4%	44.0%	84.0%
	Student Survey	63.5%	63.5%	67.25%	84.5%	82.75%
Dr. Ashraf	Instructor Evaluation	65.0%	62.3%	63.2%	82.8%	74.8%
	Student Survey	71.25%	81.25%	81.5%	81.25%	75%
Overall	Assessment Rating	Needs Improvement	Achieved	Achieved	Needs Improvement	Achieved

**Observations:**

1. Dr. Radwan Feedback:

Minimum weights were achieved for all outcomes and far exceeded for outcomes 2 and 3. Achievements in all outcomes are satisfactory (ranging from 61.4% to 74%). The term paper and programming assignments proved successful in motivating students for self learning, team working and enhancing their writing and presentation skills. It is suggested

that outcome 1 indicators should be expanded to include the application of modulo 2 binary arithmetic to error detection codes.

2. Dr. Marwan Feedback:

\* Need to improve outcome 1 by implementing the following suggestions:

1. Give the students an external math quiz to prepare them for the course.
2. Include additional examples.

\* Need to improve outcome 4 by implementing the following suggestions:

1. Give the students more programming assignments.
2. Ask the students to verify their other assignments using the available tools.

3. Dr. Ashraf Feedback:

\* Need to improve outcome 2 by implementing the following suggestions:

1. More emphasis on practical communication systems (HDLC, PCM, etc.) examples.
2. Perhaps integrate some material into experiments with software

\* Need to improve outcome 3 by implementing the following suggestions:

1. Give the students more concrete examples of formulating and analyzing problems.
2. Again, attempt to integrate some material into experiments with software

Outcome 1 - Math skills - needs reinforcement.

**Recommendations:**

1. Outcome 1 indicators need to be revised.
2. Outcome 1 can be enhanced by giving more examples and more assignments.
3. Outcome 4 needs to be enhanced by giving more programming assignments using tools.
4. Outcome 2 and 3 can be improved further by giving more assignment using tools and giving more examples.