

Department of Electrical and Computer Engineering  
Batten College of Engineering and Technology  
Old Dominion University

## **STUDENT OUTCOME ASSESSMENT REPORT<sup>1</sup>**

**Course Number and Title:** ECE 487

**Semester and Year:** Spring 2022

**Instructor:** Dr. Elsayed-Ali

**Program:** Electrical Engineering

### **List of Assessed Performance Indicators:**

Student Outcome 1: An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics

SO1 – PI1: Capable of identifying and formulating a complex engineering problem

Student Outcome 2: An ability to apply the engineering design process to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors

SO2 – PI1: Capable of applying the engineering design process to produce solutions that meet specified needs

SO2 – PI2: Capable of taking into consideration public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors in the engineering design process

Student Outcome 3: An ability to communicate effectively with a range of audiences

SO3 – PI1: Capable of communicating effectively in technical writing

SO3 – PI2: Capable of preparing a technical presentation

SO3 – PI3: Capable of delivering an effective technical presentation

Student Outcome 4: An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts

SO4 – PI1: Capable of recognizing ethical and professional responsibilities in engineering situations

SO4 – PI2: Capable of making informed judgments that consider the impact of engineering solutions in global, economic, environmental, and societal contexts

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<sup>1</sup> Please attach anonymous copies of three samples of students' responses per assessed performance indicator corresponding to performance categories 2, 3, and 4. If no student performed at a given level, the number of samples can be reduced. In addition, please include a copy of the assessment tool, that is, the question used for the assessment.

Student Outcome 5: An ability to function effectively on a team who members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives

SO5 – PI1: Capable of contributing effectively to the success of the team through a collaborative and inclusive environment

SO5 – PI2: Capable of contributing effectively to the success of the team through establishing goals, planning tasks, and meeting objectives

Student Outcome 7: An ability to acquire and apply new knowledge as needed, using appropriate learning strategies

SO7 – PI1: Capable of acquiring and applying new knowledge as needed

SO7 – PI2: Capable of independently choosing appropriate learning strategies to apply this knowledge in solving an engineering problem

**Performance Categories:**

1 Unacceptable (D-/F) <sup>2</sup>	2 Below Expectations (C-/D+/D)	3 Meets Expectations (B/B-/C+/C)	4 Exceeds Expectations (A/A-/B+)
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Assessed Performance Indicator	Assessment Tool (e.g., Question in HW or Exam, Etc.)	Brief Description	Number of Assessed Students	Total Possible Points	Ranges of Points for Performance Categories				Total Number of Students in Each Performance Category			
					1	2	3	4	1	2	3	4
SO1 – PI1												
SO2 – PI1												
SO2 – PI2												
SO3 – PI1												
SO3 – PI2												
SO3 – PI3												
SO4 – PI1												
SO4 – PI2												
SO5 – PI1												
SO5 – PI2												
SO7 – PI1												

<sup>2</sup> The purpose for the letter grades is to qualitatively characterize the level of performance in the assessed question. Additional information is provided in the student outcome rubrics.

SO7 – PI2

**Comments** (Please include comments on the student performance for each assessed performance indicator. If the total performance in Performance Categories 3&4 is below 70% for an assessed performance indicator, a detailed explanation is needed.)

**Action Plan** (Include a suggested action plan if the percentage of assessed students in Performance Categories 3&4 is below 70%.)

**Action Resolution** (Describe the activities that took place to improve the attainment of the assigned student outcomes as identified by on-going actions. Also, assess the effect of the activities, including the possible quantitative effect on the attainment of student outcomes.)