Report of Student Learning and Achievement
Concordia University Irvine
School of Arts and Sciences – Engineering Program

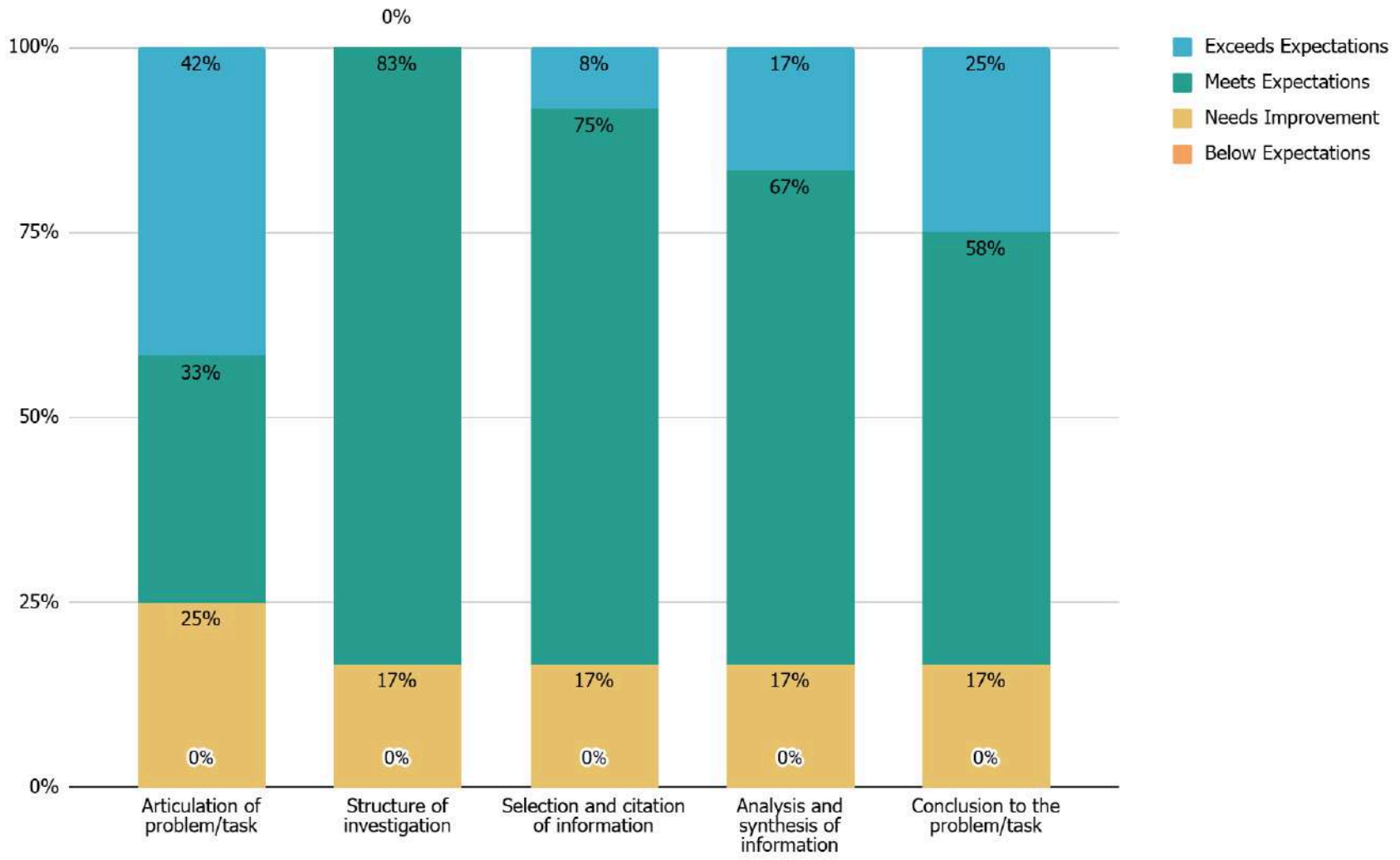
For Academic Year:	2024-2025

School of Arts and Sciences Mission
Engineering Program Purpose
The School of Arts and Sciences strives to educate its students within the multi-faceted context of the liberal arts. Firmly rooted in the Christian tradition of Concordia University Irvine, the School confidently and freely explores both the riches of the past and the knowledge of today. The School cultivates within all students a disciplined and coherent worldview to prepare them to be active and effective leaders in today's world. **The Engineering Bachelor of Science** challenges students to investigate, formulate, analyze, and articulate engineering problems by connecting principles of engineering, science, mathematics, and computer science with studies in liberal arts, in order to produce and communicate informed solutions which consider the impact of global, environmental, health, safety, and economic factors.

Program Learning Outcomes (PLOs)
1. An ability to identify, formulate, and solve engineering problems by applying principles of engineering, science, and mathematics.
2. An ability to apply engineering design 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.
3. An ability to communicate effectively with a range of audiences.
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgements, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions.
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

Program Assessment Overview Aligns with ULO: Systematic Inquiry			
PLOs Assessed	**Evidence and Assessment Instrument**	**Performance Objectives (Targets/Criteria) Measures:**	**Results for Measures of Student Learning:**
An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgement to draw conclusions.	ENGR 312 - Material testing laboratory	75% scoring a 3 or higher	Percentage of students who met or exceed expectations: Articulation - 75% Structure - 83% Selection - 83% Analysis - 83% Conclusion - 83%

Program Assessment Results



Summary of Program Assessment Findings
The expected standard for each criterion was 75% of students meet or exceed expectations (score greater than a 3). This was met for all of the criteria. Most criteria (Structure of investigation, Selection and citation of information, Analysis and synthesis of information, and Conclusion to the problem/task) reached an 83% rate. The weakest criteria was Articulation of problem/task, but still reached the expected standard.

Summary of Achievement Outcomes Aligns with ULO: Systematic Inquiry		
2024-2025 PLO Assessed	**Student Evidence: Material testing laboratory**	**Student Evidence: N/A**
Criterion Measured	**Performance Target Was…**	**Performance Target Was…**
Articulation of Problem / Task	Met	
Structure of Investigation	Met	
Selection and Citation of Information	Met	
Analysis and Synthesis of Information	Met	
Conclusion to the Problem / Task	Met	

Program Proposed Course of Action for Improvement in Learning Outcomes
Although the expectations for all criteria were met, the engineering program plans to explore ways to better use campus resources, such as tutoring, Supplemental Instruction, and/or the Writing Center. Each of these entities is able to assist students with the criteria for Systematic Inquiry, especially Articulation of problem/task. We plan to meet with each of these entities to determine how these could be incorporated into engineering courses. Currently, there are engineering tutors, but limited engagement with Supplemental Instruction and the Writing Center. We anticipate that these resources may grant faculty more time to work with students on discipline-specific tasks in smaller groups than the ones used in this year's signature assignment.