BS Industrial Engineering 5 Year Assessment Plan

PROGRAM LEARNING OUTCOMES (PLOS)

1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics**. (ILO 1)**
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. **(ILO 1 & 5)**
3. An ability to communicate effectively with a range of audiences. **(ILO 2)**
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. **(ILO 3, 4 & 5)**
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. **(ILO 3 & 4)**
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions. **(ILO 1 & 2)**
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies. **(ILO 1, 2, & 4)**

Assessment Plan:

Year 1: 2023-2024	
1. Which PLO(s) to assess	3. An ability to communicate effectively with a range of audiences. **(ILO 2)**
2. Is it aligned to ILO	Yes, ILO 2
3. Sample (courses/# of students)	c-INDE 492 Senior Design

9. Ways of reporting (how, to who)	The results (qualitative and quantitative) will be reported by faculty to the department chair via completion of the course Faculty Self-Assessment form.
10. Ways of closing the loop	Interaction between chair, faculty and industrial advisory board

Year 2: 2024-2025

1. Which PLO(s) to assess	

	and deductive processes, distinguish between claims, and analyze, criticize, and advocate ideas.
5. *Assessment indicators*	exam question; Ethics final exam question
6. *Assessment instrument*	Program rubric
7. *Time (which semester(s))*	a-Spring 2026
8. *Responsible person(s)*	a-TBD
9. *Ways of reporting (how, to who)*	The results (quantitative) will be reported by faculty to the department chair via completion of the course Faculty Self-Assessment form.
10. *Ways of closing the loop*	Interaction between chair, faculty and industrial advisory board

Year 4: 2026-2027	
1. *Which PLO(s) to assess*	1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. (ILO 1) 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. (ILO 1 & 5)
2. *Is it aligned with ILO*	Yes, ILO 1, 5
3. *Sample (courses/# of students)*	e-INDE 460 Manufacturing and service system modeling
4. *SLO from the course*	Apply systems engineering approach throughout the product life cycle. Apply models, tools and methods to formulate and analyze engineering problems. Interpret modeling results and select among alternatives by applying decision-making concepts utilized in systems engineering.
5. *Assessment indicators*	e-Team project; j-Final exam
6. *Assessment Instrument*	Program rubric
7. *Time (which semester(s))*	e-Spring 2027;
8. *Responsible person(s)*	e-Prof Ganjeizadeh;
9. *Ways of reporting (how, to who)*	The results (qualitative and quantitative) will be reported by faculty to the department chair via completion of the course Faculty Self-Assessment form.