BS Computer 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: 2024-2025	
1. Which PLO(s) to assess	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. Assessment activity	Exam Problems
3. Assessment instrument	Program rubric
4. Sample (courses/# of students)	CMPE 330 - Electric Circuits II
5. SLO from the course	Understand the operation of advanced electric circuits
6. Time (which semester(s))	Spring 2025
7. Responsible person(s)	Prof. Doering
8. Ways of reporting (how, to who)	The results (quantitative and qualitative) will be reported by faculty to the department chair via completion of the course Faculty Self-Assessment form.
9. Ways of closing the loop	Interaction between chair, faculty and industrial advisory board

Year 2: 2025-2026

1. *Which PLO(s) to assess*	6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions. **(ILO 1 & 2)**
2. *Assessment activity*	Final Project report and presentation
3. *Assessment instrument*	Program rubric
4. *Sample (courses/# of students)*	a-CMPE 321 Computer Architecture
5. *Time (which semester(s))*	a-Fall 2025
6. *Responsible person(s)*	a. Prof. Tandon
7. *Ways of reporting (how, to who)*	The results (quantitative and qualitative) will be reported by faculty to the department chair via completion of the course Faculty Self-Assessment form.
8. *Ways of closing the loop*	Interaction between chair, faculty and industrial advisory board

Year 3: 2026-2027

1. *Which PLO(s) to assess*	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)**
2.*Assessment activity*	e-Course Project
3.*Assessment instrument*	Program rubric
4.*Sample (courses/# of students)*	e-CMPE 492 – Senior Design I
5.*SLO from the course*	e- Create a written specification, prototyping and implementation
6.*Time (which semester(s))*	e-Fall 2026;
7.*Responsible person(s)*	e-Prof. Tandon
8.*Ways of reporting (how, to who)*	The results will be reported by faculty to the department chair via completion of the course Faculty Self-Assessment form.
9.*Ways of closing the loop*	Interaction between chair, faculty and industrial advisory board

Year 4: 2027-2028	
1.Which PLO(s) to assess	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).
2.Assessment activity	Senior design report and presentation
3.Assessment instrument	c-Capstone project rubric
4.Sample (courses/# of students)	c-CMPE 493, Senior Project II
5.SLO from the course	Successfully complete a major capstone design project satisfying requirements of project clients. Disseminate project results through a technical journal article, mock U.S. patent application, and oral presentation in front of project clients. Experience working with project clients and team members. Understanding of the broad societal and ethical impacts of a project. Develop teamwork skills for project implementation and completion.
6.Time (which semester(s))	c-Spring 2028
7.Responsible person(s)	c-Prof. Tandon
8.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.
9.Ways of closing the loop	Interaction between chair, faculty and industrial advisory board

Year 5: 2028-2029	
1. Which PLO(s) to assess	3. An ability to communicate effectively with a range of audiences. **(ILO 2)**
2. Assessment acivity	Senior design report and presentation
3. Assessment instrument	c-Capstone project rubric
4. Sample (courses/# of students)	c-CMPE 493, Senior Design II
5. SLO from the course	Successfully complete a major capstone design project satisfying requirements of project clients. Disseminate project results through a technical journal article, mock U.S. patent application, and oral presentation in front of project clients. Experience working with project clients and team members. Understanding of the broad societal and ethical impacts of a project. Develop teamwork skills for project implementation and completion.
6. Time (which semester(s))	c-Spring 2029
7. Responsible person(s)	c-Prof. Tandon
8. Ways of reporting (how, to who)	The results (quantitative and qualitative) will be reported by faculty to the department chair via completion of the course Faculty Self-Assessment form.
9. Ways of closing the loop	Interaction between chair, faculty and industrial advisory board