



Student Outcomes and Key Performance Indicators (KPIs)

SO1: An ability to identify, formulate and solve complex engineering problems by applying engineering, science, and mathematical principles.

KPI	
1.1	Identify the components of a complex problem, and relevant mechanisms.
1.2	Formulate and express complex problems within the field of engineering using mathematical or computational tools.
1.3	Solve or identify solutions to complex problems by applying engineering tools

SO2: An ability to apply engineering design to produce solutions considering public health, safety, welfare, global, cultural, social, environmental, and economic factors.

KPI	
2.1	Conceive, design, implement, and/or operate industrial processes relevant to engineering and similar disciplines, to create products and solutions by combining the tools of science and technology.
2.2	Evaluate investment and operating costs in projects associated with the industry.
2.3	Evaluate the operational risks associated with the industry.
2.4	Apply criteria for safe design and operation, considering aspects of safety, health and the environment

SO3: An ability to communicate effectively with a range of audiences.

KPI	
3.1	Communicate effectively through writing skills in Spanish and English.
3.2	Communicate effectively through oral skills in Spanish and English.
3.3	Communicate effectively through graphic or drawing skills
3.4	Communicate effectively to a wide range of audiences.

SO4: An ability to recognize ethical and professional responsibilities in engineering practice, and to make informed judgments, considering the impact of engineering solutions in a global, economic, environmental, and social context.

KPI	
4.1	Understand the economic impacts of decisions associated with the engineering practice
4.2	Understand the environmental impacts of engineering practice.
4.3	Understand ethical implications and social responsibility of engineering practice.



SO5: Ability to function effectively in a team promoting leadership, creating a collaborative and inclusive work environment, setting goals, planning tasks, and meeting objectives.

KPI	
5.1	Demonstrate the ability for teamwork and leadership skills.
5.2	Function in a team characterized by a collaborative and inclusive environment
5.3	Formulate and execute a work plan with objectives and goals.

SO6: An ability to develop and conduct appropriate experimentation, data analysis, and interpretation and use engineering judgment to draw conclusions.

KPI	
6.1	Conduct research on the state of the art of engineering disciplines
6.2	Formulate work goals
6.3	Design and conduct experiments.
6.4	Analyze and interpret results

SO7: Ability to acquire and apply new knowledge, as required, through appropriate learning strategies.

KPI	
7.1	Select scientific and technological information.
7.2	Identify emerging topics relevant to engineering.
7.3	Apply critical thinking, creative ability, and scientific and technological curiosity
7.4	Update and improve engineering skills.

SO8: An ability to manage human, material, and financial resources.

KPI	
8.1	Manage financial resources
8.2	Manage human resources.
8.3	Manage material resources