Saint Louis University
SCHOOL OF ENGINEERING AND ARCHITECTURE

SLU's PROGRAM OUTCOMES (POs) FOR ITS ENGINEERING GRADUATES

POs specify what students are expected to know and be able to do **by the time of graduation**. These relate to the skills, knowledge, and behaviours that students acquire as they progress through the engineering program.

POs	Indicators
PO1: Apply a wide range of skills in mathematics, physical sciences, and engineering sciences to the practice of engineering.	**a.** Demonstrate a thorough understanding of a wide range of theorems and principles of mathematics, physical sciences, and engineering sciences.
	b. Apply relevant theorems and principles of mathematics, physical sciences, and engineering sciences to the practice of engineering.
PO2: Design and conduct experiments as well as analyze and interpret data.	**a.** Perform scientific experiments in the field of engineering and obtain accurate and precise data and results
	b. Design experiments to test relevant parameters of engineering systems and establish significant conclusions based on the evaluation of collected data and results.
PO3: Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability in accordance with standards.	**a.** Define the requirements and constraints associated with engineering systems, components, and processes based on established standards.
	b. Design engineering systems, components, or processes based on established standards.
PO4: Work effectively as a member and leader in multi-disciplinary and multi-cultural teams.	**a.** Demonstrate a well-developed set of interpersonal and social skills in dealing with group members to effectively establish goals, plan tasks, meet deadlines, and analyse risk and uncertainty
	b. Work effectively with individuals from a wide range of educational, cultural, and technical backgrounds.
PO5: Formulate, and solve engineering problems.	**a.** Demonstrate the capability to formulate engineering problems that are properly governed by fundamental theorems and principles of engineering
	b. Apply the fundamental theorems and principles to properly identify and effectively solve engineering problems.
PO6: Act in accordance to professional, social, and ethical responsibility.	**a.** Demonstrate professional responsibility by doing assigned tasks/activities properly with minimum errors or wastes within the allotted timeframe
	b. Practice professional attitudes and values i.e.: comes to work early, never missed an activity or meeting, and takes responsibility to work and is dependable especially in times of need.
PO7: Apply an in-depth understanding of the impact of engineering solutions in a global, economic, environmental and societal context.	**a.** Apply the fundamental theorems and principles of engineering to address global, economic, environmental, and societal problems and issues.
	b. Develop engineering systems to address and alleviate global, economic, environmental and societal problem.
PO8: Communicate effectively in written and oral forms using English and Filipino as well as graphical forms.	**a.** Demonstrate the ability to communicate in written form with sufficient substance and in the correct form.
	b. Demonstrate the ability to communicate orally with sufficient substance, correct form, and articulate delivery.
PO9: Practice life-long learning and exhibit the willingness and capability to be current and relevant with the developments in the field of engineering.	a. Attend educational trips, OJTs, seminars, and trainings to maximize learning and expertise in the field of engineering.
	b. Compose and submit relevant reports that accurately depict the learning experiences in educational trips, OJTs, seminars, and trainings in the field of engineering.
PO10: Apply current trends and developments in the field of engineering.	**a.** Discuss how current trends affect engineering policies and guidelines.
	b. Design and develop systems responsive to the effects of current trends affecting engineering.
PO11: Use appropriate techniques, skills and modern engineering tools for engineering practice.	**a.** Demonstrate a fully developed set of skills in the use of engineering laboratory equipment and/or computer-based simulation and computational software in the testing and analysis of engineering systems and processes.
	b. Apply skills in the use of engineering laboratory equipment and/or computer-based simulation and computational software in the design of real world engineering systems.
PO12: Demonstrate a keen awareness of contemporary issues and their impact on the practice of the engineering profession.	**a.** Demonstrate a thorough understanding of contemporary issues, policies, and guidelines in the field of engineering.
	b. Discuss how contemporary issues, policies, and guidelines affect the engineering practice.
PO13: Participate in the generation of new knowledge.	**a.** Conduct investigatory projects and researches in the field of engineering.
	b. Design and develop new systems or produce innovations on existing technologies.
PO14: Preserve and promote "Filipino historical and cultural heritage" by showing a deep and principled understanding of how engineering is related to a larger social, cultural, and political process	**a.** Demonstrate a keen knowledge of Filipino history and culture.
	b. Demonstrate concern for the preservation of Filipino and cultural heritage in the practice of the engineering profession.
	a. Practice Christian attitudes and values in all academic, co-curricular, and extra-curricular activities in the university and the society at large.

PO15: Practice Christian values in their personal and professional endeavors as Louisians in the service of the CICM mission.	**b.** Demonstrate a keen moral and ethical sense in all inter-personal, social, and professional relations and dealings.
PO16: Demonstrate the knowledge and understanding of engineering and management principles as a member and leader in a team, to manage projects and in multidisciplinary environment	a. Discuss how engineering and management principles are used to manage projects in multidisciplinary environments.
	b. Apply engineering and management principles as a member and leader in a team, to manage projects and in multidisciplinary environments