

# Industrial Engineering with minor in Management

Current curriculum 430 (mixed modality)

## Program Educational Objectives

The Educational Goals are defined based on what the Industrial Engineering Management Program expects its graduates to achieve within 3 to 5 years after graduation. These goals reflect applying the knowledge gained during their academic training once students contextualize their undergraduate education in real-world scenarios.

Graduates of the Industrial Engineering Management Program at the School of Chemical Sciences, Universidad Autónoma de Nuevo León, are capable of:

1. Continuously improving value chain processes to increase organizational profitability systematically.
2. Developing optimal production systems that maximize value for all stakeholders.
3. Effectively manage businesses in dynamic environments through results-oriented leadership with a strong human focus, maximizing the potential of staff talent and fostering adaptability to change.
4. Adapt value chain activities through systematic innovation, supported by state-of-the-art technologies, while acting as an agent of change and demonstrating professional, responsible, and ethical behavior that considers societal and environmental impacts.

## Student Outcomes

- 1) The ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, basic sciences, and mathematics.
- 2) The ability to apply engineering design to develop solutions that meet specific needs, considering health, safety, public welfare, and global, economic, cultural, social, and environmental factors.
- 3) The ability to communicate effectively.
- 4) The ability to recognize professional and ethical responsibilities in engineering situations and to make informed judgments that consider the impact of engineering solutions in global, economic, environmental, and social contexts.
- 5) The ability to work effectively in a team, where members collectively exercise leadership, foster an inclusive and collaborative environment, establish goals, plan tasks, and achieve objectives.

- 6) The ability to design and conduct appropriate experiments, analyze and interpret data, and apply engineering reasoning to draw conclusions.
- 7) The ability to acquire and apply new knowledge as needed, employing appropriate learning strategies.