

Licenciatura in Mechanical Engineering

Program Curriculum 2006

The program of Licenciatura in Mechanical Engineering at Fundación Universidad de las Américas Puebla forms professionals who are highly proficient in mechanical and thermal systems design, taking in consideration materials and manufacturing aspects, with integral and global perspectives. The program is committed to the formation of effective communicators, team members and independent thinkers as well as with the formation of individuals who recognize universal values and the importance of life-long learning. Additionally, the program offers two terminal areas where the student can select between Automotive or Automation area.

Program Educational Objectives

The objectives for the Mechanical Engineering program focus primarily on practicing engineers who are capable to work successfully not only in Mexico, but within a global context, into diverse areas that include mechanisms, materials and manufacturing, vibrations, design of mechanical and thermal systems, among others . During the initial years of their careers, UDLAP's mechanical engineering graduates will:

- PEO # 1: Have a successful career in Mechanical Engineering by demonstrating technical proficiency in the theoretical and practical knowledge of the discipline.
- PEO # 2: Become effective communicators (oral, written, graphic), team members, decision makers and leaders.
- PEO # 3: Understand the global impact of the profession and recognize the social responsibility of Mechanical Engineers.
- PEO # 4: Recognize the relevance of life-long learning and commit to professional development.

Initial profile

- Mechanical engineers design and manufacture complex elements or systems of equipment and machinery; a creative mind helps to perform this kind of work.
- Mechanical engineers use mathematics, science and engineering to analyze, design and troubleshoot during their careers, then it is expected a likening in the mentioned areas.
- Mechanical engineers work with different areas in the industry, then it is required to have the conviction to work for the common good and to strive for success.
- Mechanical engineers seek to make products useful to companies for the benefit of people, then a liking for hands-on work and curiosity to keep finding out the best option, are skills that will help the student in solving real world problems.

Student outcomes

The Student Outcomes for the Mechanical Engineering Program at Fundación Universidad de las Americas Puebla are the following:

- a) An ability to apply knowledge of mathematics, science, and engineering.
- b) An ability to design and conduct experiments, as well as to analyze and interpret data.
- c) An ability to 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.
- d) An ability to function on multidisciplinary teams.
- e) An ability to identify, formulate, and solve engineering problems.
- f) An understanding of professional and ethical responsibility.
- g) An ability to communicate effectively.
- h) The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- i) A recognition of the need for, and an ability to engage in life-long learning.
- j) A knowledge of contemporary issues.

- k) An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.