



**INDUSTRIAL ENGINEERING:** In charge of planning, design, execution and evaluation of products and services in systems which integrate people, materials, equipment and information for the progress and improvement of the quality of human life. They work in manufacturing, services and government organizations.

**Areas of interest:** design of work methods, analysis and cost control, quality control, optimization, use of human resources, engineering economics, design of physical facilities and design of automatic manufacturing systems.



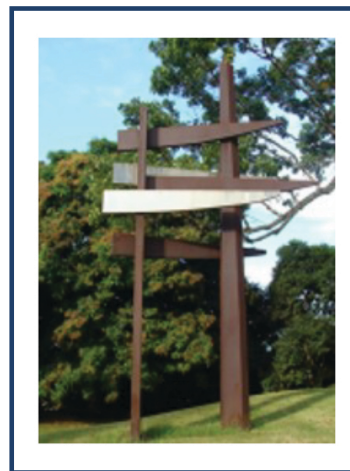
**MECHANICAL ENGINEERING:** Studies the behavior of materials when force is applied, such as the movement of solids, liquids and gases; and what happens during the heating and cooling of objects and machinery. With these concepts, mechanical engineers design space vehicles, computers, robots, trains, airplanes, furnaces, air conditioners and others.

**Areas of interest:** energy systems, thermodynamics, mechatronics, machine design, robotics, aerospace, materials and manufacturing processes.



## A WORLD OF OPPORTUNITIES:

- Nine engineering programs and related branches
- Specialties, minor concentrations and certificates: Project Management, Aerospace, Pharmaceutical, Materials Science and Oceanic Engineering.
- Undergraduate Research
- COOPS, Internships and professional practices
- Exchange with universities in the US and other places in the World
- Special projects: solar house, solar car, concrete canoe, steel bridge, CREST ...



**"Today a door opens,  
a door to dream"**



## VISION

Prepare the best professionals in the different areas of engineering, and be the main center for research, information and service for technological developments in Puerto Rico, the United States, the Caribbean and America.

## ENGINEERING

Application of science, math and technology for the improvement of the quality of life for human beings, through the efficient and effective use of resources provided by nature.

<https://www.uprm.edu/engineering/>



## COMPUTER SCIENCE AND ENGINEERING:

Branch of engineering which works with the analysis, design and implementation of computer systems, including computer networks, Web and mobile applications, design and implementation of programming languages and data architecture. It has two areas of expertise: Systems and Architectures, and Information Sciences.

**Areas of interest:** big data networking, mobile applications, parallel / cloud computing, bioinformatics and computer programming and architecture.



## SOFTWARE ENGINEERING:

Application of a systematic, methodological and quantifiable approach for the development, operation and maintenance of computer programs.

**Areas of interest:** design patterns, testing, human-computer interaction, reliability test and formal methods.



## ELECTRICAL ENGINEERING:

Works with the production, control and use of electrical energy.

**Areas of interest:** applied electromagnetic, signals processing, controls, electronics and power systems.

## COMPUTER ENGINEERING:

Dedicated to the design, programming and implementation of systems through the use of computers and other digital equipment. Provides knowledge of both hardware and software.

**Areas of interest:** communications and signal processing, computing systems and hardware and embedded systems.



## CHEMICAL ENGINEERING:

Includes the design, operation and improvement of chemical processes.

**Areas of interest:** environment, renewable energy technologies, food, medicine, biotechnology and development of new materials.



## CIVIL ENGINEERING & SURVEYING:

Responsible for the planning, design, construction, operation and maintenance of the systems which make up the infrastructure necessary for the public and private life of a country.

**Areas of interest:** environmental engineering, structural engineering, geotechnical engineering, engineering and construction management, transportation engineering and surveying.