

SCIENCE AND TECHNOLOGY

Electronic and Industrial Engineering

Objectives

To prepare professionals trained to perform process analyses, production planning and control, and the evaluation and selection of electronic equipment and computerized production systems for total quality control. Additionally, graduates will be qualified to participate in the planning of manufacturing processes, determining characteristics of machinery operation, and in the selection of communications and electronic control equipment.

Areas for Potential Employment

Graduates of this program will be able to: work in both public and private sectors in the industry of transforming and optimizing resources, as well as in manufacturing processes. Electronic and industrial engineers can also work as teachers and researchers within universities, or as technical consultants.

First Semester

- Algebra and Analytical Geometry
- Differential and Integral Calculus
- General Physics
- Introduction to Engineering
- Introduction to Computers
- Equipment Management Laboratory

Second Semester

- Cost Accounting and Administration
- Linear Algebra
- Vectorial Calculus
- Statics
- Computational Tools
- Formal Logic and Algorithms

Third Semester

- Dynamics
- Logical Design
- Differential Equations
- Electricity and Magnetism
- Advanced Programming

- Techniques for Oral and Written Expression

Fourth Semester

- Human Resources Management
- Physical Systems Dynamics
- Philosophical Anthropology
- Economic Engineering
- Numerical Methods
- Probability and Statistics
- Quality Systems

Fifth Semester

- Analysis of Electric and Electronic Circuits
- Digital Systems Design
- Electronic Devices
- Applied Statistics
- Research Methodology
- Operations Research I
- Project Analysis

Sixth Semester

- Signal Amplification
- Microprocessor and Microcontroller Architecture

Student Profile

The student in this program should:

- Have the ability to analyze and synthesize;
- Be creative;
- Be able to work well in groups;
- Enjoy physics and mathematics;
- Have good oral and writing skills.

- Analogue Electronics

- Control Theory

- Quality Control

- Industrial Engineering

- Production Planning and Control

Seventh Semester

- Microprocessor and Microcontroller Systems Design

- Power Electronics

- Measuring and Instrumentation

- Evaluation of Investment Projects

- Productive Systems Design

- Digital Communications

- Interfaces and Peripherals

Eighth Semester

- Business Development

- Internship

- Professional Ethics

- Electronic Information Transmission

- Operations Research II

- Production Automation