

Objectives

To prepare in the area of computers highly trained professionals able to maintain, install and support computational equipment. And also able to apply electronic systems for industrial control such as: robotics, voice and image recognition, etc., and in computer network administration and installation. This program guides the student in developing the aptitudes necessary to design, develop, and implant systems based on computers.

Student Profile

- The student in this program should:
- Like acquiring technical knowledge;
 - Be able to analyze and synthesize;
 - Have assessment skills;
 - Be creative;
 - Be interested in scientific disciplines;
 - Be able to reason logically;
 - Be enterprising;
 - Be interested in doing research;
 - Be able to apply critical judgment.

Areas for Potential Employment

Graduates of this program will be able to work in both public and private sectors as well as business or industrial areas that require or use electronics systems based on computers for meeting productive, commercial, or service goals. The graduate will develop industrial control and robotics systems based on computers, and will offer technical support and electronic maintenance for data-processing equipment.

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
- Analysis of Electric Circuits
- Philosophical Anthropology

- Economic Engineering
- Numerical Methods
- Probability and Statistics
- Quality Systems

Fifth Semester

- Data Structure
- Legal Framework for Computing
- Assembler Language
- Computer Lab Organization
- Databases
- Elective
- Elective

Sixth Semester

- Computer Architecture I
- Project Planning and Development
- Memories and Peripherals
- Operating Systems
- Elective
- Elective
- Elective

Seventh Semester

- Microprocessors
- Minicomputer Systems
- Teleprocessing
- Professional Ethics
- Elective
- Elective
- Elective

Eighth Semester

- Internship
- Business Development
- Computer Networks
- Elective
- Elective
- Elective

Elective Subjects

- Analysis of Algorithms
- Digital Systems Design
- Measuring and Instrumentation
- Digital Signal Processing
- Signal Analysis and Modulation I
- Analogue Control
- Digital Communication
- Interface Design
- Distributed Control
- Digital Control
- Computer Control
- Electronic Devices
- Robotics
- Computer Architecture II
- Communication Systems
- Computer Maintenance
- Pattern Recognition
- Compilers
- Analysis of Electric Circuits
- Analogue Electronics
- Object-Oriented Programming
- Image Processing
- Programming Language