Faculty of
Electrical and Computer Engineering

Computer Science

RPC-SE-09-No.086-2020

espol®

Bachelor of Science in

Computer Science

Applicant Profile

Students are expected to demonstrate curiosity, imagination, creativity, and innovation, as well as:

- Basic knowledge of computing
- Numerical aptitude and basic knowledge of mathematics
- Skills in abstraction, analysis, synthesis, and logical reasoning
- Willingness to work collaboratively
- Reading comprehension in English
- Perception and attention skills

Professional Skills

After four years in the program, students will be able to:

- Coherently and comprehensively apply appropriate tools for the automated processing of information in areas such as Software Engineering, Information Technologies, Information Systems, and related fields
- Address professional challenges at a global level by applying the foundations of their profession and innovation, while considering social, economic, and environmental aspects within an ethical and moral framework
- Successfully propose and lead the development and implementation of solutions related to their discipline, contributing value propositions to different segments of society
- Acquire and strengthen technical and scientific skills and knowledge throughout their professional lives, taking contemporary, research, and entrepreneurship-related aspects as points of reference

Employability

Computing engineers may pursue careers as entrepreneurs, managers, directors, auditors, advisors, or consultants in projects involving:

- Analysis, design, and implementation of information systems, multimedia systems, and computing solutions
- Management and development of information technology projects
- Design and administration of databases
- Design, administration, and operation of computer networks and data communication systems
- Implementation of advanced technological solutions involving cloud computing, data analytics, optimization algorithms, and information security technologies

In fact...

Computing is currently one of the fields in highest demand. Between 65% and 70% of students in the program secure their first job before graduation.

LEARN MORE

Curriculum

N 100 - I	SINGLE VARIABLE CALCULUS	PHYSICS: MECHANICS	PROBLEM SOLVING	PROGRAMMING FUNDAMENTALS	ARTS, SPORTS AND LANGUAGES ELECTIVE	ENGLISH I
N 100 - II	LINEAR ALGEBRA	VECTOR CALCULUS	COMPUTERS AND SOCIETY	OBJECT ORIENTED PROGRAMMING	COMMUNICATION	ENGLISH II
N 200 - I	ELECTRICAL FUNDAMENTALS AND DIGITAL SYSTEMS	DISCRETE MATHEMATICS	DATA STRUCTURES	SOFTWARE DESIGN	DATABASE SYSTEMS	ENGLISH III
N 200 - II	COMPUTER ORGANIZATION	SYSTEMS PROGRAMMING	STATISTICS	HUMAN COMPUTER INTERACTION	DATA NETWORKS	ENGLISH IV
N 300 - I	OPERATING SYSTEMS	ANALYSIS OF ALGORITHMS	WEB AND MOBILE APPLICATION DEVELOPMENT	SOFTWARE ENGINEERING I	ENTREPRENEURSHIP AND INNOVATION	ENGLISH V
N 300 - II	INFORMATION SECURITY	RESEARCH METHODOLOGY IN COMPUTING	PROGRAMMING LANGUAGES	SOFTWARE ENGINEERING II	SUSTAINABILITY SCIENCE	COMMUNITY SERVICE INTERNSHIPS
N 400 - I		ARTIFICIAL INTELLIGENCE	INFORMATION SYSTEMS	DISTRIBUTED SYSTEMS AND CLOUD COMPUTING	COMPUTER PROJECT MANAGEMENT	SELECTED ELECTIVE COURSE
N 400 - II			HUMANITIES ELECTIVE COURSES	COMPUTER SCIENCE CAPSTONE COURSE		SELECTED ELECTIVE COURSE
						PRE-PROFESSIONAL BUSINESS INTERNSHIPS

Accredited Program

ABET | Computing Accreditation Commission

European Accreditation of Engineering Programmes EUR-ACE®

Did you know?

This program trains professionals who, throughout their careers, strengthen their abilities to research, propose, design, and implement solutions to problems in the country and the region.

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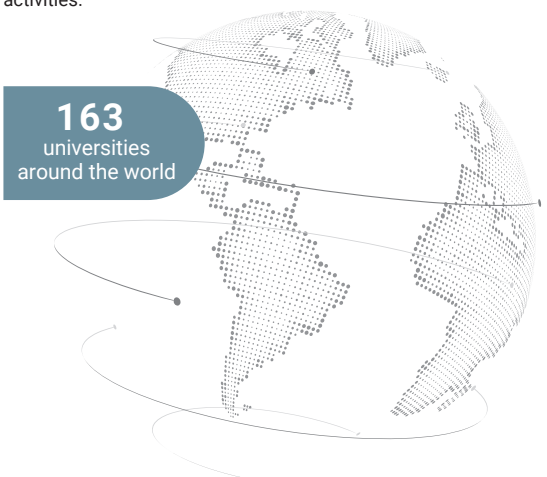
International Relations

Through its External Relations Office, ESPOL promotes and develops partnerships with international cooperation organizations, academic institutions, and research centers. These partnerships create mobility opportunities for the entire ESPOL community and contribute to the excellence that distinguishes the institution.

More than 226 international agreements allow students to participate in experiences abroad, including semester or year-long exchange programs, pre-professional internships, research placements, and participation in conferences, competitions, and other academic activities.



UPDATE.08.2026