

The background of the slide is a photograph of three students in a laboratory setting. A male student in the foreground, wearing glasses and a grey t-shirt, is holding a white, circular, mesh-like antenna or sensor device. Two other students, also in grey t-shirts, are visible in the background, looking down at something they are working on. The scene is brightly lit, suggesting a modern educational environment.

Faculty of
Electrical and Computer
Engineering

Telecommunications Engineering

RPC-SO-20-No.422-2020

espol[®]

Bachelor of Science in Telecommunications Engineering



Applicant Profile

Applicants to the Telecommunications Engineering program should have a strong interest in technology, basic knowledge of physics, chemistry, and mathematics, and a willingness to embrace constant innovation in a digitally connected world.



Professional Skills

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

- ▶ Design and implement optimized telecommunications networks
- ▶ Efficiently manage projects for the implementation and expansion of communication systems
- ▶ Design analog and digital electronic systems based on programmable systems
- ▶ Participate in scientific research projects for the development of telecommunications network systems

Students and faculty are prepared to excel in diverse environments, demonstrating full command of their skills. Their professional competence is reflected in their ability to analyze, design, manage, and integrate communication and information technologies to meet society's needs, including key areas such as design, applied electronics, radiocommunications, IP networks, and telecommunications service management.



Employability

ESPOL Telecommunications Engineers may work as a:

- ▶ Engineering Manager in telecommunications service providers and industries that rely on electronic systems
- ▶ Design and Implementation Engineer for structured cabling, data and Internet networks, outside plant, and telecommunications infrastructure
- ▶ Technical Support Specialist in operation and maintenance services for communication networks
- ▶ Design Manager, consultant, and advisor in the implementation of ICT technologies
- ▶ Telecommunications Researcher responsible for planning and executing scientific research projects for technological development



In fact...

The Telecommunications Engineering program stands out for its high labor demand and constant technological innovation. It connects the world by facilitating instant communication, access to global information, and the operation of advanced technologies such as the internet, mobile telephony, and streaming services, thereby driving the economy and the digital society.



LEARN MORE



Curriculum

N 100 - I	GENERAL CHEMISTRY	SINGLE VARIABLE CALCULUS	PHYSICS: MECHANICS	PROBLEM SOLVING	ARTS, SPORTS AND LANGUAGES ELECTIVE COURSES	ENGLISH I
N 100 - II	LINEAR ALGEBRA	PROGRAMMING FUNDAMENTALS	VECTOR CALCULUS	PHYSICS: ELECTRICITY AND MAGNETISM	HUMANITIES ELECTIVE COURSES	ENGLISH II
N 200 - I	DIFFERENTIAL EQUATIONS	SIGNALS AND SYSTEMS	STATISTICS	COMMUNICATION	INTRODUCTION TO TELECOMMUNICATIONS	ENGLISH III
N 200 - II	ELECTROMAGNETIC THEORY	DIGITAL SIGNAL PROCESSING	COMMUNICATIONS SYSTEMS I	BASIC ELECTRICITY	ELECTRONIC PRINCIPLES	ENGLISH IV
N 300 - I	HIGH FREQUENCY CIRCUITS AND MICROWAVES		COMMUNICATIONS SYSTEMS II	ELECTRONICS APPLICATIONS	SWITCHING NETWORKS DESIGN	ENGLISH V
N 300 - II	ENTREPRENEURSHIP AND INNOVATION	PROPAGATION	DIGITAL SYSTEMS I	SUSTAINABILITY SCIENCE	NETWORK SYSTEMS	PROJECT MANAGEMENT AND TELECOMMUNICATIONS REGULATION
N 400 - I	COMMUNITY SERVICE INTERNSHIPS	WIRELESS COMMUNICATIONS	TELECOMMUNICATIONS APPLICATION DESIGN	FIBER OPTICS	MULTIMEDIA SERVICES TRANSMISSION	SELECTED ELECTIVE COURSE
N 400 - II					TELECOMMUNICATIONS CAPSTONE COURSE	SELECTED ELECTIVE COURSE
						PRE-PROFESSIONAL BUSINESS INTERNSHIPS



Accredited Program



Engineering
Accreditation
Commission



Did you know?

A member of the program's alumni community heads one of the leading telecommunications service companies, which is responsible for implementing the national fiber-optic network and is also a pioneer in the production and export of fiber optics.

Telecommunications enable connectivity and support the development of high-speed internet, voice and video transmission, home and industrial automation, the Internet of Things (IoT), and many other technologies.

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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.

163
universities
around the world

