



Faculty of
Geosciences Engineering

Civil Engineering

RPC-SO-24-No.526-2020

espol[®]

Bachelor of Science in Civil Engineering



Applicant Profile

The Civil Engineering program seeks proactive, creative, analytical, and critically minded students with a basic knowledge of the experimental sciences and an interest in the fields of Physics, Mathematics, and Construction, as well as in designing, planning, managing, and executing civil works projects.



Professional Skills

- ▶ Design and conduct laboratory tests, as well as analyze and interpret the results
- ▶ Design systems, components, or processes to meet specific needs under ethical, policy-related, and economic, social, and environmental sustainability constraints
- ▶ Identify and solve problems arising in the different areas of Civil Engineering through the application of knowledge in Mathematics, Physics, and other sciences
- ▶ Conduct quality control in construction processes carried out by private companies and public institutions



In fact...

- ▶ Company-based pre-professional internships are carried out in public or private institutions that have cooperation agreements with ESPOL
- ▶ International accreditations facilitate the recognition of alumni degrees abroad, helping streamline the process of obtaining licenses for professional practice, as well as admission to master's and doctoral programs



Employability

ESPOL's Civil Engineering professionals will be prepared to contribute to the development of the country's construction sector by working in the following environments:

- ▶ Private or public sector, including government or decentralized agencies
- ▶ Universities and research institutes
- ▶ As independent consultants and advisors
- ▶ As construction supervisors and builders

These environments may be combined with the following areas of work:

- ▶ Construction and management of civil works
- ▶ Structures
- ▶ Roads
- ▶ Geotechnics
- ▶ Sanitary and environmental
- ▶ Hydraulics

Civil Engineering students remain in constant contact with representatives of the construction sector through seminars, conferences, and technical visits that allow them to learn about new construction processes and technologies. Each year, the private sector endorses the program's professional graduation projects, as well as its research projects. Students also participate in extracurricular activities such as competitions, conferences, and student chapters with national and international activities.



LEARN MORE



Curriculum

N 100 - I	PROBLEM SOLVING	SINGLE VARIABLE CALCULUS		PHYSICS: MECHANICS	GENERAL CHEMISTRY	ARTS, SPORTS AND LANGUAGES ELECTIVE COURSES	ENGLISH I
N 100 - II	PROGRAMMING FUNDAMENTALS	VECTOR CALCULUS	DIFFERENTIAL EQUATIONS AND LINEAR ALGEBRA	PHYSICS: THERMODYNAMICS AND ELECTRONICS		HUMANITIES ELECTIVE COURSES	ENGLISH II
N 200 - I		STATISTICS	MATHEMATICS APPLIED TO ENGINEERING	STATICS	CONCRETE AND BUILDING MATERIALS		ENGLISH III
N 200 - II	COMMUNICATION	GEOGRAPHIC INFORMATION SYSTEMS	FLUID MECHANICS	STRENGTH OF MATERIALS	TECHNICAL DRAWING		ENGLISH IV
N 300 - I	ENTREPRENEURSHIP AND INNOVATION	HYDROLOGY		STRUCTURAL ANALYSIS	SURVEYING		ENGLISH V
N 300 - II	SUSTAINABILITY SCIENCE	HYDRAULICS	SOIL AND ROCK MECHANICS	REINFORCED CONCRETE DESIGN	GEOMETRIC DESIGN OF ROADS		
N 400 - I		WATER SUPPLY AND COLLECTION SYSTEMS	FOUNDATION ENGINEERING	STRUCTURAL DESIGN	PAVEMENT DESIGN		COMMUNITY SERVICE INTERNSHIPS
N 400 - II	CIVIL ENGINEERING PROJECT MANAGEMENT	DRINKING WATER AND WATER TREATMENT	DESIGN OF STEEL STRUCTURES	BRIDGE DESIGN	PRESTRESSED CONCRETE		SELECTED ELECTIVE COURSE
N 500 - I	CONSTRUCTION ENGINEERING	BUILDING SYSTEMS				CIVIL ENGINEERING CAPSTONE COURSE	SELECTED ELECTIVE COURSE
							PRE-PROFESSIONAL BUSINESS INTERNSHIPS



Accredited Program



Engineering
Accreditation
Commission



Did you know?

As part of this program, students will be able to apply their knowledge and skills in the design, construction, and supervision of civil works, such as:

- ▶ Bridges
- ▶ Roads
- ▶ Drinking water systems
- ▶ Sewerage systems
- ▶ Ports
- ▶ Sheds
- ▶ Buildings

They will also learn criteria related to economics and sustainability, preparing them to become competitive and environmentally responsible professionals.

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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

