

Faculty of
Geosciences Engineering



Petroleum Engineering

RPC-SO-24-No.526-2020

espol[®]

Bachelor of Science in Petroleum Engineering



Applicant Profile

Applicants to the Petroleum Engineering program are expected to be curious, creative, analytical, and critical thinkers, with basic knowledge of experimental sciences and an interest in Earth sciences, particularly in oil and natural gas extraction.



Employability

Professionals from ESPOL's Petroleum Engineering program will be prepared to contribute to the development of the country's hydrocarbon sector by working in the following areas:

- Exploration
- Drilling
- Production
- Reservoirs
- Environmental remediation
- Petroleum negotiations
- Research

In 2026, ESPOL ranked first nationally in the Petroleum Engineering subject area, according to the QS World University Rankings by Subject 2026, a recognition that reflects ESPOL's commitment to academic excellence.



Professional Skills

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

- Design or conduct tests through the interpretation and analysis of data related to the field
- Plan, design, and operate systems, components, or processes to meet needs under economic, environmental, social, political, ethical, health and safety, and uncertainty constraints
- Identify, formulate, and solve problems in the different areas of Petroleum Engineering
- Use essential and innovative techniques and tools for the development of Petroleum Engineering



In fact...

The Petroleum Engineering program has strategic partnerships with private companies in the hydrocarbon sector for the development of corporate academic chairs. These spaces allow knowledge related to specific areas of the program to be shared from a practical industry perspective.



LEARN MORE



Curriculum

N 100 - I	SINGLE VARIABLE CALCULUS	PHYSICS: MECHANICS	GENERAL CHEMISTRY	PROBLEM SOLVING	ARTS, SPORTS AND LANGUAGES ELECTIVE COURSES	ENGLISH I
N 100 - II	VECTOR CALCULUS	PROGRAMMING FUNDAMENTALS	PHYSICS: THERMODYNAMICS AND ELECTRONICS	INTRODUCTION TO THE PETROLEUM INDUSTRY	GEOLOGY FOR PETROLEUM ENGINEERS	ENGLISH II
N 200 - I	HUMANITIES ELECTIVE COURSES	STATISTICS	THERMODYNAMICS	STATICS	COMMUNICATION	ENGLISH III
N 200 - II	DIFFERENTIAL EQUATIONS AND LINEAR ALGEBRA	NUMERICAL METHODS	PROPERTIES OF HYDROCARBONS AND PHASE BEHAVIOR	PETROPHYSICS	DRILLING	ENGLISH IV
N 300 - I	ENTREPRENEURSHIP AND INNOVATION	FLUID MECHANICS	FORMATION EVALUATION I		DIRECTIONAL DRILLING	ENGLISH V
N 300 - II	SUSTAINABILITY SCIENCE	PRODUCTION ENGINEERING I	FORMATION EVALUATION II	RESERVOIR ENGINEERING I	WELL COMPLETION AND WORKOVER	
N 400 - I		PRODUCTION ENGINEERING II	RESERVOIR SIMULATION	RESERVOIR ENGINEERING II	HSEQ IN THE PETROLEUM INDUSTRY	COMMUNITY SERVICE INTERNSHIPS
N 400 - II			EVALUATION OF HYDROCARBON PROJECTS		PETROLEUM ENGINEERING CAPSTONE COURSE	SELECTED ELECTIVE COURSE
						PRE-PROFESSIONAL BUSINESS INTERNSHIPS



Accredited Program



Did you know?

The Petroleum Engineering program has a student chapter of the international organization Society of Petroleum Engineers (SPE), which carries out activities for the ESPOL community, SPE members worldwide, and professionals in general. Since 2019, the chapter has received recognition for excellence granted by this organization. In addition, it has received the international Presidential Awards recognition, awarded for the first time in Ecuador.

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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.

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universities
around the world

