

Oceanographic Engineer



Applicant profile

The candidate must possess skills in the area of basic sciences (mathematics, physics and chemistry), with critical and analytical thinking.

In addition, they must have a vocation for working at sea, which includes designing solutions to problems arising in the marine-coastal zone, researching ocean-atmospheric processes to better understand these environments, and implementing strategies for the sustainable use of marine-coastal zone resources.



Professional skills

Graduates of this program are able to:

- Analyze and solve problems that require an understanding of oceanic and marine-coastal processes and their social, ethical, and environmental implications.
- Integrate teams multidisciplinary, working effectively with professionals from other disciplines to address oceanographic engineering problems.
- Contribute to the development and innovation of tools, methodologies, and the application of technologies in oceanographic engineering through ongoing knowledge updates.
- Participate in continuing education, research, and industry outreach programs related to oceanographic engineering as part of their professional development.

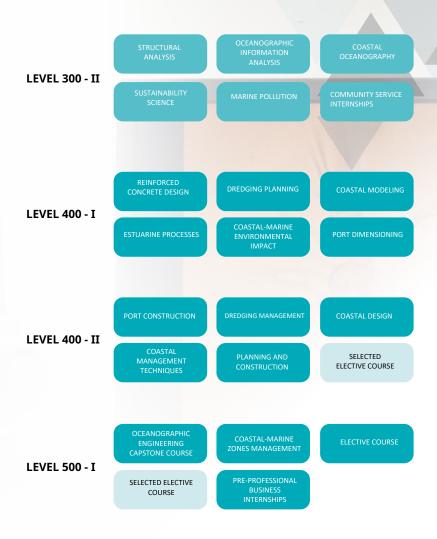


Employability

- You'll be able to practice your profession in areas such as coastal engineering and port works, ocean engineering, oceanography, and coastal resource management.
- You'll conduct studies on coastal processes, coastal protection, and beach and habitat restoration.
- Design and manage ports and maritime structures, conduct navigation studies, and plan, execute, and supervise oceanographic studies and projects. Execute
- coastal development projects and coastal protection projects, taking into account their environmental, risk and disaster reduction, climate change, and sustainability implications.

Curriculum

LEVEL 100 - I	SINGLE VARIABLE CALCULUS	PHYSICS: MECHANICS	GENERAL CHEMISTRY
	PROBLEM SOLVING	ELECTIVE COURSES	ENGLISH I
		2	
LEVEL 100 - II	VECTOR CALCULUS	PROGRAMMING FUNDAMENTALS	PHYSICS: THERMODYNAMICS AND OPTICS
	FUNDAMENTALS OF OCEANOGRAPHIC ENGINEERING	DESCRIPTIVE OCEANOGRAPHY	ENGLISH II
		-	-10
LEVEL 200 - I	STATISTICS	DIFFERENTIAL EQUATIONS AND LINEAR ALGEBRA	NUMERICAL METHODS
	COMMUNICATION	CLIMATOLOGY AND METEOROLOGY	ENGLISH III
LEVEL 200 - II	VECTOR MECHANICS	FLUID MECHANICS	PHYSICAL OCEANOGRAPHY
	MARINE GEOLOGY	MARINE BIOGEOCHEMISTRY	ENGLISH IV
LEVEL 300 - I	STRENGTH OF MATERIALS	MARINE WAVES	SOIL AND ROCKS MECHANICS
	ENTREPRENEURSHIP AND INNOVATION	ENGLISH V	



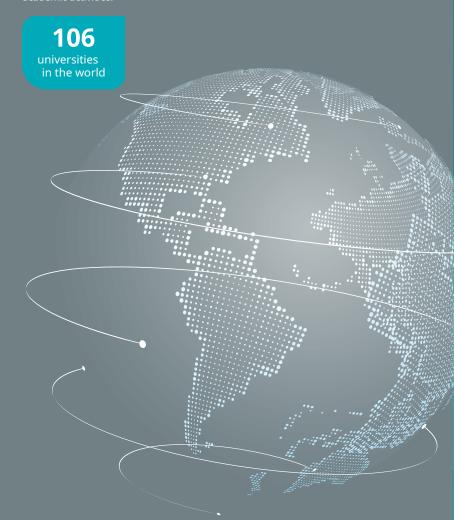


If you're interested in studying and designing solutions to problems inherent to the country's oceanic and marine-coastal zones, this program is an excellent option.



ESPOL, through its Foreign Relations Office, promotes and develops ties with international cooperation agencies and academic and research institutions. These ties generate mobility opportunities for the entire polytechnic community and contribute to the excellence that characterizes us.

More than 165 agreements allow our students to undertake stays abroad, including semester-long or annual exchanges, pre-professional internships, research internships, and participation in conferences, competitions, and other academic activities.



Accredited career



Engineering Accreditation Commission





Did you know?

Since 1973, Oceanographic Engineering has trained professionals specializing in the oceans, marine-coastal zones, and adjacent areas. Topics include climate variability, the El Niño-Southern Oscillation, coastal processes, numerical modeling, forecasting, natural hazards and risks, coastal engineering, ports, dredging, pollution, environmental impact, and integrated coastal management. We have collaborative networks that allow for student exchanges, internships, and placements at national and international institutions.

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