**ENVIRONMENTAL ENGINEERING**

#### **Degree:**

## Environmental Engineering

#### **Length:**

## 9 semesters

#### **Modality:**

## Onsite

PLAN OF STUDY HERE

\*\* The plan of study may be subject to change.

### **Degree Description:**

The Bachelor of Environmental Engineering aims to prepare graduates with the skills necessary to propose innovative solutions to the problems of environmental risk through the analysis of the behavior of pollutants and the application of environmental technologies, in accordance with national and international regulations. They will be able to diagnose environmental problems in water, soil, air, and biota through the analysis of physical, chemical, and biological parameters. They will be able to analyze the behavior of pollutants through mathematical models and designs and engineering processes through the implementation of applied research, qualitatively and quantitatively interpreting experimental data. Also, they will be able to design, direct, and participate in prevention, conservation, and environmental remediation projects, using the environmental methods and technologies applied in industry and in urban and rural communities.

The Environmental Engineer from UDLA is expected to work in multidisciplinary teams, respecting the gender and cultural identity of the collective groups that require the inclusion of environmental technology, demonstrating professional ethics and environmental awareness.

### **Advantages:**

Laboratories for water, soil, pollution, and remediation studies.

Simulation software for contaminant transport processes and watershed management

Conservation management practices at the university’s experimental farm in Nono, and field trips throughout Ecuador

UDLA´s own wastewater treatment plant

Pre-professional internships in the public (organizations responsible for environmental control) and private (organizations responsible in charge of compliance with environmental regulations and waste treatment systems) sectors

Participation in projects, forums, and competitions related to the development and innovation of environmental management.

Full-time and part-time faculty with master’s degrees and professional experience in the environmental sector

Academic exchange programs in universities around the world

Use software for design and environmental simulation (provide knowledge about integrated management of water resources, pollutant behavior, and planning with geographic information systems)

Courses include exam preparation for certifications such as ISO 14001, ISO9001, ISO45001 Lead Auditor

**Career options:**

Industrial, food, chemical, textile, petrochemical, mining, agricultural, and manufacturing sectors

Public and private organizations

Environmental Consultancy

Non-Governmental Organizations – NGOs

Research and development

### **Skills:**

As an environmental engineer, you will be able to:

* Identify, formulate, and solve complex engineering problems; apply engineering design to produce solutions that meet specified needs; communicate effectively with a range of audiences; recognize ethical and professional responsibilities in engineering situations; function effectively on a team whose members together provide leadership; develop and conduct appropriate experimentation and acquire; and acquire new knowledge as needed.

**Career Advisory Committee**

This committee addresses issues related to the fulfillment of the educational objectives, degree profile, and other academic aspects linked to the career’s development.

**Responsibilities:**

* Review the career educational objectives, degree profile, student learning outcomes, and plan of study
* Propose changes or recommendations for the career educational objectives, degree profile, student learning outcomes, and plan of study
* Review the results of the career annual operating plan
* Review the program review report and action plan

**Committee Structure:**

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| --- | --- |
| **Description** | **Committee Members** |
| Dean of the College or its delegate | Diego Buenaño |
| Highest authority of the career or its delegate | Alejandro González |
| Professor in charge of graduate follow-up | Daniel Hidalgo |
| Representatives of employers and/or representatives of professional associations or guilds | Juan Carlos Avilés |
| Pablo Macías |
| Carla Muñoz |
| Carlos Banchón |
| Graduates | Verónica Mena |
| Andrés Argüello |
| Carlos Endara |
| Camila Sáenz |
| Pavlova Sigcha |

**Enrollment and Graduation Data**

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| --- | --- |
|   | **Bachelor Enrollment** |
| **Academic Year** | 2016 | 2017 | 2018 | 2019 | 2020 |
| **Number of Students**  |   |   |   |   |   |
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|  |  |  |  |  |  |
|   | **Bachelor Degrees Awarded** |
| **Academic Year** | 2016 | 2017 | 2018 | 2019 | 2020 |
| **Number of Students**  |   |   |   |   |   |