

Professional Mentoring Programs

GEOTECHNICS, SOIL AND ROCKS



250€
~~2.500€~~

250 hours
5 months

English
language

Online
methodology

Certified by:



Endorsed by:



This program aims to reinforce and consolidate the knowledge of its students in a highly interesting discipline for professionals in the construction, geology and civil engineering sectors. These are areas that are currently generating great interest due to the need for professionals capable of working on significant infrastructure projects in all countries. This includes both underground infrastructure and construction that rely on an interaction with the terrain.

Professional Mentoring Programs offer specialized training in areas of particular interest in today's productive sector, aligning citizens' training with the real demands of the market. The goal is to strengthen the current capabilities of the participants and expand their skills and abilities to facilitate their access to the job market, the search for new employment, or the improvement of their current performance.

■ Program

MODULE I: INTRODUCTION TO GEOTECHNICS. SOIL AND ROCKS

Description of Soils

Properties and Classification of Soils

Description of Rocks

Properties and Classification of Rocks

MODULE IV: CONTINUUM MECHANICS AND CONSTITUTIVE MODELS. APPLICATIONS TO SOIL AND ROCKS

Elasticity and Continuum Mechanics

Plasticity Theory

Soil Constitutive Models

Rock Constitutive Models

MODULE II: GROUNDWATER. EFFECTS ON SOIL AND ROCKS

Fluid Flow in Porous Media

Effective Stress and Pore Pressures. Water Effects on Soil and Rocks

Soil Consolidation

Wells and Pumping Systems

MODULE V: EARTH PRESSURES AND RETAINING STRUCTURES

Theory

Rigid Walls

Flexible Cantilevered Walls

Design Considerations

MODULE III: GROUND CHARACTERIZATION, INSTRUMENTATIONS AND MONITORING

Geotechnical and soil investigation campaigns

Laboratory Tests in Geotechnical Engineering - I

Laboratory Tests in Geotechnical Engineering - II

Geotechnical Auscultation

Enroll here

The Educational Portal of the Americas has been working for over two decades to promote education for **comprehensive development**, reduce digital educational gaps, and cooperate with states to promote community progress. Our work has **facilitated the education of thousands of citizens** across the hemisphere through educational opportunities.

At Structuralia, we are experts in specialized online graduate education with over **20 years of experience in training STEM (Science, Technology, Engineering, Mathematics)** professionals. Since our foundation in 2001, we have supported more than 200.000 international students, mostly engineers, from up to 115 countries, to boost their professional careers.

