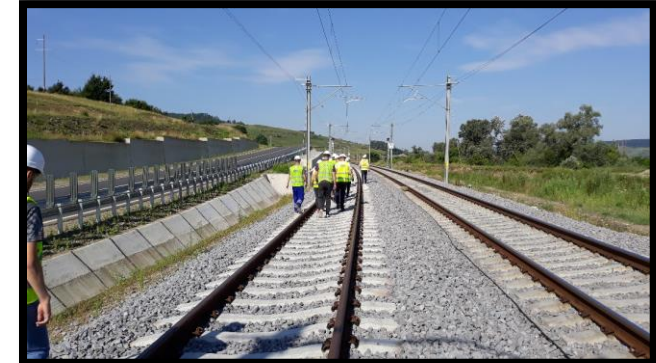


ROADS

BRIDGES

RAILWAY

Transportation infrastructures requires permanent maintenance and continuous development. In present, Romania is currently in an extensive process of developing the road and rail network, both through the construction of highways and the modernization of the vast railway network. At the same time, the national, county and local road network needs to be modernized to support increasing traffic. The shortage of specialists requires an increase in employability for construction engineers, especially in works management.



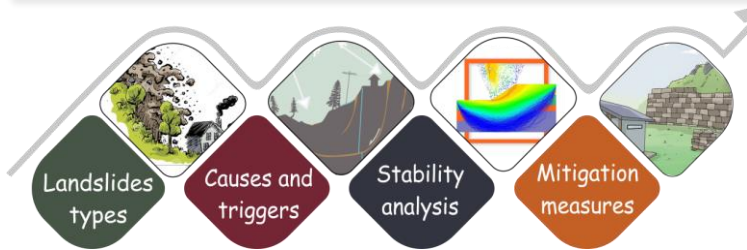
- Types and dimensions of highways and roads
- Road structure – rigid, semirigid and flexible
- Elements of a road
- Current technologies for roads and road platforms
- Life of a road and maintenance solutions

- Types of bridges – concrete and steel bridges
- Structural elements of bridges
- Constructive elements of bridges
- Overview of bridge calculation
- Current technologies for bridge construction
- Maintenance work for bridges

- Elements for railway structure
- Types of rail and support
- Rules for railway utilization
- Restrictive elements for design and construction of railway
- Interaction between railway and roads

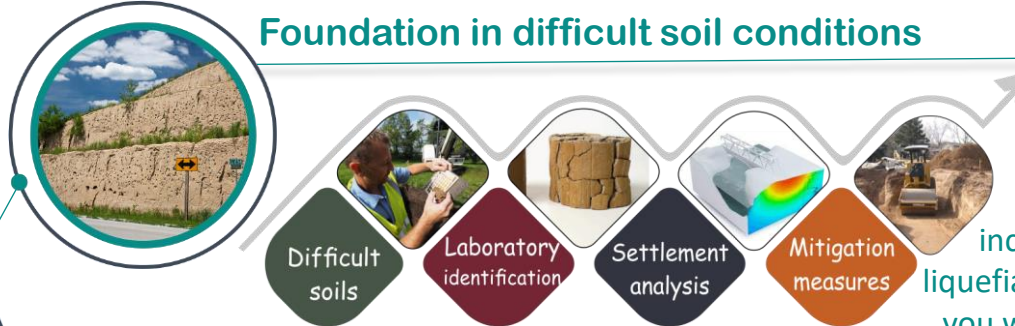


Stability issues on natural slopes



In the beginning of this lecture we will start with an overview of the state of the art in geohazards engineering. It examines current state-of-the-practice including field methods, design methodologies, mitigation strategies, and construction methods.

Foundation in difficult soil conditions



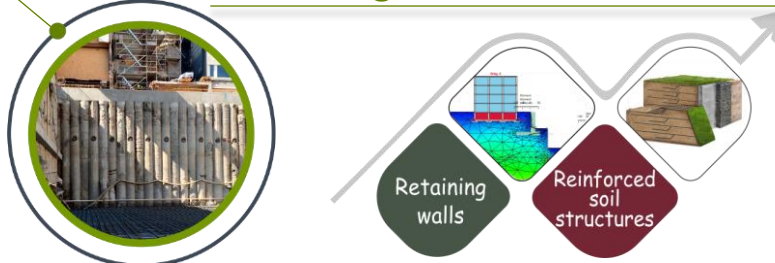
The objective of this session is to understand the complex nature of soil, see different types of difficult soil including collapsible soils, expansive soils, liquefiable soils etc. As a result of this lecture, you will be able to understand the impact of these difficult soils on foundation design.

Soil improvement



The purpose of this part is to provide knowledge about principles, methods and applications of ground modification and soil improvement in an easy to understand manner.

Retaining walls



In this part we will learn about different types of retaining walls, their advantages and disadvantages and how they are designed.