

Department: Mining Engineering

Division: Tunneling and Underground Spaces

Level and Major: MSc, Tunneling and Underground Spaces

Course Title: Tunnel Basin Site Investigations

Number of Credits: 2

Lecturer: Dr. Hamed Molladavoodi

Course Goals and Objectives

Prepare data for the feasibility study, optimum selection, design, and risk management.

Course Topics

- Introduction, the importance of site investigation
- Alignment selection
- Geometric specification of tunnel
- Data collection
- Surface geological investigation
- Geophysics studies
- Exploration boring
- Hydrology study
- In situ tests
- Engineering services for studies
- Risk evaluation
- Settlement evaluation
- Environmental evaluation
- Earthquake studies
- Site evaluation

Reading Resources

- Up-to-date articles