

Department: Mining Engineering

Division: Tunneling and Underground Spaces

Level and Major: MSc, Tunneling and Underground Spaces

Course Title: Instrumentation and Monitoring in Tunneling

Number of Credits: 2

Lecturer: Dr. Parviz Maarefvand

Course Goals and Objectives

Learn about instrumentation and monitoring in rock mass around the tunnel.

Course Topics

- Convergencemetry
- Pressure cell
- Load cell
- Piezometry
- Extensometry
- Inclinometry
- Settlement
- Jointmetry
- Hydraulic fracturing
- Flat jack
- Plate loading
- Gallery jacking
- Lugeon test
- S.P.T
- Dilatometry
- Flat dilatometer

Reading Resources

- Instrumentation and monitoring in rock engineering M. Ahmadi et MR Shahverdilloo