

Tárgytematika / Course Description Tunnels

NGM_SE108_1

Tárgyfelelős neve /

Teacher's name: dr. Wolf Ákos

Félév / Semester: 2023/24/2

Beszámolási forma /

Assesment: Vizsga

Tárgy heti óraszám /

Teaching hours(week): 3/0/0

Tárgy féléves óraszám /

Teaching hours(sem.): 0/0/0

OKTATÁS CÉLJA / AIM OF THE COURSE

Based on previous geotechnical knowlegde, this course is introducing the different tunnel construction methods, the principles of tunnel design and the failures, maintenance and renovation of underground structures.
The topic focuses on the design process of underground structures. The students will be able to determine the main input data for tunnel design, will know the tunnel excavation method, and can choose an adequate tunneling method to solve a specific problem. We are also introducing the principles of waterproofing and tunnel maintenance.
After a successful exam the students will be able to actively participate in tunnel design and excavation processes and after some year of experience they will be able to manage tunnel design and tunnel excavation

TANTÁRGY TARTALMA / DESCRIPTION

Geotechnical design of tunnels
Tunnel construction
Enviromental issues
Risk analysis, risk management
Ground improvement methods
Tunnel excavation methods
Temporary lining
Groundwater, waterproffing
Survey, monitoring
Inner lining, mainenance
Caverns
Ventilation, fire hazard

SZÁMONKÉRÉSI ÉS ÉRTÉKELÉSI RENDSZERE / ASSESMENT'S METHOD

Homework: Design of an infrastructure tunnel based on the topics of recitation

Exam: writing exam (test)

KÖTELEZŐ IRODALOM / OBLIGATORY MATERIAL

AJÁNLOTT IRODALOM / RECOMMENDED MATERIAL