



Course Name:

Advanced Soil Mechanics and Dynamics Laboratory

Course Number: -	Credit: 3
Program: Graduate	Course Type: Technical Selective
Prerequisite: -	Corequisite: -

Course Description (Objectives):

The main goal of this course is to familiarize students with advanced tests in soil mechanics and soil dynamics, including element tests and physical modeling experiments for analyzing behavior and simulating real conditions.

Course Content (outline):

- Chapter 1: Familiarization with the fundamentals of sensor operation and data transmission in laboratory equipment
- Chapter 2: Cyclic triaxial test
- Chapter 3: Cyclic simple shear test
- Chapter 4: Resonant column test
- Chapter 5: Hollow cylinder test
- Chapter 6: Shake table device
- Chapter 7: Centrifuge device
- Chapter 8: Energy pile device

References:

- K. Ishihara, "Soil behavior in earthquake Geotechnics", Oxford University Press, 1996.
- S. L. Kramer, "Geotechnical Earthquake Engineering" Prentice Hall, New Jersey, USA, 1996