



Course Name:

Earth and Rockfill Dams

Course Number: 20-430	Credit: 3
Program: Graduate	Course Type: Technical Selective
Prerequisite: -	Corequisite: -

Course Description (Objectives):

The course aims to provide a comprehensive understanding of the design, construction, and stability analysis of earth and rockfill dams. It covers theoretical, practical, and quality control aspects to equip students with the skills to design and manage real-world dam projects effectively.

Course Content (outline):

- Chapter 1: General Design Criteria
- Chapter 2: Theoretical Aspects of Seepage
- Chapter 3: Control of Seepage through Embankments
- Chapter 4: Control of Seepage through Foundations
- Chapter 5: Stability Analysis-Shear Strength of Soils
- Chapter 6: Stability Analysis-Pore Pressures in Earth Dams
- Chapter 7: Stability Analysis-Method of Computation
- Chapter 8: Stability Analysis-Seismic Stability
- Chapter 9: Stress-Strain Analysis of Earth Dams
- Chapter 10: Quality Control of Earth Dams & Instrumentation
- Chapter 11: Section Details and Special Problems
- Chapter 12: Project

References:

- Haeri, S.M. (1984). *Fundamentals of Earth Dam Design*. GMOS, Tehran, Iran.
- Singh, B. and Sharma, H.D. (1976). *Earth and Rockfill Dams*. Sarita Prakashan, Meerut, India.