

1.	Title of the course	Soil Mechanics
2.	Course number	CE214M
3.	Structure of credits (L-T-P-C)	2-1-2-4
4.	New course/modification to	New
5.	To be offered by	Civil and Environmental Engineering
6.	Proposed by	B Janaki Ramaiah
7.	Prerequisite	None
8.	<b>Course Objective(s):</b> To explain the physical, mechanical and hydraulic properties of soils and their importance in civil and environmental engineering infrastructure through theoretical concepts and hands-on experience through laboratory testing.	
9.	<b>Course Content:</b> Phase relationship in soils; Index properties; Clay mineralogy; Identification and classification of soils; Permeability of soils; Effective stress principle; Seepage through soils; Stress distribution due to external loads; Compaction of soils; Shear strength of soils: Mohr circle of stress and strain, theories and evaluation of shear strength parameters; Consolidation of soils: theory, stress history and settlement computations.	
10.	<b>Textbook(s):</b> 1. Rajan G and Rao A S R, Basic and Applied Soil Mechanics, 3rd Edition, New Age International Publishers (2016). 2. Das B M, Principles of Geotechnical Engineering, 10th Edition, Cengage (2022).	
11.	<b>Reference(s):</b> 1. Holtz R D, Kovacs W D and Sheahan T C, An Introduction to Geotechnical Engineering, 3rd Edition, Pearson (2023). 2. Bardet J P, Experimental Soil Mechanics, Pearson (1997). 3. Lambe T W and Whitman R V, Soil Mechanics SI Version, Wiley India Pvt. Ltd. (2008).	