國立台灣科技大學 114學年 第2學期　課程大綱

Spring 2026 NTUST Course Outline

授課教師：鄧福宸

Instructor:Fuchen Teng

課程名稱：土壤力學

Course Title：Soil Mechanics

2026/11/3

課程代號： CT3410301 Course Code 學分數： 3 Credits	必選修：必修/半學年 Required/Electve:Required/Half Yr. 先修課程： Prerequisites
節次教室： Time/Location	M3(IB-509) M4(IB-509) T6(IB-509)
專業核心能力： Core Professional Competencies	
課程網址： Course Website	
課程宗旨： Course Objectives	Soil mechanics introduces the fundamental theories on soil materials, including granular soils and fine soils. It's the basis of all geotechnical engineering subjects. The courses will cover the physical properties, hydraulic properties, mechanical properties. Effective stress concept will be introduced to know the mechanical behavior of soils. Evaluating the shear strength and compressibility is based on the effective stress principle. Soil mechanics is the key for all geotechnical design especially the foundation engineering.
課程大綱： Outline of Lectures	CH1 Introduction CH8 Seepage CH2 Origins of soil and grain size CH9 In-situ stresses CH3 Weight-volume relationship CH10 Stresses in soil mass CH4 Plasticity and structure of soil CH11 Compressibility of soil CH5 Classification of soil CH12 Shear strength of soils CH6 Soil compaction CH13 Lateral earth pressure CH7 Permeability
授課方式： Method of Instruction	講授 Lecture：90% 分組討論 Group discussion：10% 案例研討 Case study：0% 操做練習 Practical exercises：0% 講授 Lecture：%
教科書： Textbooks	Das B. M., Principles of Geotechnical Engineering, 10th Edition, Cengage Learning.
參考書目： References	Holtz R. D., Kovacs W. D., Sheahan T. C., An Introduction to Geotechnical Engineering, 2nd edition, Upper Saddle River, NJ: Pearson, c2011.
修課須知： Notice	(1) Homework problem sets will be assigned and will typically be due one week later. Homework should be submitted before the commencement of the class (2) Late submission of the homework is not allowed
評量方式： Grading	

In-class attendance 10%
Homework 20%
Mid-term Exam 30%
Final Exam 40%

Total 100%

備註說明： N/A
Notes