

Soil Mechanics

Module Code:	CSE5009-B
Academic Year:	2018-19
Credit Rating:	20
School:	Department of Civil and Structural Engineering
Subject Area:	Civil and Structural Engineering
FHEQ Level:	FHEQ Level 5
Module Leader:	Dr Amir Khan

Additional Tutors:
Dr Mostafa Mohamed

Pre-requisites:

Co-requisites:

Contact Hours

Type	Hours
Lectures	48
Tutorials	12
Laboratory	12
Directed Study	126
Examinations DO NOT USE	2

Availability Periods

Occurrence	Location/Period
BDA	University of Bradford / Academic Year (Sept - May)

Module Aims

To develop an understanding of the behaviour of soils, and the factors influencing their behaviour.

Outline Syllabus

Volume- mass relations, compaction of soils, Darcy`s law of permeability. Stresses in soil mass, definitions of effective stress, pore water pressure and total stress. Increase in effective stress due to external loading. Shear strength of soils. One-dimensional consolidation, drained and undrained soil behaviour, lateral earth pressure. Lab tests: permeability (falling head and constant head), oedometer test, shear box, triaxial test.

Module Learning Outcomes

On successful completion of this module, students will be able to...

- 1 1.1 Review of soil behaviour in terms of its particulate nature
 1.2 Apply principles of continuum mechanics to soils.
- 2 2.1 Perform in a laboratory context and interpret related data.
- 3 3.1 Present and interpret data.
 3.2 Solve problems systematically

Learning, Teaching and Assessment Strategy

Concepts are introduced using formal lectures. Deeper understanding is developed during problems classes, and further enhanced using the laboratory class. Oral feedback is given during the laboratory sessions and problems classes. Technical report will assess the application of practical skills to the knowledge base of the module and the formal examination will assess the wider learning outcomes expressed in the descriptor

Mode of Assessment

Type	Method	Description	Length	Weighting	Final Assess'
Summative	Examination - closed book	Examination - closed book	3 hours	70%	No
Referral	Examination - closed book	Supplementary with one compulsory laboratory based question	3 hours	100%	No
Summative	Coursework	A technical report on the laboratory obtained data	0-1500 words	20%	Yes
Summative	Classroom test	One class test	30 minutes	10%	No
Formative	Classroom test	One Class Test	0 minutes	%	No

Legacy Code (if applicable)

ENG2303L

Reading List

To view Reading List, please go to [rebus:list](#).