

Course : Diploma in Civil Engineering
Subject : Soil Mechanics and Geology
Course Work Assessment Schedule

1. Student contact hours

Lectures :	30 hours
Tutorials:	18 hours
<u>Lab:</u>	<u>12 hours</u>
Total :	60 hours

2. Lecture Notes

1. Soil properties
2. Soil compaction
3. Soil classification
4. Permeability
5. Consolidation
6. Shear strength
7. Soil pressure on retaining wall
(1-7 are based on Smith)
8. Geology
9. Structural geology

3. Assessment Scheme

- a) Coursework 30%
- b) Examination 70%

- Examination is a **3-hour** end-of-module examination.
- Passing mark is 40%. Students must pass **both** coursework and examination.

4. Coursework components

- a) Coursework comprises of 5-6 assignments, 2 tests and laboratory works.
- b) Test is close-book assessment to be completed in **1½ hours** in the class.
- c) The assessment of the coursework is as follows:
- d) Laboratory report to be submitted as a group report.

Assignments	Best of 5 @ 4% each	20%
Tests	3 @ 20% each	60%
Lab 1,2,3,4,5,6	Best of 5 @ 6 % each	20 %
	Total	100 % of the total course work marks

Six Assignments :

1. Soil properties,
2. Soil compaction, soil classification
3. Permeability
4. Consolidation
5. Shear strength, soil pressure
6. geological mapping

Three tests:

1. Soil properties, compaction and classification, permeability
2. consolidation, shear strength
3. Lateral pressure, Geology

Six Laboratory tests:

- i. Specific Gravity, Sieve Analysis
- ii. Moisture contents, Plastic and liquid limits

- iii. Proctor Test
- iv. Sand Replacement test
- v. Constant Head / Falling Head Permeability Test
- vi. Mineral and Rock identification/ Soil classification

5. Text books and reference books

- i) Soil Mechanics, M.J. Smith**
- ii) Principles of geotechnical engineering, B.M. Das
- iii) Soil Mechanics, R.F. Craig
- iv) Elements of Soil Mechanics, G.N. Smith
- v) Solving problems in Soil Mechanics, B.H.C. Sutton
- vi) Manual of soil laboratory testing, K.H. Head
- vii) Geoguide 2 – guide to site investigation, GEO
- viii) Geoguide 3 – Guide to Rock Soil Description, GEO
- ix) Geotechnical Manual for Slopes, GEO
- x) Geology for Civil engineers, C. Gribble
- xi) Geology for engineers, F.G.H. Blyth and M.H. Defreitas