

## Annexe A: New/Revised Course Content in OBTL+ Format

### Course Overview

The sections shown on this interface are based on the templates [UG OBTL+](#) or [PG OBTL+](#)

If you are revising/duplicating an existing course and do not see the pre-filled contents you expect in the subsequent sections e.g. Course Aims, Intended Learning Outcomes etc. please refer to [Data Transformation Status](#) for more information.

Expected Implementation in Academic Year	
Semester/Trimester/Others (specify approx. Start/End date)	
Course Author * Faculty proposing/revising the course	Lee-Chua Lee Hong
Course Author Email	clhlee@ntu.edu.sg
Course Title	Civil Engineering Laboratory B
Course Code	CV2712
Academic Units	1
Contact Hours	30
Research Experience Components	Not Applicable

## Course Requisites (if applicable)

Pre-requisites	
Co-requisites	
Pre-requisite to	
Mutually exclusive to	
Replacement course to	
Remarks (if any)	

## Course Aims

This course is open to Year 2 students in the second semester. This course aims to verify the theories taught in class with practical experiments to enhance their learning experience. This is such that you can gain relevant exposures and develop practical understanding of the theories learned.

## Course's Intended Learning Outcomes (ILOs)

Upon the successful completion of this course, you (student) would be able to:

ILO 1	Carry out experiments and verify theories in CEE courses relating to civil engineering materials, environmental engineering and soil mechanics.
ILO 2	Carry out investigative open-ended projects to include independent methodology to relate theories and principles to experimental results on various test apparatuses relating to above courses.
ILO 3	Estimate percent uncertainty in experimental data and the results.
ILO 4	Analyse, interpret and infer from experimental data and results.
ILO 5	Write a project report with professional and technical competency and clarity

## Course Content

S/N	Topic
1	Los Angeles abrasion and polished stone value
2	Concrete designing & mixing, casting, demoulding and slump test
3	Tests on hardened concrete & tensile test of reinforcing bars
4	Solids analysis
5	10% fines / sand equivalent tests
6	Marshall test, bitumen penetration & softening point
7	Compaction
8	One-dimensional consolidation test
9	Shear strength of sand
10	Shear strength of clay

## Reading and References (if applicable)

1. Lab Manual

## Planned Schedule

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
1	Los Angeles abrasion and polished stone value	1, 2, 3, 4, 5		In-person	Lab Session
2	Concrete designing & mixing, casting, demoulding and slump test	1, 2, 3, 4, 5		In-person	Lab Session
3	Tests on hardened concrete & tensile test of reinforcing bars	1, 2, 3, 4, 5		In-person	Lab Session
4	Solids analysis	1, 2, 3, 4, 5		In-person	Lab Session
5	10% fines / sand equivalent tests	1, 2, 3, 4, 5		In-person	Lab Session
6	Marshall test, bitumen penetration & softening point	1, 2, 3, 4, 5		In-person	Lab Session
7	Compaction, One-dimensional consolidation test	1, 2, 3, 4, 5		In-person	Lab Session
8	Shear strength of sand	1, 2, 3, 4, 5		In-person	Lab Session
9	Shear strength of clay	1, 2, 3, 4, 5		In-person	Lab Session

Week or Session	Topics or Themes	ILO	Readings	Delivery Mode	Activities
10	Los Angeles abrasion and polished stone value	1, 2, 3, 4, 5		In-person	Lab Session

## Learning and Teaching Approach

Approach	How does this approach support you in achieving the learning outcomes?
Lectures	Weekly lectures to provide you with the specific knowledge and techniques to achieve the learning outcome stated above.
Tutorials	Weekly tutorials to enable you to apply the knowledge to solve structured problems. We encourage you to explore alternative approaches and techniques.

## Assessment Structure

Assessment Components (includes both continuous and summative assessment)

No.	Component	ILO	Related PLO or Accreditation	Weightage	Team/Individual	Rubrics	Level of Understanding
1	Continuous Assessment (CA): Others([assignments (e.g. term paper, essay)] Laboratory Experiments: Log-sheets)	1,2,3,4	EAB SLOs (a), (b), (c), (d), (i), (j)	60	Team	Holistic	Relational
2	Continuous Assessment (CA): Others([laboratory reports] Laboratory Experiments: Formal Reports)	1,2,3,4,5	EAB SLOs (a), (b), (c), (d), (i), (j)	40	Team	Holistic	Relational

Description of Assessment Components (if applicable)

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### Formative Feedback

Feedback will be through the dissemination of the student's performance in their grades obtained through the submission of log-sheets and formal report.
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# NTU Graduate Attributes/Competency Mapping

This course intends to develop the following graduate attributes and competencies (maximum 5 most relevant)

Attributes/Competency	Level
Care for Environment	Basic
Collaboration	Basic
Curiosity	Basic
Influence	Intermediate
Problem Solving	Intermediate

## Course Policy

### Policy (Academic Integrity)

Good academic work depends on honesty and ethical behaviour. The quality of your work as a student relies on adhering to the principles of academic integrity and to the NTU Honour Code, a set of values shared by the whole university community. Truth, Trust and Justice are at the core of NTU's shared values. As a student, it is important that you recognize your responsibilities in understanding and applying the principles of academic integrity in all the work you do at NTU. Not knowing what is involved in maintaining academic integrity does not excuse academic dishonesty. You need to actively equip yourself with strategies to avoid all forms of academic dishonesty, including plagiarism, academic fraud, collusion and cheating. If you are uncertain of the definitions of any of these terms, you should go to the academic integrity website for more information. On the use of technological tools (such as Generative AI tools), different courses / assignments have different intended learning outcomes. Students should refer to the specific assignment instructions on their use and requirements and/or consult your instructors on how you can use these tools to help your learning. Consult your instructor(s) if you need any clarification about the requirements of academic integrity in the course.

### Policy (General)

The standing university policy governing student responsibilities shall apply.  
No special policy for this course.

### Policy (Absenteeism)

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### Policy (Others, if applicable)

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Last Updated Date: 06-01-2025 03:18:11

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