

ADVANCED TESTING OF CONSTRUCTION MATERIALS

<i>Credits</i>	1 (0.3.3)			Code	CI3079
<i>Periods</i>	Total: 30	Theory: 0	Practice: 0	Exp: 30	Assignment: 0
<i>Project</i>					
<i>Grading</i>	<i>Assignment</i> :	<i>Experiment</i> :	<i>Midterm exam:</i>	<i>Project:</i>	<i>Final exam:</i> 100%
<i>Evaluation</i>	- <i>Report</i>				
<i>Prerequisite course</i>					
<i>Previous course</i>	Construction Materials				
<i>Co-requisite course</i>					
<i>Training field</i>	- Kỹ thuật Xây dựng (Kỹ thuật Công trình Xây dựng)/ <i>Civil Engineering</i> - Kỹ thuật Xây dựng (Công nghệ Kỹ thuật Vật liệu Xây dựng)/ <i>Construction Material Engineering</i>				
<i>Level</i>	<i>Bachelor</i>				
<i>Studied year</i>	3				
<i>Other notes</i>					

Course Description

The students are required to learn about of building materials and to practice skills. Testing on physical-chemical properties, mechanical properties of building materials such as: clay brick, sand, coarse aggregate, portland cement, mortar, concrete.

Course materials

- [1] Giáo trình vật liệu xây dựng, Phùng Văn Lự và các tác giả, Nhà xuất bản Giáo dục, 2000;
- [2] Tuyển tập tiêu chuẩn xây dựng - tập 8 & 10, Bộ xây dựng, 2004;
- [3] Nguyễn Cao Đức, Nguyễn Mạnh Phát, Trịnh Hồng Tùng, Phạm Hữu Hanh, Giáo trình thí nghiệm vật liệu xây dựng , NXB Xây Dựng , Hà Nội 2006.
- [4] <http://tieuchuan.xaydung.gov.vn>

Course Outcomes

STT	Learning outcome	CDIO
L.O.1	Understand and apply basic knowledge	1.1, 1.2

	L.O.1.1 – Use basic scientific knowledge to evaluate physical properties of construction materials	1.1.2, 1.1.3
	L.O.1.2 – Use basic scientific knowledge to evaluate mechanical properties of construction materials	1.2.8, 1.2.12
L.O.2	Know typical methods to evaluate properties of construction materials	1.3, 2.1, 4.5
	L.O.2.1 – Know standard system used to evaluate properties of construction materials	1.3.12,
	L.O.2.2 – Apply testing process to evaluate properties of construction materials	2.1.3, 4.5.3, 4.5.4, 4.5.5
	L.O.2.3 – Understand and use equipment to evaluate properties of construction materials	
L.O.3	Judge and comparison with theories	1.3, 4.1, 4.2
	L.O.3.1 – Know meaning of testing process and applied standard	2.3.1, 2.3.2
	L.O.3.2 – Know how to classify and behavior of materials used in structures	2.3.4, 2.4.2, 4.1.3,
	L.O.3.3 – Know application of construction materials	4.1.6, 4.2.4
L.O.4	Know application and evaluation of construction materials	3.1, 4.1, 4.5
	L.O.4.1 – Know and apply suitable construction materials	3.1.2, 4.1.3, 4.1.6
	L.O.4.2 – Evaluate properties of construction materials used in structures	4.5.4, 4.5.5
	L.O.4.3 – Know safety technique	1.1.8
L.O.5	Show readiness to work	2.1, 2.5, 3.1
	L.O.5.1 – Know to generate group.	2.1.1, 2.1.3,
	L.O.5.2 – Show professional working behavior.	2.1.4,

	L.O.5.3 – Know to write report	2.5.1,
	L.O.5.4 – Know to present results	2.5.2, 3.1.5

Guide

Present testing report

Teacher

All lecturers of Department of Construction Materials.