



Course Syllabus: Spring 2013/2014

1. Course Name:	Properties of Concrete Lab.	Course Number:	0941352	Credits:	3	Pre/Co – requisite:	0941351
2. Class schedule	Time and place	Section #1: Sunday: 14:00 – 17:00 pm (at concrete lab.)					
	Office Hours:	Monday and Wednesday: 12:30 – 2:00 pm, or by appointment					
3. Instructor:	Name:	Dr. Maha Alqam					
	E-mail address:	m.alqam@ju.edu.jo					
	Office Phone:	+9625355000 Ext.: 22778					

4. Textbook: A. M. Neville, and J.J Brooks, **Concrete Technology**, Revised Edition-2001 Standards Update, Prentice Hall.

5. Course information:

- a. One credit hour mandatory course.
- b. Department required course.
- c. Pre/Co-requisite: 0941351- Properties of concrete.

6. Specific goals of the course:

a. Course Objectives:

1. To develop an understanding for properties, types of cement, and properties of aggregates.
2. To develop an understanding for properties and testing of fresh and hardened concrete.
3. To develop the ability to conduct tests for cement, aggregates, fresh concrete mixes, and hardened concrete.

b. Expected Outcomes:

Students will be expected to develop the following skills/understanding upon the successful completion of this course:

1. Develop an understanding of concrete as a structural material.
2. Develop an understanding of cement types, properties, hydration, and testing.
3. Develop an understanding of aggregates classifications, mechanical and physical properties.
4. Develop an understanding of concrete mixing, handling, placing, and compacting.
5. Develop an understanding of fresh concrete properties and testing.
6. Develop an understanding of hardened concrete properties and testing.

7. Contents:

Material	Experiment
Cement	1. Consistency and setting time of cement
	2. Compressive, and tensile strength of cement mortar
Aggregates	3. Bulk density, specific gravity and water absorption of fine and coarse aggregates
	4. Los Angeles abrasion test
	5. Sieve analysis
Midterm Exam	
Fresh concrete	6. Slump test
	7. Compaction factor test
	8. V.B test
	9. Casting concrete samples, cubes, cylinders and beams
Hardened concrete	10. Compressive strength, splitting and flexural tests
	11. Core drilling test – Schmidt Hammer test

7. Minimum student materials: Class handouts, and engineering calculator.

8. Instructional methods:

- a. Lecture/Problem solving sessions.
- b. Case studies.
- c. Quizzes.
- d. Reading assignments.

9. Assessment Scheme:

Evaluation	Weight of 100%
Midterm Exam	25%
Reports	25%
Practice	10%
Final Exam	40%
Total	100%

10. Attendance: Students are expected to attend EVERY CLASS SESSION and they are responsible for all material, announcements, schedule changes, etc., discussed in class. The university policy regarding the attendance will be strictly adhered to.