UNIVERSITY OF CALIFORNIA
Department of Civil and Environmental Engineering
Spring Semester, 2015 Instructor: Paulo J.M. Monteiro

CE 165 CONCRETE MATERIALS, CONSTRUCTION, and SUSTAINABILITY
Tu., Th. 8:00-9:30 am
Room 502 Davis Hall

Date		Lecture Topic
Jan.	20	Introduction; course organization
	22	Concrete as a construction material
	27	Sustainability of concrete
I. Selection of Materials		
Jan.	29	Different types of hydraulic cements
	3	Different types of aggregates
Feb.	5	Air entraining and water-reducing admixtures
	10	Chemical admixtures
	12	Mineral admixtures
	17	Formwork
	19	Fiber reinforced concrete
II. Concrete Processing		
Feb.	24	Ready-mixed concrete, batching and mixing
	26	Transport and placement methods
	3	Consolidation techniques
Mar.	5	Finishing
	10	Curing
	12	Early age properties
	17	Hot-weather and cold-weather concreting
	19	*Midterm Examination*
	31	Quality assurance; accelerated and non-destructive testing
April	2	Non-destructive testing
III. Special Construction Methods		
April	7	Mass concrete construction
	9	Roller-compacting
	14	Tremie concreting
	16	Shrinkage-compensating concrete floors
	21	Repair and rehabilitation *(group report due)*
	23	Poster presentation
	28	Group Presentation
May	1	Group Presentation
Note		**Due to the large size of the class we are going to meet on May 1 from 1-5pm for Group Presentation**

Useful Information:

Course Grade: 10% Homework, 20% MT, 20% Project, 5% Presentation, 5% Poster, 40% Final

Textbook: Concrete: Structure, Properties and Materials by Mehta and Monteiro, Fourth Edition, McGraw-Hill , 2014.

Office hours: Monday 1-2pm, Tu Th 10-11 am at 725 Davis Hall.

Final Exam: THURSDAY, MAY 14, 2015 7-10P

CE 165 web site: http://www.ce.berkeley.edu/~paulmont/CE165.htm

Email address: monteiro@ce.berkeley.edu

Homework policy: 50% penalty if late and returned during the following lecture. No points will be given after that.

Midterm review policy: I will be happy to discuss your midterm until the last day of classes.