School of Applied Engineering and Technology
Syllabi

Fall 2019

CIMT 201-101: Concrete Applications I

Mohamed Mahgoub

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COURSE NUMBER	CIMT 210
COURSE NAME	Concrete Applications I
COURSE STRUCTURE	(3-0-3) (lecture hr/wk - lab hr/wk – course credits)
COURSE DESCRIPTION	This course is the first of two courses designed to provide a detailed study of the many applications of concrete in the construction of buildings, pavements, and other facilities as they relate directly to the concrete industry. Emphasis will be placed on the advantages, disadvantages and unique problems facing the concrete industry and suppliers of materials used in the manufacture of concrete products.
PREREQUISITE(S)	CIMT 101
COREQUISITE(S)	CIMT 305
REQUIRED, ELECTIVE OR SELECTED ELECTIVE	Required
REQUIRED MATERIALS	1. Main Text: Various resources and handouts will be disseminated in class. 2. Supplementary References: PCA College Literature_CD ROM (CD_ROM includes ACPA and CRMCA Literature, Concrete Pipe Handbook, ACI Manual of Inspection, PCA Concrete Masonry Handbook, PCI Architectural Precast Concrete).
COMPUTER USAGE	Word, Excel, PowerPoint

COURSE LEARNING OUTCOMES (CLO)

By the end of the course students should be able to:

1. Define and recognize various concrete applications and their use.
2. Understand the properties and performance of concrete and the environmental impacts of cement and concrete.
3. Be aware of the issues associated with the production, transport and placing of concrete. Health and safety issues with handling construction materials.
4. Choose between different types of concrete depending on intended application and requirement to strength and environment.
5. Define safety practices.

CLASS TOPICS

Concrete basics, concrete sustainability, concrete applications such as pavements, pipes, buildings, bridges..ect, Concrete ingredients, various field visits, guest speakers, concrete construction, concrete safety, CIM National steering committee structure, CIM programs throughout the U.S, CIM history, professionalism, cement and SCM materials, admixtures, aggregates, ready mixed concrete, precast/pre-stressed concrete, testing and inspection, concrete equipment, concrete reinforcing, concrete formwork, work ethics, and admixures.

STUDENT OUTCOMES

The Course Learning Outcomes support the achievement of the following CIMT Program Outcomes and TAC of ABET Criterion 9 requirements

OUTCOME 1 Understand how each ingredient of concrete affect its properties and performance (Relates to CLO 2)

OUTCOME 2 Assimilate and integrate their knowledge, make   assessments and utilize their knowledge and understanding in solving relevant problems in the field of concrete technology specifically. (Relates to CLO 3 and 4)

OUTCOME 3 Identify, adapt and develop models appropriate to the   study of a wide-range of different problems relevant to concrete technology. (Relates to CLO 4)

ACADEMIC INTEGRITY   NJIT has a zero-tolerance policy regarding cheating of any kind and student behavior that is disruptive to a learning environment. Any incidents will be immediately reported to the Dean of Students. In the cases the Honor Code violations are detected, the punishments range from a minimum of failure in the course plus disciplinary probation up to expulsion from NJIT with notations on students' permanent record. Avoid situations where honorable behavior could be misinterpreted. For more information on the honor code, go to http://www.njit.edu/academics/honorcode.php

MODIFICATION TO COURSE   The Course Outline may be modified at the discretion of the instructor or in the event of extenuating circumstances. Students will be notified in class of any changes to the Course outline.

COURSE COODINATED BY   Dr. M. Mahgoub

CLASS HOURS

Monday -lecture   6:00 PM – 9:00 PM   FMH 209

OFFICE HOURS (GITC 2511)

Monday   4:00 PM – 6:00 PM

Or by appointment: **(973) 596-6081** or **mahgoub@njit.edu**

COURSE OUTLINE

Week	Dates	Topic
1	9/9	Course Introduction & Overview/ Strength of Material
2	9/16	Pavements
3	9/23	Decorative Concrete
4	9/30	Roller Compacted Concrete
5	10/7	Pervious Concrete
6	10/14	Concrete Bridges
7	10/21	Flowable Fill
8	10/28	Precast Concrete
9	11/4	Mid-Term Exam
10	11/11	Precast Concrete
11	11/18	Concrete Masonry
12	11/25	Concrete Blocks
13	12/2	Tilt-up Concrete
14	12/9	Class Presentation and Final Exam Review

GRADING POLICY

Note: Grading Policy may be modified by Instructor for each Section in the Course)

Homework	25%
Quizzes	15%
Mid-Term Exam	20%
Extra Concrete Activities	10%
Final Exam	30%

Letter grades will be assigned based on the following scale

A	100 - 90
B	89 – 80
C	79 – 70
D	69 – 60
F	59 - 0

Note: Cannot pass course if you having failing grades on final exam

STUDENT BEHAVIOR

- No eating is allowed at the lectures, recitations, workshops, and laboratories.
- Cellular phones must be turned off during the class hours – if you are expecting an emergency call, leave it on vibrate.
- No headphones can be worn in class.
- Unless the professor allows the use during lecture, laptops should be closed during lecture.
- Class time should be participative. You should try to be part of a discussion