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CIMT 101-102: Introduction to the Concrete Industry

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CIMT 101 – Introduction to the Concrete Industry

COURSE NUMBER	CIMT 101
COURSE NAME	Introduction to the Concrete Industry
COURSE STRUCTURE	(3-0-2) (lecture hr/wk - lab hr/wk – course credits)
COURSE DESCRIPTION	This course is designed to provide the student with an in depth understanding of the concrete industry. We will explore all aspects of the industry and students will gain a basic understanding of concrete, historical aspects, the chemistry, properties and uses of concrete, production and delivery, and management of production facilities. Emphasis will be placed on the history, present status, and future vision of the CIM program including the role of the National Steering Committee, Patrons group, and relationships between the five Universities across the nation currently offering the program. Students will also be introduced to concrete construction and contracting, environmental concerns, professionalism, and career opportunities in the concrete industry.
PREREQUISITE(S)	None
COREQUISITE(S)	CIMT 205
REQUIRED, ELECTIVE OR SELECTED ELECTIVE	Required
REQUIRED MATERIALS	Various handouts and other supplemental materials.
COMPUTER USAGE	Word, Excel, PowerPoint
COURSE LEARNING OUTCOMES (CLO)	By the end of the course students should be able to: <ol style="list-style-type: none">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	Topics will include: <ul style="list-style-type: none">• CIM Program• Professionalism• Resume Writing• Cement & Supplementary Cementitious Materials (SCM's)• Admixtures• Aggregates• Ready Mix Concrete• Precast/Prestress Concrete• Dry Cast Concrete• Concrete Contracting• Testing & Inspection• Concrete Equipment• Concrete Reinforcing

STUDENT OUTCOMES

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

OUTCOME 1: Recognize the CIM program history, present status, and vision for the future. (Relates to CLO 1)

OUTCOME 2 Understanding of contemporary concrete blending, mixing, transporting, placing and finishing. (Relates to CLO 2)

OUTCOME 5 Understanding of project, quality, and safety management methods and the impact of their application on the financial and economic aspects of concrete materials, products and services. (Relates to CLO 2 and 5)

OUTCOME 7 Ability to communicate effectively ideas in oral, written, and graphical form. (Relates to CLO 3 and 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

Wednesday -lecture 6:00 PM – 9:00 PM CKB 226

OFFICE HOURS (GITC 2511)

Wednesday 4:00 PM – 6:00 PM

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

COURSE OUTLINE

Week	Dates	Topic
1	1/22	Course Introduction & Overview/ CIM Introduction
2	1/29	Professionalism & Resume Writing
3	2/5	Cement & Supplementary Cementitious Materials
4	2/10	Testing Concrete
5	2/19	Admixtures & SCC
6	2/26	Ready Mix Concrete & Aggregates
7	3/4	Test #1
8	3/11	Dry Cast Concrete (Block, Pavers, & Pipe)
9	3/25	NO CLASS – Spring Break
10	4/1	Concrete Contracting
11	4/8	Concrete Equipment & Reinforcing
12	4/15	Concrete Industry Associations
13	4/22	Test #2
14	4/29	Class Presentations

GRADING POLICY

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

Homework	15%
Final Presentation and report	10%
Quizzes	15%
Mid-Term Exams (average of two)	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