Fall 2019

CIMT 310-101: Concrete Products and Delivery

Ricardo Arocha

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CIM 310 – Concrete Products and Delivery

COURSE NUMBER	CIM 310
COURSE NAME	Concrete Products and Delivery
COURSE STRUCTURE	(3-0-3) (lecture hr/wk - lab hr/wk – course credits)
COURSE DESCRIPTION	This course will provide the student with a basic understanding of managing, production, order, and delivery process common to all concrete products. An emphasis will be given to planning, organizing, and controlling, at both, Management and Supervisory levels.
PREREQUISITE(S)	CIM 210
COREQUISITE(S)	
REQUIRED, ELECTIVE OR SELECTED ELECTIVE	Required
REQUIRED MATERIALS	Main Text: **NRMCA Pub. # 159 – Concrete Plant Operator's Manual** **Supplementary References: Design and Control of Concrete Mixtures. PCA, 15th Edition.** **ACI and PCA Publications. ASTM Standards.**
COMPUTER USAGE	Word, Excel, PowerPoint
COURSE LEARNING OUTCOMES (CLO)	By the end of the course students should be able to: 1. Have an understanding of the fundamentals of concrete, properties of freshly mixes concrete, and concrete testing. 2. Recognize the types of ready mix concrete plants, and their operation. 3. Understand the ready mix control systems, troubleshooting, and plant maintenance. 4. Have further comprehension of aggregates, cement, fly-ash, slag cement, admixtures, and other additives, as they relate to ready mix concrete manufacturing. 5. Comprehension of the ready mix concrete ordering, and delivering process. 6. Be aware of Plant Safety 7. Grasp the ready mix concrete sales process.
CLASS TOPICS	Concrete Basics, concrete ingredients, plant types, ready mix production process, ordering, and delivering, various field visits, guest speakers, concrete construction, production, and safety, CIM National Steering Committee, CIM programs throught the country, CIM history, professionalism, cement and SCM materials, admixtures, aggregates, ready mix concrete, pre-cast/pre-stressed concrete, testing and inspection, concrete equipment, concrete reinforcement, concrete formwork, tilt-up construction, work ethic, ready mix market analysis, and ready mix sales.
STUDENT OUTCOMES	The Course Learning Outcomes support the achievement of the following CIM Program Outcomes and TAC of ABET Criterion 9 requirements

OUTCOME 1 Recognize and understand the basic types of ready mix concrete plants, and the general nature of how the manufacturing process operates. (Relates to CLO 2)

OUTCOME 2 Assimilate and integrate their knowledge, make assessments and utilize their knowledge and understanding regarding ready mix concrete plant control systems. Also, solving relevant problems as it relates to trouble shooting, and plant maintenance. (Relates to CLO 3)

OUTCOME 3 Understand how each ingredient in the ready mix concrete manufacturing process impacts the final product, and apply this knowledge to further advance the technology/performance of concrete products.
(Relates to CLO 4)

OUTCOME 4 Identify, adapt and develop methods to successfully execute the ready mix concrete ordering and delivery process. (Relates to CLO 5)

OUTCOME 5 Maintain and develop a safe working environment for the individual and the people accessing a ready mix concrete facility.
(Relates to CLO 6)

OUTCOME 6 Understanding at what point in the sales process, the individual is currently in and successfully navigating it. (Relates to CLO 7)

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 COORDINATED BY

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CLASS HOURS

Wednesday -Lecture 6 pm – 9:05pm FMH, 203

COURSE OUTLINE

Week	Dates	Topic
1	9/4	Course Introduction, Chapters 1 & 2.
2	9/11	Quiz # 1; Chapters 3, 4, & 5. Homework Assignment, Conc. Products Production & Delivery
3	9/18	Guest Speaker. TBD.
4	9/25	**1st. TERM TEST (Chapters. 1,2,3,4,5)**
5	10/2	1st. TERM EXAM Review & comments. Homework Due Date. Lecture: Chapters 6 & 7
6	10/9	Quiz # 2. Lecture: Chapters 8 & 9
7	10/16	Quiz # 3. Lecture: Chapters 10 & 11
8	10/23	**2nd. TERM EXAM(Chp. 6 – 11)**
9	10/30	**2nd. TERM EXAM Review and comments. Lecture: Chapters 12, 13, and 15**
10	11/6	Quiz # 4. **Project Assignment(3rd. TERM EXAM).** Review previous Lectures
11	11/13	**Guest Speaker: Danny Wilk. Concrete Placement Planning & Scheduling** **Guest Speaker. Joe Tedesco. Concrete Repair Products & Enhancers.**
12	11/20	**Guest Speaker. Ray Clark, Weldon Materials, "A Day in the life of a Concrete Plant Operator"**
13	11/27	**THANKSGIVING BREAK**
14	12/4	**3rd. TERM EXAM. Project Presentation**
16	12/11	**3rd. TERM EXAM. Project Presentation**
16	12/18	**FINAL EXAM**

GRADING POLICY

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

Attendance & Class Participation	20%
Quizzes	10%
Homework and Projects	10%
Extra Work, activity, Social Events	5% (Optional Extra Points)
Term Exams (average 2 exams)	30%
Final Exam	30%

Letter grades will be assigned based on the following scale

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

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**