



**Department of Engineering Technology  
Concrete Industry Management Technology Program  
Course Outline – Spring 2023**

**Course Number and Title:**

CIMT 405 – Advanced Concrete Testing – Quality Assurance and Initiative

**Course Location and Hours:**

Thursday	Lecture	6:00 PM – 7:55 PM	CKB 126
	Lab	8:05 PM – 10:00 PM	Colt 121

**Course Description:**

- a. Classroom Lecture/ Concrete Laboratory Course, time split as required
- b. A continuation of Basic Laboratory Testing of CIMT 205
- c. 25 ASTM Testing Protocols  
4 to 5 purely ASTM Lab Reports to submit  
Individual Workbook Chapters

**Textbooks and Course Materials:**

- (1) ACI Certification, Aggregate Testing Technician, Level 1
- (2) ACI Certification, Concrete Field Testing Technician, Grade 1

**Field Trip(s):** To be announced. Attendance is Mandatory.

**Instructors:**

Professor: Mina Saleeb

**Office:**

The Instructor shall be available in his office (GITC 2114) for consultation, at the times for office hours. Should these times be inconvenient for the student, additional hours are available upon appointment. The instructor may be reached by telephone at 973-596-6055 or by e-mail at [Mina.saleeb@njit.edu](mailto:Mina.saleeb@njit.edu) E-mail is generally preferred.

**Office Hours:**

Wednesday 12:30 PM – 4:00 PM  
Or by appointment

### **Attendance Policy and Student Conduct:**

It is the student's responsibility to attend class. If a class is missed, the student is responsible for all material and announcements provided during his/her absence.

During the conduct of the class, professional courtesy is expected. This includes **arriving on time** as well as leaving during class. Similarly, "private" conversations with fellow students during a class are discourteous and inconsiderate to both your Instructor as well as your fellow students. You are encouraged to ask any questions that you feel further clarifies the material being presented or that will be to the benefit of class in general. Please feel free to ask any question at any time.

### **Grading Criteria:**

Fifteen-minute quiz each class, three tests and a Final Examination shall be administered throughout the course. Quizzes shall cover all the material taught in the class up to the time of the quiz. The tests shall cover only the material designated by the Instructor. The Final Examination shall be a comprehensive examination of all material covered during this course. It is mandatory that the tests and the final examination be taken to successfully complete course. It is strongly encouraged that all students make every effort to attend the tests and the examination as make-up tests are strongly discouraged. In the event that a student fails to take the tests or the Final Examination, a grade of "F" shall be entered for the student for this course. Unless otherwise announced by the Instructor, the quizzes, the tests and the examination will be of the "closed notes-closed book" variety.

Homework assignments will be used to assess the student's progress during the course as well as to be employed to assess the quality of student's effort and understanding of the material presented. All homework shall be graded for accuracy. Homework may be covered in class as a review for the student. It is the intent to assign 13 homework assignments during the course of the semester and the grade on the lowest homework assignment will be dropped. In the completion of homework assignments, the assignment should be logically presented with citation to reference materials properly presented. It is suggested that, whenever possible, final answers be underlined or "boxed". All assignments are due at the beginning of the class session as designated on the assignment or as assigned by the Instructor. **Late homework will not be accepted – no exceptions.**

The student's name should appear on the upper right hand corner, followed by the date, the assignment number and description as shown below. No cover or cover sheet is required.

\*\*\*\*\**Sample Assignment Heading*\*\*\*\*\*

CIMT XXXX  
Assignment No. XXXX

John Smith  
September 1, 2009

In determining the final grade for this course, all grades shall be weighted as follows:

- 30% Reports
  - 20% Major
  - 10% Minor (Discussion and Trip papers)
- 20% Midterm Exams
- 20% Quizzes
- 20% Final
- 10% Class Participation and Laboratory Demeanor

**Grading Scale:**

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

The grade of Incomplete will only be granted in the case of an extreme emergency on the part of the student, demonstrated by appropriate documentation. Your Instructor reserves the right to vary the above as necessary based on the results of the course.

**Professional Communications:**

All communications between the student and Instructor (homework, reports, papers, emails, etc.) are professional communications and should be treated as same. Use of slang and computer short-hand are improper and should be avoided.

## CIMT 405 Spring 2023

19 Jan	<b>Introduction to Adv Concrete Testing &amp; Quality Assurance</b> Structure of Course ACI FL 1 Strength Testing, (+Aggregate Testing= ACI Lab I) QC/QA and Sieve Analysis Class Project, Group Project ASTM Testing Reports and Workbook Chapters Lab Mixing C 192, Hand Mixing, Machine Mixing (Truck Mixing) ACI FL 1 – Sampling, Temp, Slump, Yield, Air, Cylinders, & Curing <b>Laboratory:</b> Control Mix, Mix concrete and test temp, slump, air, yield; make and cure cylinders
26 Jan	<b>ACI FL 1: Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates</b> This test method covers the determination of the particle size distribution of fine and coarse aggregates by sieving. <b>Laboratory: Sampling and testing coarse and fine aggregate. Graphing, and calculating results.</b>
2 Feb	<b>ACI FL1: Concrete Mix</b> <b>Laboratory:</b> ACI FL 1, Mix concrete and test temp, slump, air, yield; make cylinders and beams
9 Feb	<b>Maker Space</b> Making fountain bass, and concrete mix.
16 Feb	<b>Strength Testing Cont</b> <b>ACI 214, ACI 318, Statistics of Standard Deviation</b> <b>Laboratory: Strength Testing</b>
23 Feb	<b>Pozzalans</b> <b>SF, FA, GBFS: Pluses &amp; minuses</b> <b>Laboratory: SFcrete</b> (evaluate all Pozzalan mixes for fc gain, shrinkage, flex)
2 Mar	<b>High-Performance, Pervious, Decorative, SCC Concretes</b> <b>Laboratory: FAcrete</b>
9 Mar	<b>NDT, Coring</b> <b>ACI 228, Schmidt, Windsor; Maturity, Pulse Vel, Forced Resonance</b> <b>Coring, ACI 214R2, ASTM C 42</b> <b>Laboratory: C1399, C39, C78,</b> <b>Laboratory: Slagcrete</b>
16 Mar	<b>Spring Break - No Classes</b>
23 Mar	<b>Midterm EXAM</b> <b>Laboratory: as needed</b>
30 Mar	<b>Quality Control &amp; Quality Assurance, What's the Difference?</b> <b>CUMSUM ACI 214</b> <b>ANOVA, Within Test and Between Test Variances</b> <b>Laboratory: FAcrete</b>
6 Apr	<b>Individual and Group Projects</b> <b>Laboratory: Slagcrete</b>
13 Apr	<b>Social Function</b>
20 Apr	<b>Individual and Group Projects</b>
27 Apr	<b>Project Presentations</b>
3 May	<b>Final Exam</b>
13 May	<b>NJ Concrete Awards Dinner (Major networking event)</b>