

Instructor:

Phone:

E-mail:

TEXTBOOK AND SUPPLIES:

- NCCER Concrete Construction Level 2, 2nd Edition, ISBN-13: 9780136898320

PREREQUISITE: TECN 1200 Concrete Masonry 2A with a C grade or higher or instructor approval

OTHER REGISTRATION RESTRICTION(S): It is highly recommended that students be registered with DOL by their Sponsor

COURSE DESCRIPTION: In this course apprentices are introduced to properties of concrete, estimating concrete quantities, tilt-up wall panels, paving, architectural finishes, industrial/superflat floors, surface treatments, troubleshooting and quality control, and concrete repair. The course is designed to help the apprentice develop their craft skills and be contributing members of a concrete crew.

Upon completing this course, students should be able to:

1. Calculate metric linear and weight conversions and work with denominate numbers to determine area and volume
2. Interpret construction drawings and estimate concrete quantities, and form a tilt-up panel per construction drawings
3. Install inserts, reinforcements, and architectural features
4. Set up and perform slipform paving, concrete slump test, and hot-mix asphalt paving
5. Apply various techniques to prepare and finish the concrete surface to a specified surface profile
6. Assist in placing, consolidating, and screeding an industrial floor slab to a given elevation and setting a wooden superflat-floor edge from on grade to a specified elevation
7. Mix, place, and cure a concrete repair
8. Collect concrete samples, prepare specimens, and complete field tests

COURSEWORK:

- **Weekly Homework:** You are expected to come to class prepared with your weekly readings and assignments.
- **Pre-Post Assessments, Weekly Quizzes:** Take and submit online in Canvas.
 - A pre- and post-assessment will be taken on the first and last day of class to measure progress
 - Weekly quizzes will be taken online in Canvas. You are allowed two attempts with the higher score recorded.
- **Attendance/Participation:** Attendance is expected and crucial to understanding the material and participating in classroom activities. Attendance and participation will be recorded daily and

included in your coursework grade. 95% attendance is required, so you are allowed three excused absences.

- **Final Exam:** The final exam will be a comprehensive examination.
- **Lab Projects:** Completion of related lab projects will be required. Missed projects must be coordinated with the instructor and made up.

GRADES: Final grades will be calculated using the following scale and weights.

A	93% and above	B-	80% – 82.9%
A-	90% – 92.9%	C+	77% – 79.9%
B+	87% – 89.9%	C	73% - 78.9%
B	83% – 86.9%		

Homework	20%	Weekly Projects	25%
Pre-Post Assessments, Quizzes	20%	Attendance/participation/class work	10%
Final Exam	25%		

Schedule (Subject to change)

WEEK	DAY 1	DAY 2	ASSIGNMENTS
1	1. Properties of Concrete a. Concrete Ingredients	1. Properties of Concrete a. Admixtures and specialized concrete	TBD
2	1. Properties of Concrete a. Concrete Mixtures and Testing	1. Estimating Concrete Quantities a. Metric Conversions & Denominate Number Calculations	TBD
3	1. Estimating Concrete Quantities a. Construction Drawings and Concrete Estimating	1. Tilt-Up Wall Systems a. Overview of Tilt-Up Walls b. Erecting and Bracing the Panels	TBD
4	1. Tilt-Up Wall Systems a. Overview of Tilt-Up Walls b. Erecting and Bracing the Panels	1. Tilt-Up Wall Systems a. Overview of Tilt-Up Walls b. Erecting and Bracing the Panels	TBD
5	1. Paving a. Concrete Paving	1. Paving a. Concrete Paving b. Hot-Mix Asphalt Paving	TBD
6	1. Architectural Finishes a. Colored and Textured Architectural Finishes	1. Architectural Finishes a. Colored & Textured Architectural Finishes	TBD
7	1. Architectural Finishes a. Colored & Textured Architectural Finishes b. Exposed Aggregate Finishes	1. Architectural Finishes a. Exposed Aggregate Finishes	TBD
8	1. Industrial Floors a. Floor Classes b. Pre-Placement Preparations	1. Industrial Floors a. Reinforcement	TBD

WEEK	DAY 1	DAY 2	ASSIGNMENTS
9	1. Industrial Floors a. Placement and Finishing	1. Superflat Floors a. Superflat Floor Applications & Tolerances b. Floor Measuring Devices	TBD
10	1. Superflat Floors a. Pre-Placement Tasks and Considerations	1. Superflat Floors a. Concrete Placement b. Finishing and Curing	TBD
11	1. Superflat Treatments a. Preparation Methods	1. Surface Treatments a. Dry Shakes b. Self-Leveling Toppings and Underlayments c. Protective Sealers and Coatings d. Epoxy Compounds	TBD
12	1. Troubleshooting and Quality Control a. Quality Control and Troubleshooting	1. Troubleshooting and Quality Control a. Quality Control and Troubleshooting	TBD
13	1. Troubleshooting and Quality Control a. Concrete Sampling and Testing	1. Troubleshooting and Quality Control a. Concrete Sampling and Testing	TBD
14	1. Troubleshooting and Quality Control a. Concrete Sampling and Testing	1. Concrete Repair a. Concrete Damage and Deterioration	TBD
15	1. Concrete Repair a. Concrete Damage and Deterioration b. Concrete Repairs	1. Concrete Repair a. Concrete Repairs	TBD
16	1. Concrete Repair a. Concrete Repairs	1. Wrap up 2. Final	TBD

WITHDRAWAL POLICY: The College's withdrawal schedule is followed. No withdrawals will be approved beyond the drop date.

COMMUNICATION and FEEDBACK EXPECTATIONS: Email is the best way to communicate with your instructor through the Canvas Inbox. You can expect to receive responses to emails within 24 business hours. Projects and exams will be graded and recorded within one week of when the assignment was submitted. Keep the line of communication open to avoid any misunderstandings.

ELECTRONIC DEVICES IN THE CLASSROOM: No video or audio recording in the classroom is allowed without written authorization from the instructor. Cell phones and other electronic devices should be silent and off the desk during class except to take notes if it is not distracting to classmates. In an emergency, exit the classroom to use your cell phones. Disruptive behavior will cause you to be excused from class and lose participation points. Please inform your instructor of any special circumstances at the start of the semester.