

Department of Engineering Technology

Title and Course Number: ET 254 Lecture and Laboratory, Concrete Technology

Credits and Contact Hours: 3 cr. 29 contact hours -- lecture
35 contact hours – laboratory

Course Description: A study of the fundamentals of aggregates, Portland cement concrete and asphalt concrete, as well as their uses in design and construction.

Prerequisites: None

Textbook: Basic Construction Materials, 6th or 7th Ed., Marotta and Herubin ;
Design and Control of Concrete Mixtures, 13th Ed., Portland Cement Association

Course Outcomes

To interpret and/or prepare design and construction documents, such as specifications, contracts, change orders, engineering drawings, and construction schedules (ABET 9a)

To conducting standardized field and laboratory testing on civil engineering materials (ABET 9c)

To become proficient in designing concrete mixtures suitable for different climactic and use conditions (ABET 9e)

Applying basic technical concepts to the solution of civil problems involving material behavior and construction (ABET 9f)

To prepare students to take and pass the American Concrete Institute Field Testing Technician certification exam (ABET 3i).

Measures

Labs #1 & #2 (Aggregate Specs.)

Labs #3 & #4 (Concrete Field Tests)

Mixture Design Lab

Exam Scores

Interest in the Certification

Computer Usage: Microsoft Excel

Library Usage: Testing standards required for the laboratory are available in the Reference section of the Library.

Prepared By: Kenny Stevens, August 2009