

Master Syllabus

CAT 1211 - Construction Materials Testing

Division: Science, Mathematics and Engineering

Department: Civil Engineering Technology

Credit Hour Total: 2.0

Lecture Hrs: 1.0 **Lab Hrs:** 3.0

Prerequisite(s): MAT 0100OR MAT 1110OR MAT 1130OR MAT 1445

Date Revised: October 2016

Course Description:

This course presents some of the basics of testing materials (concrete, steel, wood, etc.) used in the construction industry. Emphasis on how properties of materials affect their use in the construction process. Utilizes American Society for Testing and Materials (ASTM) Standards. One classroom, three lab hours per week.

General Education Outcomes:

- ❑ Oral Communication Competency
- ❑ Written Communication Competency
- ❑ Critical Thinking/Problem Solving Competency
- ❑ Computer Literacy Competency
- ❑ Information Literacy Competency
- ❑ Values/Citizenship/Community Competency

Course Outcomes:

Construction Materials Testing

Demonstrate methods to test basic construction materials in the field and lab.

Assessment Method: Locally developed exams

Performance Criteria:

70% of students must score 70% correct on written exam

Material Performance

Determine whether materials can be utilized based on performance and properties.

Assessment Method: Locally developed exams

Performance Criteria:

70% of students must score 70% correct on written exam

Construction Personnel

Identify the individuals involved in maintaining the infrastructure needs of society.

Assessment Method: Locally developed exams

Performance Criteria:

70% of students must score 70% correct on written exam

Teamwork

Work effectively in teams to complete lab exercises.

Assessment Method: Behavioral observations

Performance Criteria:

70% or higher based on team evaluation rubric

Outline:

Identify resource materials
Introduction to basic testing of materials
Aggregates
Asphalt
Portland cement
Concrete, wood and other building materials
Iron and steel