

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: CIV 226

Credits: 1

Course Title: Soil Mechanics Laboratory

Course Description: Introduces practical soil sampling; classification of unified, ASTM, and ASSHTO specifications; laboratory testing of soils to predict engineering performance. Co-requisite: CIV 225. Laboratory 2 hours per week.

General Course Purpose: Allows student to experience hands-on testing and research of soil properties as applied to a civil engineering assignment.

Course Prerequisites and Co-requisites:

Co-requisite: CIV 225

Course Objectives:

Upon completing the course, the student will be able to

- a. Demonstrate a working knowledge of classifying a soil to identify its engineering properties;
- b. Demonstrate a general understanding of the fundamentals of geotechnical engineering; and
- c. Have a basic understanding of the performance requirements of the soil laboratory or soil field technician.

Major Topics to Be Included:

- a. Soil: origin and nature
- b. Soil classification
- c. Soil index properties
- d. Stress analysis and engineering properties
- e. Interpretation of soils reports (exploration procedures)
- f. Foundation types and application
- g. Moisture–density relationship
- h. Soil stabilization

Effective Date of Course Content Summary: August, 2008