

SOUTHEAST COMMUNITY COLLEGE
ADVANCED TECHNOLOGIES AND SKILLED TRADESDIVISION
Land Surveying/GIS/Civil Engineering Technology Program
Revision Date: August 2025

I. CATALOG DESCRIPTION

Course Number: LSCE1232
Course Title: Highway Plan Reading
Prerequisite(s): None
Catalog Description: Programmed study that teaches the fundamentals of reading and interpreting a complete set of highway plans.
Credit Hours: 1
Class Hours: 15
Lab Hours: 0
Total Contact Hours: 15

II. COURSE OBJECTIVES: *Course will:*

- A. Learn how to read highway plans through hands-on training
- B. Interpret highway plans
- C. Correctly number the pages of a set of plans
- D. Name the primary drawing views on a set of plans
- E. Distinguish the difference between “cut” and “fill” cross sections
- F. Name all the parts of typical road cross section
- G. Interpret how overlaps areas are shown on a set of highway plans
- H. Name all the information that could be found on the Summary of Quantities Sheets
- I. Explain what detail sheet are used for

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

- A. Student Learning Outcomes: *Student will be able to:*
 - 1. Demonstrate how a set of highway plans are set-up to industry standards.
 - 2. Illustrate what is documented in a set of highway plans.
- B. General Education Learning Outcomes (GELOs)
 - 1. GELO #5: Analytical, Quantitative, and Scientific Reasoning
Outcome 4: Manipulate formulas, data sets, graphs, tables, etc. in a way to produce a meaningful outcome.

IV. CONTENT/TOPICAL OUTLINE

- A. Highway Plans Basics
- B. Horizontal and Vertical Curves
- C. Ownership Records
- D. Cut and Fill
- E. Cross Sections
- F. Profile Grade Line, Sections and Elevations
- G. Summary of Quantities Sheets
- H. Rates of Slopes
- I. Water Drainage

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s): Nebraska Department of Transportation, *Highway Plan Reading Self-Instructional Online Training Course*

- B.** Other Text(s) :
1. Nebraska Department of Roads, *Highway Plan Reading Answer Book*
 2. Nebraska Department of Roads, *Highway Plan Reading Plan Set*
 3. Nebraska Department of Transportation, *Road Design & Construction Terms Book*

VI. METHODS OF PRESENTATION/INSTRUCTION

- A.** Methods of presentation typically include a combination of the following:
1. Self-Instructional Training Course
 2. Hands-on lab projects

VII. METHODS OF EVALUATION

- A.** Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
1. Assignment Worksheets
 2. Tests

VIII. SPECIFIC COURSE REQUIREMENTS

- A.** A minimum grade of “C” or higher is required in all courses designated or starting with LSCE to progress through or graduate from the program.