



South Central College

## CTLS 2851 Internship

### Course Outcome Summary

#### Course Information

<b>Description</b>	The internship/practicum requires a minimum of 144 hours of hands-on experience performing civil engineering technology duties, such as construction Inspection, surveys, roadway design, GIS, materials testing, and or other duties as requested. This course is designed to provide the student with a field experience to observe how procedures and/or policies are implemented and completed in civil engineering environments. (Prerequisite: CTLS 1810)
<b>Total Credits</b>	3
<b>Total Hours</b>	144

#### Types of Instruction

Instruction Type	Credits/Hours
Internship	3

#### Pre/Corequisites

None

#### Institutional Core Competencies

Communication - Students will be able to demonstrate appropriate and effective interactions with others to achieve their personal, academic, and professional objectives.

Critical and Creative Thinking - Students will be able to demonstrate purposeful thinking with the goal of using a creative process for developing and building upon ideas and/or the goal of using a critical process for the analyzing and evaluating of ideas.

#### Course Competencies

- 1. Utilize Civil Engineering math.**  
**Learning Objectives**  
Perform Civil Engineering calculations.  
Demonstrate knowledge of measurements.  
Read and interpret graphical information.  
Apply mathematical formulas.
- 2. Communicate with others effectively.**

### **Learning Objectives**

Listen attentively.  
Create clear and concise work documentation.  
Clearly write and/or document testing results.  
Actively participate in discussion.

## **3. Enhance problem solving skills.**

### **Learning Objectives**

Make observations effectively.  
Gather information.  
Make educated decisions.  
Offer solutions to problems.

## **4. Develop professional and ethical work standards.**

### **Learning Objectives**

Follow established rules.  
Apply effective work habits.  
Set goals for personal and professional development.  
Promote respectful work relationships.  
Create professional work relationships.

## **5. Utilize technology.**

### **Learning Objectives**

Apply technical aptitude to work activities.  
Utilize computer technology as it is related to achieving goals.  
Effectively manage information on computers.  
Solve problems using technology.  
Follow ethical technology practices.

## **6. Develop safe work habits and environments.**

### **Learning Objectives**

Follow agency safety guidelines.  
Make educated decisions regarding safety in the workplace.  
Communicate unsafe practices and environments to supervisor.  
Follow OSHA safety standards.  
Identify potential field hazards.

## **7. Properly utilize and manage equipment.**

### **Learning Objectives**

Ensure equipment is properly working.  
Ensure equipment is properly maintained.  
Effectively use equipment to complete assigned work.  
Ensure proper use of equipment.

## **8. Examine the duties and responsibilities of an inspector.**

### **Learning Objectives**

Identify construction records.  
Summarize the duties of Inspectors.  
Evaluate the ethic requirements of inspectors.  
Examine the responsibilities of the representatives involved in construction.

## **9. Examine the estimating process and procedures.**

### **Learning Objectives**

Describe the estimating process.  
Evaluate scheduling.  
Develop clear and concise cost estimates.  
Explore and compare computer estimating systems.

**10. Describe the roles and responsibilities of a survey crew.**

**Learning Objectives**

Develop safe surveying practices.  
Utilize survey equipment properly.  
Accurately record survey progress.  
Ensure accurate field measurements.

**11. Define Survey Data Integrity.**

**Learning Objectives**

Adhere to accuracy guidelines.  
Document changes to data.  
Provide acknowledgement to data owned by others.  
Review Industry data practice guidelines.

**12. Examine Industry Design Standards.**

**Learning Objectives**

Review and follow state and federal geometrics standards.  
Accurately develop clear and concise construction plans.  
Document changes to design standards.  
Document design deficiencies.

**13. Identify Data Requirement Needs.**

**Learning Objectives**

Research project requirements.  
Determine project requirements.  
Identify data needs.  
Verify data needs with end users.

**14. Acquire advance proficiency of understanding project development.**

**Learning Objectives**

Research project development requirements.  
Identify required project documents.  
Describe efficient project scheduling.  
Adhere to scheduling timelines.

**15. Describe delivery of end products.**

**Learning Objectives**

Determine project deliverables.  
Develop efficient work flow diagrams.  
Communicate delivery schedule conflicts.  
Perform to the highest quality of work standards.

**SCC Accessibility Statement**

South Central College strives to make all learning experiences as accessible as possible. If you have a disability and need accommodations for access to this class, contact the Academic Support Center to request and discuss accommodations. North Mankato: Room B-132, (507) 389-7222; Faribault: Room A-116, (507) 332-7222.

Additional information and forms can be found at: [www.southcentral.edu/disability](http://www.southcentral.edu/disability)

This material can be made available in alternative formats by contacting the Academic Support Center at 507-389-7222.

