



Course Outline

2026-2027 Catalog

CNST 55 - Computer Applications in Construction Management

Catalog Description

Transfer Status: CSU

Unit(s): 3.00

Lecture: 34.00 Contact hours/68.00 Out of class hours/102.00 Total hours/2.00 Unit(s)

Activity: 34.00 Contact hours/17.00 Out of class hours/51.00 Total hours/1.00 Unit(s)

Total: 68.00 Contact hours/85.00 Out of class hours/153.00 Total hours/3.00 Unit(s)

Course Description: Coursework introduces foundational technical computing for Construction Managers. It introduces commercial software commonly used in the management and control of construction projects. Application areas include office suite programs, paperless workflows, estimating, and scheduling.

Objectives

Upon successful completion of this course, the student should be able to:

1. Apply intermediate user-level skills to an office suite of software including word processing, spreadsheet, and presentation software (Introduce: ACCE-SLO #10)
2. Construct and create a professional resume with and a cover letter (Introduce: ACCE-SLO #1).
3. Create and deliver an oral presentation (Introduce: ACCE-SLO #2)
4. Solve construction industry specific mathematics including architectural and engineer scale conversions, dimension stringing, and layout (Introduce: ACCE-SLO #11).
5. Operate industry popular software for paperless workflows, estimating and scheduling (Introduce: ACCE-SLO #4, 5, 10)
6. Develop and apply job interview skills

Course Content

Topic Titles / Suggested Time Topic		
<u>Lecture/Activity</u>		
<u>Topics</u>	<u>Lec Hrs</u>	<u>Act Hrs</u>
Introduction to Google Drive	2.00	2.00
Introduction to MS Office Suite and explore the functionality of MS Word	2.00	2.00
Resume and Cover letter	4.00	4.00
Interviewing skills and preparation	4.00	4.00
MS Excel functionality and formatting	2.00	2.00
MS PowerPoint functionality and PowerPoint Outline	2.00	2.00
Presenting to an Audience	4.00	4.00
Introduction to Construction Math	2.00	2.00
Advanced Construction Math as it relates to Estimating and Scheduling	2.00	2.00
Paperless Workflows	2.00	2.00
Bluebeam Revu Software	2.00	2.00
Construction Estimating Utilizing Excel and other Industry Specific Software	2.00	2.00
Construction Scheduling utilizing Excel and other Industry Specific Software	2.00	2.00
Construction Cost Management utilizing Excel and other Industry Specific Software	2.00	2.00
Total Hours:	34.00	34.00

Methods of Instruction

- A. Collaborative Group Work
- B. Demonstrations
- C. Field Trips
- D. Guest Speakers
- E. Homework: Students are required to complete one hour of outside-of-class homework for every two hours of activity
- F. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- G. Lecture
- H. Problem-Solving Sessions

Methods of Evaluation

- A. Exams/Tests
- B. Oral Presentation
- C. Projects
- D. Homework
- E. Written Assignments
- F. Practical Evaluations
- G. Group Participation

Examples of Assignments

Reading Assignments

1. Read the provided Construction Industry article and type a 250 word single spaced explanation of how advances in computer applications could have eliminated the problems encountered. Submit the assignment through your Canvas portal for grading.
2. Read the instructions in the Blue Beam Revu Owners manual and prepare your own "Quick Start" guide on the process and steps to create a new project. The guide should be typed and in a sequential numbered format outlining the steps to take. Submit the assignment through your Canvas portal for grading.

Writing Assignments

1. Create a one-page cover letter and one-page resume for yourself in response to a specific advertisement for job opportunity utilizing the formats that were shown and reviewed with you in the lecture. This assignment will be typed, and a physical copy will be turned in at the beginning of class for grading.
2. Utilizing Excel, complete the formatting outlined in class to create your driveway estimate. This assignment will be submitted through your Canvas portal for grading.

Out-of-Class Assignments

1. Read the OSHA accident report and type a 100 word explanation of how and why the companies' policies on communication did not help prevent this accident. This assignment will be submitted through your Canvas portal for grading.
2. Research and provide a list of the top 5 questions asked in a job interview. Explain how you would answer each one in written form. Please type out the numbered questions in bold followed by the answer in regular font. This assignment will be submitted through your Canvas portal for grading.

Recommended Materials of Instruction

MS Office Suite. *Microsoft, 2022.*

Minimum Qualifications

Construction Management
Computer Information Systems

Created/Revised by: Williams, Tom

Date: 12/13/2023