CEST 192 Course Outline as of Summer 2022

CATALOG INFORMATION

Dept and Nbr: CEST 192   Title: NON TECH SKILLS CIV ENG
Full Title: Non-Technical Skills for the Civil Engineering Technician
Last Reviewed: 2/24/2020

Units			Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00		Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00		Lab Scheduled	0	6	Lab Scheduled	0
			Contact DHR	0		Contact DHR	0
			Contact Total	3.00		Contact Total	52.50
			Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 105.00   Total Student Learning Hours: 157.50

Title 5 Category: AA Degree Applicable
Grading: Grade Only
Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:
Formerly: CEST399.92

Catalog Description:
An introduction to non-technical skills used by civil engineering and surveying technicians. The course will concentrate on developing an understanding of one's personal profile, emotional and social intelligence, group collaboration skills, project management skills, individual and group verbal/listening skills, written communication skills, and job search skills. Students will research technician-level careers in civil engineering and surveying technology.

Prerequisites/Corequisites:

Recommended Preparation:

Limits on Enrollment:

Schedule of Classes Information:
Description: An introduction to non-technical skills used by civil engineering and surveying technicians. The course will concentrate on developing an understanding of one's personal profile, emotional and social intelligence, group collaboration skills, project management skills, individual and group verbal/listening skills, written communication skills, and job search skills.

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(Grade Only)
Prerequisites/Corequisites:
Recommended:
Limits on Enrollment:
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**		Effective:	Inactive:
CSU GE:	**Transfer Area**		Effective:	Inactive:
IGETC:	**Transfer Area**		Effective:	Inactive:
CSU Transfer:		Effective:	Inactive:	
UC Transfer:		Effective:	Inactive:	

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Student Learning Outcomes:
At the conclusion of this course, the student should be able to:
1. Demonstrate speaking, writing and listening skills appropriate to the workplace.
2. Describe the process for obtaining employment in the field of civil engineering and surveying technology and develop job application materials, such as a resume.

Objectives:
At the conclusion of this course, the student should be able to:
1. Define and describe why non-technical skills are important to technicians and their success in the industry
2. Complete a personal profile examination
3. Identify and define the different types of emotional and social intelligence used by the technician in the workplace
4. Perform a job search and develop a resume

Topics and Scope:

I. Role of the Civil Engineering and Surveying Technician in the Workplace
   A. Career roles of land surveyors, civil engineers and Geographic Information System (GIS) analysts as professionals
   B. Career roles of the technical professional
   C. Relationship between peers and professionals
   D. Public servants in public and private practice
   E. Legal, moral, and ethical issues in civil engineering and surveying practice
   F. Overview of important non-technical skills for technical workers

II. Self-Assessment: Developing a Personal Profile
   A. Understanding ways in which a person interacts with the environment
   B. Identifying employment goals
   C. Identifying strengths and weaknesses
III. Emotional and Social Intelligence
   A. Components of social and emotional intelligence
   B. Negotiating complex social relationships and environments
   C. Changing social intelligence by altering attitudes and behavior in response to complex social environments
   D. Monitoring one's own and other people's emotions, to discriminate between different emotions and label them appropriately, and to use emotional information to guide thinking and behavior
   E. Developing emotional and social intelligence to drive leadership performance
IV. Working in a Group: Developing Collaboration Skills
   A. Forming a group: Developing a team based on trust, respect, individual responsibility and accountability
   B. Role of active listening and constructive feedback
   C. Establish common goal
   D. Create a timeline
   E. Outline group objectives and assign tasks such as: facilitator, idea-generator, summarizer, evaluator, mediator, encourager, and recorder
   F. Resolving conflicts: setting up ground rules
   G. Leadership skills
   H. Assessing group work
V. Project Management Skills
   A. Defining the problem
   B. Setting and prioritizing goals/objectives
   C. Research: Getting information needed
   D. Planning
      1. identifying necessary tasks to meet goals/objectives
      2. making a work plan
      3. scheduling tasks and documenting progress
      4. time/activity logs
      5. diaries and reports
   E. Developing alternatives: Investigating ideas and possible solutions and evaluation using goals/objectives
   F. Selecting final option and documenting it
   G. Issues in time management: Dealing with procrastination, understanding perseverance
VI. Elements of Effective Communication
   A. Information and its emotional content
   B. Nonverbal communication
   C. Active listening
   D. Managing stress
   E. Emotional awareness
VII. Creating an Oral Presentation
   A. Preparation: Research and development of content
   B. Organization
   C. Visual aids and the role of technology
   D. Delivery: Voice volume, rate, pitch, and quality
   E. Enthusiasm and connection with audience
   F. Dealing with audience questions
VIII. Writing a Report

A. Understand the purpose
B. Preparation: research and development of content
C. Organization: title, introduction, body, conclusion, recommendations, bibliography and appendices
D. Making an outline
E. Making a draft
F. Final version
G. Use of analytical thinking
H. Appropriate language
I. Graphic elements

IX. Job Search Essentials
A. Research technician-level careers in civil engineering and surveying technology
B. Memo writing: hard copy and email
C. Developing a resume
D. Developing an online resume / presence
E. Developing a cover letter
F. Networking
G. Online job search
H. Job-related research
I. Understanding your strengths and weaknesses
J. Applying for a job
K. Interview skills

X. Job Retention and Advancement
A. Promptness and attendance
B. Neatness and precision
C. Writing skills and mathematical skills
D. Certification and licensure
E. Changing employment venues

Assignment:

1. Reading (20-40 pages) per week
2. Homework assignments
3. Cover letter and resume
4. Group research project
5. Group participation
6. Oral presentation on cover letter, resume, or homework assignments (optional)
7. Oral presentation on project
8. Personal profile evaluation
9. Quiz(zes) and exam(s) (1-4)

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Homework assignments, cover letter and resume	Writing 30 - 60%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Group research project	Problem solving 5 - 15%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Personal profile evaluation	Skill Demonstrations 10 - 20%

Exams: All forms of formal testing, other than skill performance exams.

Quiz(zes) and exam(s)	Exams 10 - 20%

Other: Includes any assessment tools that do not logically fit into the above categories.

Group participation, presentation(s)	Other Category 10 - 20%

Representative Textbooks and Materials:
Communication Skills: The Ultimate Guide for Improving Your Communication Skills. Reed, Ava. Amazon Digital Services, Inc. 2014 (classic)
Social Skills. 2nd ed. Angelo, Gabriel. SN & NS Publications. 2014 (classic)
Personal Profile System - A Plan to Understanding Yourself & Others. Carlson Training Products. Inscape Publishing. 1994 (classic)
Emotional Intelligence. 2nd ed. Goleman, Daniel. Bantam Books. 2005 (classic)
Instructor prepared materials