

**Seward County Community College/Area Technical School
Course Syllabus**

- I. **TITLE OF COURSE:** -CT 2114 Special Topics in Corrosion Technology
- II. **COURSE DESCRIPTION:** 4 credit hours. 1 hours of lecture and 3 hours of lab per week.
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student.
- Rationale: Recent legislation requires operation personnel to demonstrate their abilities to understand and correctly apply technical standards in the Corrosion fields. These operator qualifications often focus on field practices and test procedures which are found in this course. It is also a capstone event designed for the Cathodic Protection Tester Certificate.
- III. **PROGRAM MISSION STATEMENT:** The Corrosion Technology program at Seward County Community College provides students with the opportunity to develop and enhance their skills in the corrosion technology field through educational and technical instruction.
- IV. **SCCC OUTCOMES:** Students who successfully complete this course will demonstrate the ability to do the following SCCC Outcomes.
- Outcome #1: Read with comprehension, be critical of what they read, and apply knowledge gained to real life situations.
- Outcome #2: Communicate ideas clearly and proficiently in writing, appropriately adjusting content and arrangement for varying audiences, purposes, and situations.
- Outcome #3: Communicate ideas clearly and proficiently in speaking, appropriately adjusting content and arrangement for varying audiences, purposes, and situations.
- Outcome #4: Demonstrate mathematical skills using a variety of techniques and technologies.
- Outcome #5: Demonstrate the ability to think critically by gathering facts, generating insights, analyzing data, and evaluating information.
- Outcome #6: Exhibit skills in information and technological literacy.
- Outcome #9: Exhibit workplace skills that include respect for others, teamwork competence, attendance/punctuality, decision making, conflict resolution, truthfulness/honesty, positive attitude, judgment, and responsibility.

- V. **GENERAL COURSE OUTCOMES:** Students will demonstrate the ability to measure and document the NACE criteria for cathodic protection.
- Students will demonstrate proper and safe rectifier troubleshooting skills.
 - Students will calibrate and utilize an ultrasonic tester to determine the wall thickness of standard metal samples.
 - Students will sketch corrosion facilities as part of an assigned installation project utilizing computer drawing tools.
 - Students will locate and select appropriate federal and state regulations covering pipelines, underground storage tanks, and above ground storage tanks.
 - Students will demonstrate good work habits which include safety, cleanliness, efficiency, quality of work, and respect for expensive instrumentation.
 - Students will illustrate ability to manage projects, manage their time, and demonstrate good work habits through punctuality, completion of assigned work on time, and respect for the attendance and honesty policies of SCCC
- VI. **COURSE OUTLINE:**
Groundbed installation field project
- Soil resistivity field project
 - Interference mitigation field project
 - Current requirement field project
 - Regulatory research project
 - Sketch of facilities written report
 - Ultrasonic testing written report
 - Rectifier troubleshooting written report
 - Cathodic protection criteria written report
- VII. **INSTRUCTIONAL METHODS:** Class lecture, demonstrations, discussion, field observation, and field construction.
- VIII. **INSTRUCTIONAL AND RESOURCE MATERIALS:** To be determined by instructor.
- IX. **METHODS OF ASSESSMENT:**
Project Reports 50%
Field Evaluation 50%
- X. **FIELD EVALUATION COMPETENCY CHECKLIST:**
Punctuality—gets to work on time
Adherence to established rules and regulations
Interpersonal interactions—gets along with others
Willingness to work and follow orders
Keeps intelligent and legible records

Care and use of supplies and equipment
Retention of information given
Manual dexterity—completes manual tasks efficiently
Technical skill—recognizes problems without aid
Responsibility & initiative—works without supervision

XI. **ADA STATEMENT:** If you believe that you are entitled to special accommodations under the Americans with Disabilities Act, please contact Celeste Donovan, Dean of Student Services, at 620-417-1016 or visit the office located in the Hobbles Academic Building.

Updated: 7/27/17