SECTION 1 - BASIS

COURSE TYPE: N Noncredit

SUBMITTED BY:

☐ **DISTANCE EDUCATION CERTIFICATION**

EFFECTIVE TERM: Summer 2020

☐ **Does the course content overlap or duplicate any other course content?**

DUPLICATION / OVERLAP

Note: Consultation with the faculty, department(s) and dean(s) where the overlap occurs is required and documentation of the consultation should be attached to course proposal prior to the proposal being submitted to the Curriculum Office (Stage 5).

Be advised that consulting with other departments and working with their department meeting schedules may take several weeks.

A. Specifically, what unique topics are taught in the proposed course?

B. What percentage of each course contains the same topics?

C. Are these topics taught in different ways/to different audiences at different skill levels?

D. Explain why the proposed course requires the overlapping content.

E. What is stated in course descriptions to ensure that students know which course is appropriate for them, given the overlapping content?

SECTION 2 - Course Identification

COURSE ID: VOC **COURSE NUMBER:** FSF

COURSE TITLE (FULL): Tool Use and Field Service Fundamentals

COURSE TITLE (SHORT): Tool Use and Field Serv

COURSE DIVISION: Continuing Education Division

COURSE DEPARTMENT: Vocational

COURSE SUBJECT:

DISCIPLINE:

Course Identification Numbering System (C-ID):

C-ID Full Title (https://c-id.net)

TOP CODE : 095600 *Manufacturing and Industrial Technology

CIP CODE:

SECTION 3 - Course Attributes

COURSE CREDIT STATUS:

BASIC SKILLS: Not Applicable

PRE-COLLEGIATE LEVEL: Y - Not Applicable

SAM PRIORITY CODE: C

FUNDING AGENCY CATEGORY: Not Applicable

COURSE VARIATION:

CROSS LISTING STATUS:

☐ Does this course share an outline with any other course or courses?

COURSE PROGRAM STATUS: 1 - Program Applicable

REPEATABILITY: Noncredit Repeatable

NONCREDIT COURSE TYPE: I - Short-Term Vocational

NONCREDIT ENHANCING FUNDING: True

STATE TRANSFER CODE :

STATE CLASSIFICATION CODE : K Other - NCR Enh Funding

NONCREDIT SPECIAL CHARACTERISTICS CODE : Non applicable

Sports/Physical Education Course : No

GRADING METHOD : Pass/No Pass

CREDIT BY EXAM: Not Allowed

WORK EXPERIENCE:

PREREQUISITES, CO-REQUISITES OR ADVISORY FOR ENROLLMENT (ENTRY STANDARDS)

- [x] None
- [ ] Adding prerequisites, corequisites or advisories
- [ ] Maintaining prerequisites, corequisites or advisories
- [ ] Removing prerequisites, corequisites or advisories

Non Standard Requisite

Section 4 - Course Workload Values

Faculty Contact Hours	Lecture	Lab	Act/Clin	Total
Minimum Contact Hours	2	2	0	4
Maximum Contact Hours	50	50	0	100
Minimum Out of Class Hours	4	0	0	4
Maximum Out of Class Hours	0	0	0	0
Minimum TBA Hours	0	0	0	0
Maximum TBA Hours	0	0	0	0
Scheduled Hours	0	0	0	0
Minimum Units	0	0	0	0
Maximum Units	0	0	0	0

Work Experience Hours	Paid	Unpaid
Minimum Hours	0	0
Maximum Hours	0	0
Minimum Units	0	0
Maximum Units	0	0

Lab/Lecture Parity : No

- [ ] Yes, Parity Approved
- [ ] Not Requesting Parity
- [ ] Applying for Parity

METHODS OF INSTRUCTION

- [ ] Lecture
- [ ] Laboratory
- [x] Lecture and Laboratory
- [ ] Distance Learning
- [ ] Open Entry/Exit
- [ ] Independent Studies
- [ ] Work Experience
- [ ] Other TBA

Class Size : 0

Section 5 - Course Certifications

CSU GENERAL EDUCATION AREA

INTERSEGMENTAL GENERAL EDUCATION TRANSFER (IGETC) AREA

ASSOCIATE DEGREE GRADUATION REQUIREMENTS

Section 6 - Course Certifications

CATALOG DESCRIPTION

Introductory course in tool use and material fabrication as applied to field-serviceable equipment. Covers elementary aspects of installation and maintenance with emphasis on safety and proper use of hand and power tools, fasteners, and other hardware.

SCHEDULE DESCRIPTION

Tools and their uses in field equipment installation and maintenance.

COURSE OUTLINE WITH INFORMATION

LECTURE TOPICAL OUTLINE

Safety
Identification and proper use of hand tools, types, features, applications, and safety
Identification and proper use of power tools, types, features, applications, and safety
Fasteners and hardware, including nails, screws, bolts, nuts, and washers
Clamping, gluing, and fastening methods
Metal fabrication (cutting, punching, drilling, bending, and fastening)
Tool and cutter grinding
Surface grinding
Deburring and polishing
Taps and dies
Part measurement and inspection with rulers, calipers, micrometers, and gauges
Properties of steel and alloys, tool steels, non-ferrous, and non-metallic materials
Introduction to welding fundamentals and weld-based repair of joints
Drywall patching and repair

LAB TOPICAL OUTLINE

Safety procedures
Identifying and measuring screw, bolt, and nut types
Using hand tools
Using power tools
Fabricating metal mounting brackets and other workpieces
Fastening objects to metal surfaces
Using measuring tools
Using taps and dies
Performing spot-welded repairs of mounting brackets or other workpieces
Cutting and patching holes in drywall

MEASURABLE OBJECTIVES

1. Identify safe working practices.
2. Demonstrate the proper use of hand and power tools.
3. Describe the proper uses for various screws, nuts, washers, and other fastening hardware.
4. Fabricate metal mounting brackets consisting of four bends and eight drilled holes.
5. Perform a spot welded repair of a broken mild-steel bracket and test-fit repaired part.

METHODS OF EVALUATION

Category 1.Substantial written assignments for this course include:

If the course is degree applicable, substantial written assignments in this course are inappropiate because:

This course primarily involves skills, demonstrations, or problem-solving in fabrication techniques for equipment repairs and installations in field service.

Category 2. Computational or non-computational problems solving demonstrations

Basic layout math (multiplication and division)

Solve assigned fabrication problems

Category 3. Skills Demonstrations

Hands-on lab exercises and tests using proper equipment and tools

Class analysis of assigned fabrication problems

Category 4. Objective examinations

Short answer and fill-in examinations on fabrication knowledge

Safety exam on proper tool operations

SAMPLE ASSIGNMENTS

(Assignments should be directly related to the objectives of the course. They should be specific enough to provide real guidance to faculty and clear expectations for students. Descriptions of the type or examples of assignments are required. For example, rather than “term paper” state “term paper comparing and contrasting the social aspects of hunting tactics of two mammal species.” This section must establish that the work is demanding enough in rigor and independence to fulfill the credit level specified. The nature of the assignments must clearly demand critical thinking. Assignments should be adequate to assure that students who successfully complete them can meet the objectives of the course. Appropriate out-of-class work is required for credit courses.)

1. Fabricate a bracket to mount a radio or other piece of equipment in a panel.
2. Remove a broken-off bolt with an extractor, drill out hole, retap, and install a Timesert or Helicoil thread-repair kit to match the original, broken fastener.
3. Cut out a damaged section of sheet metal, cut and install a patch, and rivet into place.
4. Grind a steel bracket to fit.

TEXTBOOKS

Title	Publisher	Edition	Author	Date	Online Education Resource

If substantial assignments then justification of older textbooks

Requisites			
& / Or	Course Name	Type	Is Being

Preconditions of Enrollment Justification Notes/Comments: