



Arkansas Correctional School District

Curriculum Guide 2024-2025

8000 CORRECTION CIRCLE
PINE BLUFF, AR 71603
870-267-6725



TRACY DOWELL, SUPERINTENDENT
MICHEAL STEWART, DEPUTY SUPERINTENDENT

PRE-GED/FOUNDATIONAL SKILLS

All facilities

GED PREPARATION

All facilities

AGRICULTURAL EQUIPMENT TECHNICIAN

Cummins Farm

BARBERING & BARBER INSTRUCTOR

Grimes

BASIC RESIDENTIAL MECHANICS

Varner

BUILDING & GROUNDS MAINTENANCE

EARU, ORCU, Varner

BUILDING TRADES-BASICS

EARU, ORCU, Varner

COMMERCIAL & RESIDENTIAL ROOFING

Varner

COMPUTER APPLICATIONS TECHNOLOGY

McPherson, ORCU, Pine Bluff

COMPUTER SCIENCE - CODING & CYBERSECURITY

McPherson

COSMETOLOGY & COSMETOLOGY INSTRUCTOR

McPherson

FOOD SERVICE

Varner

FORESTRY SERVICES

Varner

FORKLIFT SAFETY & OPERATION

NCU, Varner

HEAVY EQUIPMENT OPERATOR

Varner

HVAC

EARU, Varner

LANDSCAPE CONSTRUCTION & DESIGN

RLW

MANUFACTURING SKILLS

North Central

OFFICE BASICS—KEYBOARDING

McPherson, ORCU, Pine Bluff

PET CARE AND MANAGEMENT

Multiple Units

PLUMBING

ORCU

RESIDENTIAL CARPENTRY

Varner

RESIDENTIAL ELECTRICITY

Varner

WELDING

EARU, ORCU, Varner

ACCA -EPA 608 - REFRIGERANT HANDLER

AWS - FILET WELD CERTIFICATION

ICEV

MSSC

NCCER CORE

NCCER CRAFT

OSHA 10

SERVSAFE®

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PRE-GED FOUNDATIONS

Math and literacy instruction that emphasizes career and life skills

Arkansas Correctional School District recognizes that the student composition of each classroom will vary. Due to the open entry and open exit nature of correctional education, teachers must have the ability to quickly adapt to the needs of their students. Teachers are expected to **include the appropriate skills from each category** in their lessons. Teachers should use their best judgement to determine which skills are appropriate for each of their classes.

Reading and Language Arts	
Category	Skills
Foundation Skills	<ul style="list-style-type: none"> • Recognize and write letters of the alphabet. • Write personal information and dates accurately on a form. • Produce simple and compound sentences.
Organization and Structure	<ul style="list-style-type: none"> • Compose a set of instructions for common tasks • Combine simple sentences into compound sentences. • Write informative/explanatory texts to examine a topic and convey ideas and information clearly
Usage	<ul style="list-style-type: none"> • Compose original sentences using verbs in all tense forms. • Write appropriate forms of common regular and irregular verbs. • Identify pronouns and antecedents. • Make pronouns and antecedents agree in number and gender. • Use organizational strategies to create three original paragraphs that include topic sentences and at least two supporting details.
Mechanics/Grammar	<ul style="list-style-type: none"> • Correctly capitalize sentences. • Correctly punctuate sentences. • Identify nouns and verbs in a sentence. • Identify the subject and predicate in a sentence • Make subjects and verbs agree in sentences. • Write related sentences which are correctly capitalized, punctuated, and grammatically correct. • Form and use comparative and superlative adjectives.
Editing	<ul style="list-style-type: none"> • Proofread written work for capitalization, spelling, punctuation, and grammatical correctness.
Spelling	<ul style="list-style-type: none"> • Use conventional spelling for high-frequency and other studied words • Add suffixes and prefixes to base words • Use spelling patterns and generalizations in writing words. • Spell and correctly punctuate contractions

Vocabulary	<ul style="list-style-type: none"> • Use word knowledge such as prefix, root/base words, compounds, contractions, symbols, and acronyms to read. • Use word relationships including synonyms, antonyms, multiple meaning words, connotations, denotation, and idioms to read. • Use context clues such as sentence and paragraph structure, definition, restatement, and example to comprehend text. • Read sight words from an appropriate level list in an instructional reading context. • Determine the meaning of general academic and domain-specific words and phrases in text.
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Comprehension	<ul style="list-style-type: none"> • Select purpose including interpreting and solving problems to focus reading. • Use comprehension strategies including summarizing and predicting. • Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text • Determine the sequence of events in a passage. • Identify the unstated main idea and supporting details of the text. • Draw conclusions, fact vs. opinion, and make predictions based on the information in the text. • Draw conclusions and make inferences about short passages.
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Mathematics

Category	Skills
Pre-Computational Skills	<ul style="list-style-type: none"> • Count with understanding and recognize how many objects are in a set. • Connect number words and numerals to quantities they represent. • Continue simple patterns and sequences using colors, shapes and numbers.
Whole Numbers	<ul style="list-style-type: none"> • Use place value understanding and properties of operations to add and subtract. • Add, subtract, multiply, and divide whole numbers. • Use a calculator to solve problems.
Estimation	<ul style="list-style-type: none"> • Apply concept of rounding to specified place value • Estimate to check the reasonableness of results
Fractions, Decimals, and Percentages	<ul style="list-style-type: none"> • Identify simple fractions • Compare and order fractions and decimals. • Add, subtract, multiply and divide fractions and decimals. • Find percentages, convert percentages to fractions and vice versa. • Use a calculator to solve fraction, decimals, and percentage problems.
Money, Measurement, and Data	<ul style="list-style-type: none"> • Identify U.S. currency and coins. • Make change using U. S. currency and coins. • Choose appropriate units and instruments to measure length, weight, capacity, time, and temperature. • Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
Applied Math	<ul style="list-style-type: none"> • Use problem solving strategies. • Identify the information necessary to solve the problem. • Read and solve simple equations with addition and subtraction. • Communicate the results with words, diagrams, and/or numerals.

Applied Math Continued	<ul style="list-style-type: none"> • Connect number words and numerals to the quantities they represent. • Solve simple equations using order of operations (e.g., multiplication, division, addition, subtraction) excluding parentheses and exponents.
Ratio and Proportion	<ul style="list-style-type: none"> • Identify and write ratios and proportions. • Determine simple probabilities.
Measures of Central Tendencies	<ul style="list-style-type: none"> • Find the mean, median, mode and range.
Geometry	<ul style="list-style-type: none"> • Recognize and identify two- and three-dimensional shapes. • Find the perimeter of polygons. • Find perimeter and area of rectangles and triangles. • Identify parallel lines, perpendicular lines and intersecting lines. • Draw and identify lines and angles, and classify shapes by properties of their line and angles. • Find degrees in angles and triangles. • Find the area of quadrilaterals.
Tables, Charts, and Graphs	<ul style="list-style-type: none"> • Identify key features of simple charts and graphs. • Use a variety of mathematical representations, including graphs, charts, tables and algebraic models.

GED Preparation

Development of the skills needed to pass the GED and become self-sufficient, actively participating members of society

Arkansas Correctional School District recognizes that the student composition of each classroom will vary. Due to the open entry and open exit nature of correctional education, teachers must have the ability to quickly adapt to the needs of their students. Teachers are expected to **include the appropriate skills from each category** in their lessons. Teachers should use their best judgement to determine which skills are appropriate for each of their classes.

Reasoning Through the Language Arts	
Category	Skills
Reading Comprehension	<p>From texts with a broad range of complexities, students will be expected to determine main ideas, points of view, meanings of words and phrases, inferences and claims, and other aspects of texts.</p> <ul style="list-style-type: none"> • Determine the details of what is explicitly stated and make logical inferences or valid claims that align with textual evidence. • Read and respond to questions from a range of texts that are from the upper levels of complexity, including texts at the career- and college-ready level of text complexity. • Analyze how individuals, events, and ideas develop and interact over the course of the text • Analyze the structure of texts, including how specific sentences or paragraphs relate to each other and the whole. • Determine an author’s purpose or point of view in a text and explain how it is conveyed and shapes the content and style of a text. • Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence. • Analyze how two or more texts address similar themes or topics.
Writing	<p>Students will learn to develop an argument in which they use evidence directly drawn from passages to support their assertions.</p>

Mathematical Reasoning

Category	Skills
Calculator Skills	<ul style="list-style-type: none"> • GED test calculator skills
Number Operations and Number Sense	<ul style="list-style-type: none"> • Use place value understanding and properties of operations to add and subtract. • Apply concept of rounding to specified place value • Estimate to check the reasonableness of results • Add, subtract, multiply, and divide whole numbers, decimals, and fractions • Apply number sense concepts, including absolute value, multiples, factors, and exponents • Calculate and use ratios, proportions, and percent <ul style="list-style-type: none"> ▪ Including interest and percent of change
Data Analysis, Statistics, and Probability	<ul style="list-style-type: none"> • Understand how to analyze data presented in a bar graphs line graph, circle graph, or line plot. • Use problem solving strategies and identify the information necessary to solve the problem. • Calculate Probability • Compare proportions in different formats
Algebra Basics, Expressions, and Equations	<ul style="list-style-type: none"> • Calculate powers and roots • Demonstrate an understanding of scientific notation • Simplify algebraic expressions • Solve equations using order of operations • Understand, simplify, add, subtract, multiply and divide polynomials • Solve equations and manipulate an equation in order to solve for different variables. • Write, manipulate, solve and graph linear inequalities • Identify functions and non-functions displayed in graphs and tables. • Compare, represent, and evaluate functions • Evaluate linear and quadratic equations • Describe the coordinate plane and demonstrate how to graph points • Calculate the distance between points • Slope of a line
Measurement and Geometry	<ul style="list-style-type: none"> • Choose appropriate units and instruments to measure length, weight, capacity, time, distance, and temperature. • Solve problems involving measurement and conversion of measurements • Calculate the side length or height, perimeter, circumference, and area of two dimensional figures • Calculate dimensions, surface area, and volume of three-dimensional figures. • Solve for side lengths or height, radius or diameter, when given volume or surface area. • Use the Pythagorean Theorem to determine unknown side lengths in a right triangle.

Science

Students will be broadly familiar with three broad science content areas:

- Physical Science
- Life Science
- Earth and Space Science

but are not expected to have in-depth and comprehensive knowledge of each subtopic.

Content from the three types of Science will be focused on two distinct themes:

- Human Health and Living Systems
- Energy and Related Systems

Classroom instruction will focus on the following science practices:

- Comprehending Scientific Presentations
- Investigating Design (Experimental and Observational)
- Reasoning from Data
- Evaluating Conclusions with Evidence
- Working with Findings
- Expressing Scientific Information
- Scientific Theories
- Probability and Statistics

Social Studies

Social Studies instruction should focus on the fundamentals of social studies reasoning, striking a balance of deeper conceptual understanding, procedural skill and fluency, and the ability to apply these fundamentals in realistic situations.

Students will be expected to be broadly familiar with the concepts in each Social Studies content domain:

- Civics and Government
- United States History
- Geography and the World
- Economics

but are not expected to have in-depth and comprehensive knowledge of each subtopic.

Classroom instruction will focus on the following social studies practices:

- Drawing Conclusions and Making Inferences
- Determining Central Ideas, Hypotheses, and Conclusions
- Analyzing Events and Ideas
- Interpreting Meaning of Symbols, Word, and Phrases
- Analyzing Purpose and Point of View
- Integrating Content Presented in Different Ways
- Evaluating Reasoning and Evidence
- Analyzing Relationships between Texts
- Writing Analytic Response to Source Texts
- Reading and Interpreting Graphs, Charts, and Other Data Representations
- Measuring the Center of a Statistical Dataset

Agricultural Equipment Technician

Location

Cummins Farm

Awards Offered

ACSD Completion Certificate -

Entrance Requirements

Agricultural Equipment Technician

Must be a farm worker at Cummins to be eligible for this program

Program Description

This is an entry level program that prepares participants to perform a variety of duties required in the maintenance and operation of agricultural equipment.

**This program does not meet the requirements of a Parole Board stipulation*

Program Course	Mod ID #	Units	Course Description	Total Units
Financial Literacy				10
Creating a Personal or Family Budget		3	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services		3	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics		4	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	
Agricultural Equipment Technician				450
AG Shop Safety		50	Students learn skills required to become productive and efficient in the Agricultural service center. The skill set will include a working understanding of hand tools, power tools, lifting equipment, general shop equipment, fastener applications and the proper torquing procedures for the various fasteners and gasket/sealant application. The student's skills are improved through practice and evaluation in a safety conscious manner.	
Farm Machinery Maintenance		50	Students learn to perform preventative maintenance procedures to a variety of agricultural equipment used in production agriculture. During this process the student gains an understanding of belt and chain drives, repair and adjustments, various types of bearings and bearing maintenance, PTO assemblies and associated repair procedures. Basic service maintenance of tractors is covered.	

Intro to Ag Electrical Systems		50	Students apply the fundamentals of electricity and electronics as it relates to the tractor electrical system. Students gain an understanding of the basic electrical system, reading schematics used to diagnosis these systems and how to apply test procedures for the circuits being studied. Students will learn the various test equipment and meters. They will apply the proper use of the test equipment while learning the basic electrical systems and repair procedures.
Farm Equipment		50	Students learn the principles of field operation and reconditioning of tillage and planting equipment. Students learn methods of testing, calibrating, adjusting and maintaining the different types of seeding equipment. Emphasis is placed on getting the planting unit field-ready.
Basic Hydraulics		50	Students disassemble, inspect, and repair hydraulic cylinders, pumps, and valves. Students apply hydraulic theory and principles by drawing hydraulic systems using ISO symbols. Students operate open and closed center hydraulic simulators to relate to the differences in pressure and flow.
Farm Machinery (Harvesting)		50	Students operate, recondition, adjust, and maintain many of the different types of harvesting equipment used on modern farms. Students diagnose electro-hydraulic systems used on combines and forage harvesters. Students learn the different types of combine construction and how this affects productivity. Students check for field loss and adjust combines to provide maximum efficiency.
Chassis and Drive Systems		50	Students diagnose and repair "live" power train problems which include clutches, transmissions, differentials, and PTOs. Students build skills necessary to diagnose and repair power trains on approved projects. Students use time management techniques during lab instruction while performing diagnostic tests and repairs.
Diesel Engines		50	Students learn concepts of the diesel engine operation and diagnostic processes used to locate problems within the engine. Students work with the maintenance and repair of the cooling system, lubrication system, fuel system and intake/exhaust systems. Students will use nozzle testing and repair equipment to make repairs to injection nozzles in the lab. Students will understand proper injection pump failure diagnosis and on tractor adjustments are emphasized as well as an insight into the specialized diesel component repair field that they may find employment in.
Precision Farm Technology		50	Acquaint students with the basic skills of farm map creation, GPS hardware components, software choices, decision making skills and application of GPS/GIS in the agriculture industry for improved crop management and protection of the environment.

Agricultural Equipment Technician	460
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Barbering

Location

Grimes

Awards Offered

ACSD Completion Certificate -
Barbering

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

Must meet all requirements of the State of Arkansas and the State Board of Barber Examiners

Testing for State Barber License

Program Description

The purpose of this course is to train the student in the basic skills, educational judgments, safety judgments, proper work habits, and desirable attitudes necessary to obtain licensure as a barber.

Program Course	Hours	Course Description	Total Hours
Workplace Human Relations			35
Formulas for Career Success	10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills	15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues	5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components	5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy			15
Creating a Personal or Family Budget	5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services	5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics	5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing.	

Barbering	Hours	1500
Hygiene and Sanitation	80	
Related Science	175	
Shaving and Beard Trimming	50	
Barber-Chemical Services	345	
Barber Shop Management	65	
Salesmanship and Product Knowledge	50	
Hair styling and waving	300	
Haircutting and bobbing	425	
Shop Department	10	
Barbering		1550

Barber Instructor

Location

Grimes

Awards Offered

ACSD Completion Certificate -
Barbering

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

Must meet all requirements of the State of Arkansas and the State Board of Barber Examiners

Testing for State Barber License

Program Description

The purpose of this course is to prepare the instructor trainee in the technical (instruction by demonstration, lecture, classroom participation, or examination) and practical (the actual performance of teaching techniques and principles) components of the profession.

Program Course	Hours	Course Description	Total Hours
Workplace Human Relations			35
Formulas for Career Success	10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills	15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues	5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components	5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy			15
Creating a Personal or Family Budget	5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services	5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics	5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	

Barber Instructor		Hours	600
Required Preparatory Training	50	Teaching of theory and practical operation. Selecting subject matter for class lecture. Preparing class lectures. Conducting a review of all subjects taught. Preparing and grading examinations. Demonstrating practical operations. Teaching practical operations.	
Class Attendance	100	To be conducted by a licensed instructor to prepare instructor-trainee to properly lecture and demonstrate on all subjects of barbering.	
Conducting Theory Classes	50	Classes to be conducted under the supervision of a licensed instructor	
Conducting Practical Classes	300	Preparation for teaching haircutting, shaving, massage, and chemical services.	
Records	10	Methods of keeping student records	
Instructor's Discretion	90	Training in subjects in which the individual may be deficient.	
Barber Instructor			650

Basic Residential Mechanics

Location

Varner

Awards Offered

NCCER Core

ACSD Completion Certificate -

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

Basic Residential Mechanics

Program Description

This is an exploratory program that introduces participants to the mechanical skills required to maintain motorized equipment used around the home. Basic Residential Mechanics will emphasize tool safety and familiarize students with basic auto and lawn equipment maintenance.

This program will also prepare participants for other construction related ACSD-CTE programs.

**This program does not meet the requirements of a Parole Board stipulation*

Program Course	Mod ID #	Units	Course Description	Total Units
NCCER Core: Introduction to Basic Construction Skills				75
Basic Safety (Basic Site Safety Orientation)	00101	12.5	Work at construction and industrial job sites can be hazardous. Most job-site incidents are caused by at-risk behavior, poor planning, lack of training, or failure to recognize the hazards. To help prevent incidents, every company must have a proactive safety program. Safety must be incorporated into all phases of the job and involve employees at every level, including management.	
Introduction to Construction Math	00102	10	This module reviews and sharpens math skills required in the construction field.	
Introduction to Hand Tools	00103	12.5	Covers hand tool identification, selection, maintenance, storage, and safety.	
Introduction to Power Tools	00104	10	Provides an overview of the common types of power tools and how they function. Describes proper techniques required to ensure their safe and efficient operation.	
Introduction to Construction Drawings	00105	10	Introduces common types of construction drawings, their basic components, standard drawing element, and measurement tools that are typically used when working with construction drawings.	
Basic Communication Skills	00107	7.5	Provides guidance in listening to understand and speaking with clarity. How to use and understand written materials are covered, along with guidelines that will improve writing skills.	

Basic Employability Skills	00108	7.5	Learn the skills needed to pursue employment successfully.	
Introduction to Materials Handling	00109	5	Provides guidelines for using the appropriate PPE for the material being handled and using proper procedures and techniques to carry out the job.	
Basic Residential Mechanics				150
Lawn Care Equipment Basics		50	The basics of four-stroke engines, tools and parts identification, disassembly and assembly procedures, troubleshooting, repair, service and maintenance are covered.	
Basic Automobile Maintenance		50	Students will learn how to flush and refill radiators, perform oil and filter changes, check and top off fluids, and the proper use of jumper cables.	
Tire Maintenance		50	Students will learn to change, repair, mount and balance tires.	
Basic Residential Mechanics				225

Building and Grounds Maintenance

Location

EARU, ORCU, Varner

Awards Offered

NCCER Core
 NCCER Craft - Construction Technology
 ACSD Completion Certificate -
Building and Grounds Maintenance

Entrance Requirements

Able to perform the basic job skills
 Completed initial assignment
 At least a class II with no pending DRs

Program Description

This is an entry level program that prepares participants to perform a variety of duties in the maintenance of buildings and grounds.

Program Course	Mod ID #	Units	Course Description	Total Units
Workplace Human Relations				35
Formulas for Career Success		10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills		15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues		5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components		5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy				15
Creating a Personal or Family Budget		5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services		5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics		5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	
NCCER Core: Introduction to Basic Construction Skills				75

Basic Safety (Basic Site Safety Orientation)	00101	12.5	Work at construction and industrial job sites can be hazardous. Most job-site incidents are caused by at-risk behavior, poor planning, lack of training, or failure to recognize the hazards. To help prevent incidents, every company must have a proactive safety program. Safety must be incorporated into all phases of the job and involve employees at every level, including management.	
Introduction to Construction Math	00102	10	This module reviews and sharpens math skills required in the construction field.	
Introduction to Hand Tools	00103	12.5	Covers hand tool identification, selection, maintenance, storage, and safety.	
Introduction to Power Tools	00104	10	Provides an overview of the common types of power tools and how they function. Describes proper techniques required to ensure their safe and efficient operation.	
Introduction to Construction Drawings	00105	10	Introduces common types of construction drawings, their basic components, standard drawing element, and measurement tools that are typically used when working with construction drawings.	
Basic Communication Skills	00107	7.5	Provides guidance in listening to understand and speaking with clarity. How to use and understand written materials are covered, along with guidelines that will help you to improve your writing skills.	
Basic Employability Skills	00108	7.5	Learn the skills needed to pursue employment successfully.	
Introduction to Materials Handling	00109	5	Provides guidelines for using the appropriate PPE for the material being handled and using proper procedures and techniques to carry out the job.	
NCCER Craft: Construction Technology				350
Introduction to Masonry	28101-13	12.5	Covers basic masonry material, tools, techniques, and safety precautions. Explains how to mix mortar by hand and lay masonry units. Also describes the skills, attitudes, and abilities of successful masons.	
Masonry Units and Installation Techniques	28105-13	60	Covers characteristics of block and brick; how to setup, layout, and bond block and brick; how to cut block and brick; and how to clean block and brick once they have been laid. Describes mason reinforcements and accessories used to lay block and brick professionally and safely.	
Floor Systems	27105-13	25	Covers framing basics and the procedures for laying out and constructing a wood floor using common lumber, as well as engineered building materials.	
Ceiling Joists and Roof Framing	27112-13	40	Describes types of roofs and provides instructions for laying out rafters for gable roofs, hip roofs, and valley intersections. Covers stick-built and truss-built roofs. Includes the basics of roof sheathing installation.	
Roofing Applications	27202-13	25	Describes how to properly prepare the roof deck and install roofing for residential and commercial buildings	

Wall Systems	27111-13	20	Describes procedure for laying out and framing walls, including roughing-in door and window openings, constructing corners, partition Ts, and bracing walls. Includes the procedure to estimate the materials required to frame walls.
Exterior Finishing	27204-13	35	Covers the various types of exterior finish materials and their installation procedures, including wood, metal, vinyl, and fiber-cement siding.
Basic Stair Layout	27110-13	12.5	Introduces types of stairs and common building code requirements related to stairs. Focuses on techniques for measuring and calculating rise, run, and stairwell openings, laying out stringers, and fabricating basic stairwells.
Electrical Safety	26102-14	10	Covers safety rules and regulations for electricians, including precautions for electrical hazards found on the job. Also covers the OSHA-mandated lockout/tagout procedure
Residential Electrical Services	26111-14	15	Covers the electrical devices and wiring techniques common to residential construction and maintenance. Allows trainees to practice making service calculations. Stresses the applicable <i>NEC</i> [®] requirements.
Introduction to HVAC	03101-13	7.5	Covers the basic principles of heating, ventilating, and air conditioning, career opportunities in HVAC, and how apprenticeship programs are constructed. Basic safety principles, as well as trade licensure and EPA guidelines, are also introduced.
Introduction to Drain, Waste, and Vent (DWV) Systems	02111-12	10	Explains how DWV systems remove waste safely and effectively. Discusses how system components such as pipe, drains, traps, and vents work. Reviews drain and vent sizing, grade, and waste treatment. Discusses how building sewers and sewer drains connect the DWV system to the public sewer system.
Plastic Pipe and Fittings	02106-12	12.5	Introduces different types of plastic pipe and fittings used in plumbing applications, including ABS, PVC, CPVC, PE, PEX, and PB. Describes how to measure, cut, join, and support plastic pipe according to the manufacturer's instructions and applicable codes. Discusses pressure testing of plastic pipe once installed.
Copper Tube and Fittings	02107-12	12.5	Discusses sizing, labeling, and applications of copper pipe and fittings, and reviews the types of valves that can be used on copper pipe systems. Explains proper methods for cutting, joining, and installing copper pipe. Addresses insulation, pressure testing, seismic codes, and handling and storage requirements.
Cabinet Making	27501-15	35	Provides basic information needed to construct and apply finishes to custom cabinetry. It identifies and discusses various types of wood products, wood-joining techniques, power tools, cabinet doors, shelves, and hardware. Specific guidance for the installation of laminated countertops is a part of this module.

Cabinet Installation	27211-13	10	Provides detailed instructions for the selection and installation of base and wall cabinets and countertops.	
Introduction to Construction Equipment	27406-14	7.2	Introduces construction equipment, including the aerial lift, skid steer loader, electric power generator, compressor, compactor, and forklift. An overview of general safety, operation, and maintenance procedures is provided.	
Grounds Maintenance				60
Introduction to Grounds Maintenance Equipment		25	Provides instruction on the use, safe operation, and maintenance of mowers, trimers, edgers, and other grounds maintenance equipment	
Landscape Design and Maintenance		25	Teaches techniques in weeding, pruning, mulching, fertilizing, spraying, laying sod, and soil preparation.	
Grounds Safety		10	Introduces how to inspect the grounds for safety hazards such as walkway cracks, trip hazards, noxious plants, and stinging insect nests.	
Building Care				60
Custodial Service		15	Provides basic information on sanitation, tool ID, Clothing PPE for safety and sanitation protection, and machinery operation.	
Floor Maintenance		15	Introduction to floor maintenance, clean up procedures, care of carpeted surfaces, floor buffer operation, Identification of floor surfaces and their proper maintenance.	
Wall Care		15	Identify the proper wall washing steps in accordance with the sanitation code and the custodial and building maintenance manuals. Additionally, students will learn to estimate room size, mix solutions using measuring devices, mix neutralizers and spot cleaners, and fill dispensers.	
Windows and Window Covering		15	Provides the basics in cleaning: windows and window coverings (shades, blinds, & shutters), patio and sliding doors (including tracks), and storm windows (including removal for cleaning and repair)	
Building and Grounds Maintenance				600

Building Trades - Basics

Location

EARU, ORCU, Varner

Awards Offered

NCCER Core

ACSD Completion Certificate -

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

Building Trades - Basics

Program Description

This is an exploratory program that introduces participants to the basics of the building trades. With an emphasis on safety, Building Trades - Basics will familiarize students with the safe use of tools and equipment commonly used at home or on a job-site. This program will also prepare participants for other construction related ACSD-CTE programs.

**This program does not meet the requirements of a Parole Board stipulation*

Program Course	Mod ID #	Units	Course Description	Total Units
NCCER Core: Introduction to Basic Construction Skills				75
Basic Safety (Basic Site Safety Orientation)	00101	12.5	Work at construction and industrial job sites can be hazardous. Most job-site incidents are caused by at-risk behavior, poor planning, lack of training, or failure to recognize the hazards. To help prevent incidents, every company must have a proactive safety program. Safety must be incorporated into all phases of the job and involve employees at every level, including management.	
Introduction to Construction Math	00102	10	This module reviews and sharpens math skills required in the construction field.	
Introduction to Hand Tools	00103	12.5	Covers hand tool identification, selection, maintenance, storage, and safety.	
Introduction to Power Tools	00104	10	Provides an overview of the common types of power tools and how they function. Describes proper techniques required to ensure their safe and efficient operation.	
Introduction to Construction Drawings	00105	10	Introduces common types of construction drawings, their basic components, standard drawing element, and measurement tools that are typically used when working with construction drawings.	
Basic Communication Skills	00107	7.5	Provides guidance in listening to understand and speaking with clarity. How to use and understand written materials are covered, along with guidelines that will improve writing skills.	

Basic Employability Skills	00108	7.5	Learn the skills needed to pursue employment successfully.
Introduction to Materials Handling	00109	5	Provides guidelines for using the appropriate PPE for the material being handled and using proper procedures and techniques to carry out the job.
Building Trades - Basics Practicum			150
Layout Tools and Measurement		10	After completing this module, students will be able to: *Demonstrate the safe and accurate use of common layout and measurement tools (steel tape, various squares, calipers, miter, bevels, levels, plumb bob/line, chalk and other lines, gauge, lines, and others *Select appropriate tools for layout procedures in woodworking and metalworking *Use layout tools correctly and accurately *Lay out wood and metal for cutting and shaping
Woodworking		45	In this module, participants will learn to: *Select, cut, shape, and fasten wood using nails, screw, bolts, and glue.* Prepare wood for finishing by sanding, removing dents, and filling holes, *Select and safely use major portable and stationary power tools used in woodworking
Metalworking		15	After completing this module, students will be able to: *Fasten metals with bolts and screws * Safely use portable and stationary power machines for metalworking
Plumbing		20	Provides instruction on identifying plumbing materials and performing basic plumbing procedures
Electrical Safety		20	Covers the basic principles of electricity, electrical safety, and planning a simple wiring system
Welding		30	Provides instruction on: *Setting up MIG welders, Oxyfuel welders/cutters and plasma cutters *Demonstrate the safe and proper use of cutting equipment *Demonstrate the safe and proper use of Oxyfuel (brazing) and MIG welders to produce basic welds.
Building Trades - Basics			225

Commercial and Residential Roofing

Location

Varner

Awards Offered

NCCER Core
 NCCER Craft – Roofing Level 1
 ACSD Completion Certificate -
Commercial and Residential Roofing

Entrance Requirements

Able to perform the basic job skills
 Completed initial assignment
 At least a class II with no pending DRs

Program Description

With both theoretical and hands-on training, *Commercial and Residential Roofing* teaches students the skills needed for employment in the roofing industry.

Program Course	Mod ID #	Units	Course Description	Total Units
Workplace Human Relations				35
Formulas for Career Success		10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills		15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues		5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components		5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy				15
Creating a Personal or Family Budget		5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services		5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics		5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	

NCCER Core: Introduction to Basic Construction Skills				77.5
Basic Safety (Basic Site Safety Orientation)	00101	12.5	Work at construction and industrial job sites can be hazardous. Most job-site incidents are caused by at-risk behavior, poor planning, lack of training, or failure to recognize the hazards. To help prevent incidents, every company must have a proactive safety program. Safety must be incorporated into all phases of the job and involve employees at every level, including management.	
Introduction to Construction Math	00102	10	This module reviews and sharpens math skills required in the construction field.	
Introduction to Hand Tools	00103	12.5	Covers hand tool identification, selection, maintenance, storage, and safety.	
Introduction to Power Tools	00104	10	Provides an overview of the common types of power tools and how they function. Describes proper techniques required to ensure their safe and efficient operation.	
Introduction to Construction Drawings	00105	10	Introduces common types of construction drawings, their basic components, standard drawing element, and measurement tools that are typically used when working with construction drawings.	
Basic Communication Skills	00107	7.5	Provides guidance in listening to understand and speaking with clarity. How to use and understand written materials are covered, along with guidelines that will help you to improve your writing skills.	
Basic Employability Skills	00108	7.5	Learn the skills needed to pursue employment successfully.	
Introduction to Materials Handling	00109	5	Provides guidelines for using the appropriate PPE for the material being handled and using proper procedures and techniques to carry out the job.	
NCCER Craft: Construction Technology				130
Ceiling Joists and Roof Framing	27112-13	40	Describes types of roofs and provides instructions for laying out rafters for gable roofs, hip roofs, and valley intersections. Covers stick-built and truss-built roofs. Includes the basics of roof sheathing installation.	
Roofing Applications	27202-13	25	Describes how to properly prepare the roof deck and install roofing for residential and commercial buildings	
Wall Systems	27111-13	20	Describes procedure for laying out and framing walls, including roughing-in door and window openings, constructing corners, partition Ts, and bracing walls. Includes the procedure to estimate the materials required to frame walls.	
Exterior Finishing	27204-13	35	Covers the various types of exterior finish materials and their installation procedures, including wood, metal, vinyl, and fiber-cement siding.	

Introduction to Drain, Waste, and Vent (DWV) Systems	02111-12	10	Explains how DWV systems remove waste safely and effectively. Discusses how system components such as pipe, drains, traps, and vents work. Reviews drain and vent sizing, grade, and waste treatment. Discusses how building sewers and sewer drains connect the DWV system to the public sewer system.
Plastic Pipe and Fittings	02106-12	12.5	Introduces different types of plastic pipe and fittings used in plumbing applications, including ABS, PVC, CPVC, PE, PEX, and PB. Describes how to measure, cut, join, and support plastic pipe according to the manufacturer's instructions and applicable codes. Discusses pressure testing of plastic pipe once installed.
NCCER Craft: Roofing Level 1			
Introduction to Roofing	16101	2.5	• Fundamental knowledge for learners entering the construction industry
Roofing Safety	16102	7.5	• Introduces common types of roof systems, components, and installation types • Emphasizes the importance of safety
Fall Protection Orientation	75901	8	• From NCCER's Safety Series • Familiarizes trainees with fall-protection practices and equipment critical for roofers
Drawings in Roofing	16103	10	• Shows trainees how to navigate construction drawings and locate information important for roofing work • Describes building information modeling (BIM)
Introduction to Steep-Slope Roofing	16105	12.5	• Describes common steep-slope roof systems and builds understanding of the related tools and practice
Introduction to Low-Slope Roofing	16106	10	• Describes common low-slope roof systems and builds understanding of the related tools and practices
Substrates, Decks, and Roof Insulation	16104	12.5	• Describes basic components and materials roofers work with on a regular basis • Explains first steps in the roof installation process
Sheet Metal in Roofing	16107	25	• Builds foundational knowledge about metal components used in roof flashings
Rigging Practices	38102	15	• Explains NCCER's separate Rigger certification
NCCER Craft: Roofing Level 2			
Asphalt Shingle Roof Systems	16201	15	Discusses asphalt shingles as well as the tools and procedures used in the application of these systems. Describes appropriate attachment techniques and safety precautions involved in asphalt shingles installation and repair.
Metal Roof Systems	16205	15	Describes the various types of metal roofs, including architectural, structural, and metal shingle systems. Discusses the seam types, methods, and tools used in metal roof installation. Details the proper tools and techniques used for the installation of these features
Thermoplastic Roof Systems	16206	10	Describes types of thermoplastic roof systems and outlines their installation and repair. Identifies types of field membranes, premanufactured flashing accessories, attachment components, and related tools

EPDM Roof Systems	16207	10	Describes types of EPDM roof systems and their components. Identifies field membrane types, pre-manufactured flashing accessories, attachment methods, and components of EPDM roof systems. Describes installation and repair of these systems.	
Roofing Practicum				189.5
Flat Roof		95	Hands on practice installing and repairing thermoplastic and EPDM roof systems.	
Gable roof		94.5	Hands on practice installing and repairing asphalt shingles and metal roof systems.	
Commercial and Residential Roofing				600

Computer Applications Technology

Location

McPherson, ORCU, Pine Bluff

Awards Offered

ACSD Completion Certificate -

Computer Application Technology

*Center for Financial Responsibility
Personal Financial Literacy Certification*

*Southwest Airlines Professional
Communications Certification*

Entrance Requirements

Able to perform the basic job skills
Completed initial assignment
least a class II with no pending DRs

At

Program Description

This is an entry level program that is designed to provide participants a basic competency in office procedures, computer operating systems, and Microsoft Office products.

Program Course	Units	Course Description	Total Units
Workplace Human Relations			25
Formulas for Career Success	5	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills	10	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues	5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components	5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy			75
Center for Financial Responsibility Personal Financial Literacy Certification	75	Topics include: Creating a Personal Budget, Creating a Family Budget, Borrowing Basics, Saving & Investment Strategies, Financial Statements & Recordkeeping, Understanding Personal Taxes, Banking Products & Services, Costs of Education & Training, Employee Compensation Components, Personal Financial Planning, Person Risk Management, Retirement & Estate Planning, Home-Buying Basics: Understanding the Language, Home-Buying Basics, Car-Buying Basics	

Center for Financial Responsibility Personal Financial Literacy Certification Review		A review of main concepts and objectives that will be tested for on the industry certification exam	
Keyboarding			60
Workplace Technology	2	Analyzes how technology is used in the workplace and discusses benefits, risks and ethical concerns related to use of technology in the workplace	
Introduction to Computers	2	Explores the processes of creating, installing, and updating software, as well as providing solutions to software installation problems	
Keyboarding Techniques: Posture & Finger Placement	20	Practice in basic keyboarding skills	
Keyboarding Techniques: Speed & Accuracy	15	Application of correct keyboard technique to improve proficiency and accuracy	
Introduction to Microsoft Office 2019 Word	10	Provides students with a foundational knowledge of Microsoft® Word.	
Keyboarding Techniques Document Basics	3	This module explores proper formatting and creation techniques for business and personal documents.	
Keyboarding Techniques: Business Correspondence	2	This module explores proper formatting and creation techniques for correspondence.	
Keyboarding Techniques: Business Publications	2	This module explores proper formatting and creation techniques for publications such as press releases, reports and promotional items.	
Internet Basics	2	Defines the Internet, details it's supporting technologies, lists its various uses, provides tips and methods for researching and identifies possible risks associated with its use.	
Web Ethics & Safety	2	Discusses the potential dangers and hazards of the Internet and provides skills to prevent and respond to these issues.	
Business Computer Applications			340
Operating Systems and Networking	5	Examines the different types of operating systems and the basic approaches to networking	
Windows® 10 Operating Systems 2019 Basics	20	Unit 1 - Welcome to Windows®, Unit 2 - The Desktop & Apps, Unit 3 - Files & Folders, Unit 4- Additional Features, Unit 5- Review	
Computer Worms and Viruses	5	Discusses the history and basics of computer worms and viruses	
Introduction to Digital Communication	5	Examines the meaning and background of digital communication, including examples of devices and the process of digital communication	
Business Documents & Technology	10	Illustrates the use of emerging technologies to produce business documents, such as an employment portfolio, a multimedia presentation, a business report and a business newsletter. Students learn to demonstrate basic writing skills, to compose positive, negative and persuasive messages and to prepare business letters and memos.	

Microsoft® Word 2019 Basics	75	Unit 1 - Welcome to Microsoft® Word, Unit 2 - Documents, Templates & Entering Text, Unit 3 - Formatting Text, Unit 4 - Editing & Correcting Text, Unit 5 - Saving, Reopening, Closing & Distributing Doc, Unit 6 - Formatting Tools, Unit 7 - Paragraphs, Unit 8 - Formatting Pages, Unit 9 - Navigating Documents, Unit 10 - Tables, Text Boxes & Graphics, Unit 11 - Proofing Documents, Unit 12 - Macros, Quick Parts & Building Blocks, Unit 14 - Review
Written Communication Practices	10	Provides a basic understanding and history of written communication. Students will learn the importance of organizing information and they will be provided with examples of how to do so. Written Communication Practices addresses the importance of proper grammar, spelling and punctuation.
Researching Strategies & Tactics	15	Examines the seven step process for researching. Students will discover the six commonly acceptable sources for research including scholarly journals, periodicals, government agencies, books, articles and electronic media. Students will also learn the importance of information that has been gathered from researching efforts, as well as how to interpret it. Includes an explanation of how to correctly cite sources and provides a list of the various citation styles including APA, Chicago and MLA.
Business Letters & Memos	10	Provides an understanding of when to use a business letter or memo in a work environment and what the document should contain.
Cover Letters & Resumes	5	Discusses the use of cover letters and résumés and how to create them
Business Mailing Procedures	5	Describes how to properly address an envelope as well as the importance and ease of using mail merge in a business setting.
Business Reports and Newsletters	5	Describes how to write business reports and newsletters and to understand what information these articles should contain.
Microsoft® PowerPoint® 2019 Basics	75	Unit 1- Welcome to PowerPoint®, Unit 2 - Slide Basics, Unit 3 - Worksheets, Unit 4 - Slide Masters & Themes, Unit 5 - Notes and Speaker's Notes, Unit 6 - Tables & Graphs, Unit 7 - Slide Transitions & Animations, Unit 8 - Saving, Printing, & Distributing, Unit 9 - Review
Presentation Strategies & Tactics	5	Instructs in presentation techniques and how to apply the techniques to different settings.
Microsoft® Excel 2019 Basics	75	Unit 1 - Welcome to Microsoft® Excel, Unit 2- Cells, Unit 3 - Worksheets, Unit 4 - Formula Basics, Unit 5 - Function Basics, Unit 6 - VLOOKUP & HLOOKUP funct, FivTables & PivCharts, Unit 7 - Tables, Unit 8 Charts, Unit 9 - Formatting Data, Unit 10 - Macros, Unit 11- Final Review
Budgeting for Business	15	Explains the importance of maintaining an accurate budget so problems are avoided before they arise. Various factors of creating a budget and the importance of each in relation to the outcome of a company's operations are discussed.

Computer Application Technology

Add on Certificate

Southwest Airlines Professional Communications Certification is not required for completing Computer Applications Technology. It is offered solely at the discretion of the instructor.

Professional Communications			100
Southwest Airlines Professional Communications Certification	100	Topics include: English Applications, Introduction to Professional Communication, Communication Styles, Written Communication Practices, Workplace Communication, Business Letters & Memos, Researching Strategies & Tactics, Public Speaking Basics, Extemporaneous Speaking, Introduction to Digital Communication, Telecommunications Basics, Steps to Superior Customer Service, Managing Diversity, Conflict Management, Teamwork & Collaboration, Leadership Styles	
Southwest Airlines Professional Communications Certification Review		A review of main concepts and objectives that will be tested for on the industry certification exam	

Computer Science: Coding and Cybersecurity

Location

McPherson

Awards Offered

Center for Financial Responsibility Personal Financial Literacy Certification

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

ACSD Completion Certificate -

Computer Science - Coding and Cybersecurity

Program Description

This is an entry level program that is designed to provide participants a basic competency in computational thinking, problem solving, text-based coding, networks, and cybersecurity.

Program Course	Units	Course Description	Total Units
Workplace Human Relations			35
Formulas for Career Success	10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills	15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues	5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components	5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy			75
Center for Financial Responsibility Personal Financial Literacy Certification	75	Topics include: Creating a Personal Budget, Creating a Family Budget, Borrowing Basics, Saving & Investment Strategies, Financial Statements & Recordkeeping, Understanding Personal Taxes, Banking Products & Services, Costs of Education & Training, Employee Compensation Components, Personal Financial Planning, Person Risk Management, Retirement & Estate Planning, Home-Buying Basics: Understanding the Language, Home-Buying Basics, Car-Buying Basics	

Center for Financial Responsibility Personal Financial Literacy Certification Review		A review of main concepts and objectives that will be tested for on the industry certification exam	
Computational Thinking and Problem Solving			50
Algorithms	25	Examines traditional programming algorithms, including searches and sorts. Manually tests algorithms with sample data to observe accuracy of anticipated output.	
Collaboration	25	Describes the steps needed to efficiently solve a problem. Demonstrates collaborative behaviors (e.g., integrating feedback, providing useful feedback, understanding and accepting multiple perspectives) when solving problems.	
Data, Information, and Security			145
Analyzing and Utilizing Data	50	Defines, stores, accesses, and manipulates data (e.g., primitive, linear). Defines and discusses quantitative and qualitative data.	
Digital Footprint	50	Applies strategies to protect personal digital footprints and the responsibilities and opportunities of living, learning, and working in a digitally connected world.	
Cybersecurity	45	Identifies the five pillars of cybersecurity and evaluates the relevance of each pillar to computer science concepts. Describes different roles within the hacking community (e.g., white hat, black hat, gray hat), including positive and negative motivations, significant impact, and social stereotypes. Describes the impacts of ransomware, trojans, viruses, and other malware. Applies strategies to protect personal digital footprints and the responsibilities and opportunities of living, learning, and working in a digitally connected world.	
Algorithms and Programs			145
Logic	50	Explains the logic involved in how a computer program executes (e.g., flow charts, program flow). Discusses and applies best practices of backend program design (e.g., comments, documentation, and whitespace).	
Debugging	50	Tests a computer program with data and evaluate output for accuracy. Finds and debugs errors in a computer program.	
Programming Concepts	45	Implements the following programming concepts: data types, variable creation, variable assignment, conditional branching, iteration, and functions. Creates a program using a text-based programming language.	
Computers and Communications			80
Utilization of Computers within Industry	35	Identifies software and hardware specific to carrying out the mission of regional industries. Researches advancing and emerging technologies (e.g., artificially intelligent agents, block chain, extended reality, machine learning, robotics).	

Communications	45	Analyzes communication methods and systems used to transmit information. Describes common networking concepts at an introductory level. Describes modems, network interface cards, routers (e.g., consumer, industrial), switches, and wireless access points, and identify their purposes within a network. Describes the importance of creating and using common rules for communication and the utilization of common network protocols including the relationship between client and server.	
Professionalism and Impacts of Computing			70
Impact of Implementation	30	Analyzes the impacts of technology and professionalism within the computing community. Describes the risks and risk mitigation strategies as well as the potential benefits associated with the utilization and implementation of digital technologies.	
Communicating Technical Information	40	Appropriately communicates about technical information. Communicates basic technical information effectively to diverse audiences including, but not limited to, non-technical audience members.	
Computer Science: Coding and Cybersecurity			600

Cosmetology

Location

McPherson

Awards Offered

ACSD Completion Certificate -
Cosmetology

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

Must meet all prerequisites required by the State of Arkansas

Testing for State Cosmetology License

Program Description

The purpose of this course is to train the student in the basic skills, educational judgments, safety judgments, proper work habits, and desirable attitudes necessary to obtain licensure as a cosmetologist.

Program Course	Hours	Course Description	Total Hours
Workplace Human Relations			35
Formulas for Career Success	10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills	15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues	5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components	5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy			15
Creating a Personal or Family Budget	5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services	5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	

Borrowing Basics	5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	
Cosmetology			1500
<i>A. A total of fifteen-hundred (1500) hours shall be required in the cosmetology program and shall consist of the following curricula:</i>			
Hygiene and Sanitation	80	Instructions in sanitation, sterilization, hygiene, lighting and ventilation. General sanitation duties performed by students shall not exceed more than fifteen (15) minutes per day. Students are required to maintain their stations as warranted and are responsible for their actions or mishaps.	
Related Science	120	Physiotherapy or cosmetricity (pertaining to electricity used in cosmetology), Physiology and Histology Anatomy, Neurology, Myology and Osteology.	
Hairdressing	1000	A course in cleaning hair, shampooing, haircutting, clipping, singeing, dying, tinting, bleaching, scalp massage, brushing and combing, curling, permanent waving, and reconditioning hair, wiggery, thermal pressing, iron curling, chemical relaxing, etc.	
Manicuring	100	A course in the construction, filing and shaping of the fingernails, loosening and removing the dead cuticle and the art of hand and arm massage.	
Aesthetics	100	A course in the skin, various kinds of facial massage, cosmetics, packs, the art of makeup, eyebrow arching, eyebrow and eyelash dying.	
Salesmanship and Shop Management	50	Instruction in how to keep records, knowledge of business law, cosmetology law, rules and regulations, booking appointments, retailing, etc.	
Shop Department	50	Courtesy, neatness and professional attitude in meeting the public.	
<i>B. All schools shall provide a minimum of five (5) hours each week in theoretical instruction of reach student enrolled. This requirement may be modified by pro-rating the hours when necessary depending upon the school schedule provided the student is receiving quality theoretical instruction to prepare him/her for examination.</i>			
<i>C. The time of the classroom instruction class shall be registered with the Board.</i>			
<i>D. Students shall not be permitted to leave the classroom during theoretical instructions to work on clients.</i>			
<i>E. To qualify for the cosmetology examination, students must acquire a minimum of one-hundred-eighty (180) hours in theoretical instruction.</i>			
<i>F. All schools shall provide a minimum of ten (10) services per week, for each student enrolled who has acquired two-hundred-fifty (250) hours of instruction. Students shall be assigned to clients on the basis of respective learning needs.</i>			
Cosmetology			1550

Cosmetology Instructor

Location

McPherson

Awards Offered

ACSD Completion Certificate -
Cosmetology Instructor

Entrance Requirements

Able to perform the basic job skills
Completed initial assignment
At least a class II with no pending DRs
Must meet all prerequisites required by the State of Arkansas

Testing for State Cosmetology Instructor's License

Program Description

The purpose of this course is to train the student in the basic teaching skills, educational judgments, safety judgments, proper work habits, and desirable attitudes necessary to obtain licensure and for competency as an instructor or related position.

Program Course	Hours	Course Description	Total Hours
Cosmetology Instructor			600
Required preparatory training	50	Teaching of theory and practical operation. Selecting subject matter for class lecture. Preparing class lectures. Conducting a review of all subjects taught. Preparing and grading examinations. Demonstrating practical operations Teaching practical operations	
Class attendance	100	Classes are to be conducted by a licensed Instructor to prepare instructor-trainee. Instructor-trainee to properly lecture and demonstrate on all subjects of cosmetology.	
Conducting Theory Classes in Cosmetology, Aesthetics, Manicuring or Electrology	50	Theory classes will be conducted under the supervision of a licensed instructor.	
Conducting Practical Classes in Cosmetology, Aesthetics, Manicuring or Electrology	300	Practical classes will be conducted under the supervision of a licensed instructor.	
Method of Keeping Student Records	10	Maintaining accurate student records	
Instructor's Discretion	90	Training in subjects in which the individual instructor-trainee may be deficient, or to the practice of Cosmetology	
Cosmetology Instructor			600

Food Service

Location

Varner

Awards Offered

ServSafe Food Handler
ServSafe Manager

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

ACSD Completion Certificate -
Food Service

Program Description

This is an entry level program that teaches participants the basic food safety practices for preparing and serving food.

Program Course	Units	Course Description	Total Units
Workplace Human Relations			35
Formulas for Career Success	10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills	15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues	5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components	5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy			15
Creating a Personal or Family Budget	5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services	5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics	5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	
ServSafe			550

Providing Safe Food	50	Introduces foodborne illnesses, describes how foodborne illnesses occur, and instructs on methods and techniques of keeping food safe.
Forms of Contamination	50	Describes the different types of contamination - biological, chemical, and physical, discusses deliberate contamination of food, teaches how to respond to a foodborne-illness outbreak, and introduces food allergens.
The Safe Food Handler	50	This module describes how food handlers can inadvertently contaminate food, teaches proper handwashing and hand care - including single-use gloves, the importance of good personal hygiene, and the policies for reporting health issues.
The Flow of Food: An Introduction	50	Introduces food handlers to the hazards in the flow of food, and the importance of monitoring time and temperature.
The Flow of Food: Purchasing, Receiving, and Storage	50	This module discusses general purchasing and receiving principles and teaches proper storage.
The Flow of Food: Preparation	100	Instructs on the various methods of preparation, prepping of specific foods, cooking and baking, cooling and reheating food
The Flow of Food: Service	50	Discusses methods of safely holding food and serving food
Food Safety Management Systems	50	Practices and procedures intended to prevent foodborne illnesses
Safe Facilities and Pest Management	50	Discusses interior requirements for a safe operation, emergencies that affect the facility, and pest management
Cleaning and Sanitizing	50	Instructs participants in proper cleaning and sanitizing, dishwashing, and cleaning and sanitizing in the operation
Food Service		600

Forestry Services

Location

Varner

Awards Offered

ACSD Completion Certificate

Forestry Services

Entrance Requirements

Completed initial assignment

At least a class II with no pending DRs

Program Description

This program prepares participants for entry level careers in the forestry industry. Participants will learn the forestry industry's best practices and, by use of simulators, how to operate heavy equipment used in the industry.

**This program does not meet the requirements of a Parole Board stipulation*

Program Course	Units	Course Description	Total Units
Workplace Human Relations			35
Formulas for Career Success	10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills	15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues	5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components	5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy			15
Creating a Personal or Family Budget	5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services	5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics	5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	

Forestry & Woodland Ecosystems			75
Forestry & Woodland Ecosystems	75	This multi-lesson course examines current management practices for wooded areas and their resources. Students will discover how to meet ecological requirements and better manage, harvest, and maintain forests, including safety and best practices.	
SimScholar			150
Backhoe Loader	75	This course covers safety, machine walkaround, control familiarization, maneuvering, driving, & braking, backfilling, site support, trenching, and lifting & moving materials and objects	
Track Feller Buncher	75	This course covers safety, machine walkaround, control familiarization, felling head placement, lowboy trailer (loading/offloading equipment) single tree cutting, clear cutting, and thinning.	
Heavy Equipment Operator Simulator Lab			100
Backhoe Loader	50	Participants will utilize the CAT simulator to become familiar with the operation of heavy equipment used in the forestry industry. Focus will be on pre-start inspection, walk around inspection, control familiarization, and the safe operation of heavy equipment by providing realistic training scenarios which develop safety awareness, good motor skills, and an understanding of basic applications.	
Track Feller Buncher	50		
Forestry Services			375

Forklift Safety & Operation

Location

NCU, Varner

Awards Offered

OSHA 10

ACSD Completion Certificate -

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

Forklift Safety & Operation

Program Description

This program is open to students enrolled in either FutureFit/MSSC or Manufacturing Skills. Participants will learn to safely operate a forklift in a warehouse or manufacturing setting.

**This program does not meet the requirements of a Parole Board stipulation*

Program Course	Units	Course Description	Total Units
Tooling U SME			35
Lifting & Moving Equipment	11	This class provides an overview of the equipment used to pick up and move loads in the manufacturing workplace. Lifting and moving equipment includes pallet jacks, forklifts, air skids, conveyors, portable lifts, gantry cranes, and overhead cranes. The specific equipment used for an application depends on the weight of the load, as well as the location the load is being lifted from and moved to. Operating any Powered Industrial Trucks (PITs) requires special certification, and operating cranes requires the use of hand signals to communicate between an operator and a signal person.	
Powered Industrial Truck Safety	24	"Powered Industrial Truck Safety" provides an overview of safety topics related to forklifts and other PITs. OSHA has many standards surrounding the use of PITs in the workplace for operators, non-operators, attended vehicles, and unattended vehicles. OSHA also has detailed training requirements for PIT operators. To safely operate a PIT, operators must understand basic principles of stability, including the concepts of a fulcrum and centers of gravity. Operators must also be aware of the weight and shape of loads and what individual vehicles are capable of handling.	
OSHA			10
General Industry	10	This course provides foundational knowledge of occupational safety and health standards appropriate for general industry careers.	

Forklift Operation			40
Operation		With the primary focus on safety, students will learn to operate forklift controls, safely start and park a forklift, move forward and backwards, maneuver around traffic cones and other obstacles, pick up and drop off loads, drive with loads, pick up and drop off stacked pallets, and work in narrow aisles and limited space.	
Forklift Safety & Operation			75

Heavy Equipment Operator

Location

Varner

Awards Offered

NCCER Core

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

ACSD Completion Certificate -

Heavy Equipment Operator

Program Description

This program introduces students to the knowledge base and technical skills required in the Heavy Equipment Industry.

Program Course	Mod ID #	Units	Course Description	Total Units
Workplace Human Relations				35
Formulas for Career Success		10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills		15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues		5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components		5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy				15
Creating a Personal or Family Budget		5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services		5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics		5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	
NCCER Core: Introduction to Basic Construction Skills				75

Basic Safety (Basic Site Safety Orientation)	00101	12.5	Work at construction and industrial job sites can be hazardous. Most job-site incidents are caused by at-risk behavior, poor planning, lack of training, or failure to recognize the hazards. To help prevent incidents, every company must have a proactive safety program. Safety must be incorporated into all phases of the job and involve employees at every level, including management.	
Introduction to Construction Math	00102	10	This module reviews and sharpens math skills required in the construction field.	
Introduction to Hand Tools	00103	12.5	Covers hand tool identification, selection, maintenance, storage, and safety.	
Introduction to Power Tools	00104	10	Provides an overview of the common types of power tools and how they function. Describes proper techniques required to ensure their safe and efficient operation.	
Introduction to Construction Drawings	00105	10	Introduces common types of construction drawings, their basic components, standard drawing element, and measurement tools that are typically used when working with construction drawings.	
Basic Communication Skills	00107	7.5	Provides guidance in listening to understand and speaking with clarity. How to use and understand written materials are covered, along with guidelines that will help you to improve your writing skills.	
Basic Employability Skills	00108	7.5	Learn the skills needed to pursue employment successfully.	
Introduction to Materials Handling	00109	5	Provides guidelines for using the appropriate PPE for the material being handled and using proper procedures and techniques to carry out the job.	
NCCER Craft: Heavy Equipment Operator Level 1				75
Orientation to the Trade	22101	5	Provides an overview of heavy equipment terminology, operations, operator responsibilities, career opportunities, and basic principles of safety.	
Heavy Equipment Safety	22102	10	Provides a comprehensive overview of safety requirements on job sites with emphasis on OSHA, MSHA, and NIOSH requirements. Presents basic requirements for personal protection, safe equipment operations and maintenance, and HAZCOM.	
Identification of Heavy Equipment	22103	5	Introduces the eleven most used pieces of heavy equipment. Describes the functional operation and uses for each piece of equipment, along with a general description of heavy equipment drive and hydraulic systems.	
Basic Operational Techniques	22104	20	Covers prestart checks of a machine's hardware (frame, body panels, tires or tracks, and safety equipment), driveline components, hydraulic system components, electrical components and controls. Reviews machine safety issues. Explains how to safely start, move, steer, stop, and shut down different types of machines.	

Utility Tractors	22105	10	Covers operation of general utility tractors in the construction industry. Describes duties and responsibilities of the operator, safety rules for operation, the attachment of implements, and basic preventive maintenance practices.
Introduction to Earth Moving	22201	10	Provides a broad introduction to the process of planning and executing earthmoving activities on various types of construction projects. The use of heavy equipment such as bulldozers, scrapers, excavators, and loaders is explained.
Grades	22106	15	Introduces the concept of preparing graded surfaces using heavy equipment. Covers identification of construction stakes and interpretation of marks on each type of stake. Describes the process for grading slopes.
NCCER Craft: Heavy Equipment Operator Part 2			150
Excavation Math	22207	20	Covers basic math skills required for site excavation work. Includes methods and practice in calculating the areas and volumes of various geometric shapes, as well as formulas and methods used to calculate cut and fill requirements on a job.
Site Work	22210	20	Expands on information covered in Level 1 in relation to setting and interpreting grade stakes. Also provides information and instructions on controlling surface water and ground water on a job site, as well as the layout of foundations and laying of pipe.
Soils	22308	10	Describes soil classification systems and explains how shrink and swell factors affect equipment selection. Discusses how soil conditions affect equipment performance and explains techniques for working with various types of soils.
Loaders	22205	20	Covers the uses of wheel and track loaders, as well as operator maintenance, loader safety, and operating procedures. Includes procedures for using loaders in excavation, grading, and demolition work.
Backhoes	22303	20	Identifies and describes the common uses, types, components, instruments, controls, and attachments of backhoes. Presents safety guidelines, prestart inspection procedures, and preventive maintenance requirements. Describes basic startup and operation, and covers common work activities associated with backhoes.
Dozers	22302	20	Identifies and describes the common uses, types, and components of dozers. Presents safety guidelines, prestart inspection procedures, and preventive maintenance requirements. Describes basic startup and operation, and covers common work activities associated with dozers.

Excavators	22304	40	Identifies and describes the common types, uses, and components of excavators. Presents safety guidelines, prestart inspection procedures, and preventive maintenance requirements. Describes basic startup and operation, and covers common work activities associated with excavators	
Sim Scholars				110
Hydraulic Excavator		40	Machine walk around, control familiarization, bucket placement, raking the green, over the moon, Loading and off-loading machine from low-boy trailer, trenching, truck loading, bench loading, quick coupler, setting trench box and pipe, backfilling, and production cycle	
Track Type Tractor/Dozer		35	Machine walk around, controls familiarization, steering - wide, steering - narrow, blade steering, level & straight dozing, slot dozing, ripping, backfilling, and dozing over a highwall	
Small Wheel Loader		35	Machine walk around, controls familiarization, driving, load & carry, stockpile, truck loading, truck spotting, backfilling, multipurpose bucket - backfilling, multipurpose bucket - carry objects, quick coupler, and unloading pallets - forks	
Heavy Equipment Operator Simulator Lab				140
Hydraulic Excavator		35	Participants will utilize the CAT simulator to become familiar with the operation of heavy equipment. Focus will be on pre-start inspection, walk around inspection, control familiarization, and the safe operation of heavy equipment by providing realistic training scenarios which develop safety awareness, good motor skills, and an understanding of basic applications.	
Wheel Loader		35		
Backhoe		35		
Dozer		35		
Heavy Equipment Operator Total Units				600

HVAC

Location

EARU, Varner

Awards Offered

NCCER Core
 NCCER Craft – HVAC, Level 1
 ACSD Completion Certificate -

Entrance Requirements

Able to perform the basic job skills
 Completed initial assignment
 At least a class II with no pending DRs

HVAC
 EPA 608 Certification

Program Description

This is an entry level program that prepares participants to install, maintain, and repair heating, air conditioning, and refrigeration systems.

Program Course	Mod ID #	Units	Course Description	Total Units
Workplace Human Relations				35
Formulas for Career Success		10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills		15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues		5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components		5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy				15
Creating a Personal or Family Budget		5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services		5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics		5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	

NCCER Core: Introduction to Basic Construction Skills				77.5
Build Your Future in Construction	00100	2.5	Details detailing different options in construction	
Basic Safety (Basic Site Safety Orientation)	00101	12.5	Work at construction and industrial job sites can be hazardous. Most job-site incidents are caused by at-risk behavior, poor planning, lack of training, or failure to recognize the hazards. To help prevent incidents, every company must have a proactive safety program. Safety must be incorporated into all phases of the job and involve employees at every level, including management.	
Introduction to Construction Math	00102	10	This module reviews and sharpens math skills required in the construction field.	
Introduction to Hand Tools	00103	12.5	Covers hand tool identification, selection, maintenance, storage, and safety.	
Introduction to Power Tools	00104	10	Provides an overview of the common types of power tools and how they function. Describes proper techniques required to ensure their safe and efficient operation.	
Introduction to Construction Drawings	00105	10	Introduces common types of construction drawings, their basic components, standard drawing element, and measurement tools that are typically used when working with construction drawings.	
Basic Communication Skills	00107	7.5	Provides guidance in listening to understand and speaking with clarity. How to use and understand written materials are covered, along with guidelines that will help you to improve your writing skills.	
Basic Employability Skills	00108	7.5	Learn the skills needed to pursue employment successfully.	
Introduction to Materials Handling	00109	5	Provides guidelines for using the appropriate PPE for the material being handled and using proper procedures and techniques to carry out the job.	
Modern Refrigeration and Air Conditioning				152.5
Refrigeration System Fundamentals		5	Participants learn about energy and matter, gases, and basic refrigeration systems.	
Service Basics		7.5	Covers tools and supplies and working with tubing and piping.	
Refrigerants		10	Introduces refrigerants and the equipment and instruments needed for refrigerant handling and service, and covers the basics of working with refrigerants.	
Basic Electricity, Magnetism, and Electronics		10	Covers basic electricity, electrical power, and basic electronics.	
Motors and Electric Control Systems		10	Provides instruction on electric motors, electrical control systems, and servicing electric motors and controls.	
Refrigeration System Components		10	Covers compressors and compressor safety, metering devices, heat exchangers, and refrigerant flow components.	

Domestic Refrigerators and Freezers		10	Provides an overview of systems and components, installation and troubleshooting, and service and repair of domestic refrigerators and freezers.	
Indoor Air Fundamentals		10	Covers air movement and measurement, air quality, air distribution, and ventilation system service.	
Air-Conditioning Systems		15	Instructs on ductless air-conditioning systems, residential central air-conditioning systems, commercial air-conditioning systems, humidity control, thermostats, and heating and cooling loads.	
Heating Systems		15	Covers the fundamentals of forced-air and hydronic heating, heat pumps, and gas-fired, oil-fired, and electric heating systems.	
Energy Management and Conservation		10	Explains solar power and thermal storage, energy management, and energy conservation.	
Commercial Refrigeration Systems		10	Provides an overview of commercial refrigeration systems, special refrigeration systems and applications, and commercial refrigeration system configurations.	
Designing Commercial Refrigeration Systems		10	Provides an understanding of heat loads and system thermodynamics and commercial refrigeration component selection.	
Installing and Servicing Commercial Refrigeration Systems		20	Instruction on the installation of commercial systems, troubleshooting commercial (system and component diagnosis), and servicing commercial systems.	
NCCER Craft: HVAC Level 1				120
Introduction to HVAC	03101	7.5	Covers the basic principles of heating, ventilating, and air conditioning, career opportunities in HVAC, and how apprenticeship programs are constructed. Basic safety principles, as well as trade licensure and EPA guidelines, are also introduced.	
Trade Mathematics	03102	10	Explains how to solve HVAC/R trade related problems involving the measurement of lines, area, volume, weights, angles, pressure, vacuum, and temperature. Also includes a review of scientific notation, powers, roots, and basic algebra and geometry.	
Basic Electricity	03106	12.5	Introduces the concept of power generation and distribution, common electrical components, AC and DC circuits, and electrical safety as it relates to the HVAC field. Introduces reading and interpreting wiring diagrams.	
Introduction to Heating	03108	15	Covers the fundamentals of heating systems and the combustion process. The different types and designs of gas furnaces and their components, as well as basic procedures for their installation and service, is provided.	
Introduction to Cooling	03107	30	Explains the fundamental operating concepts of the refrigeration cycle and identifies both primary and secondary components found in typical HVAC/R systems. Common refrigerants are introduced as well. Describes the principles of heat transfer and the essential pressure temperature relationships of refrigerants. Basic control concepts for simple systems are also introduced.	

Introduction to Air Distribution Systems	03109	15	Describes the factors related to air movement and its measurement in common air distribution systems. The required mechanical equipment and materials used to create air distribution systems are also presented. Basic system design principles for both hot and cold climates are introduced.	
Basic Copper and Plastic Piping Practices	03103	10	Explains how to identify types of copper tubing and fittings used in the HVAC/R industry and how they are mechanically joined. The identification and application of various types of plastic piping, along with their common assembly and installation practices, are also presented.	
Soldering and Brazing	03104	10	Introduces the equipment, techniques, and materials used to safely join copper tubing through both soldering and brazing. The required PPE, preparation, and work processes are covered in detail. The procedures for brazing copper to dissimilar materials are also provided.	
Basic Carbon Steel Piping Practices	03105	10	Explains how to identify various carbon steel piping materials and fittings. The joining and installation of threaded and grooved carbon steel piping systems is covered, with detailed coverage of threading and grooving techniques included.	
Heating, Ventilation, Air-Conditioning & Refrigeration Practicum				200
Hands-on training		200	Participants will use their knowledge and skills to repair and service HVAC units at the facility, compl	
HVAC				600

Landscape Construction and Design

Location

RLW

Awards Offered

Center for Financial Responsibility Personal Financial Literacy Certification
SFMA Turfgrass Science

Entrance Requirements

Able to perform the basic job skills
Completed initial assignment
At least a class II with no pending DRs

ACSD Completion Certificate -
Landscape Construction and Design

Program Description

This is an entry level program that prepares participants for employment in the landscaping industry. Participants gain practical experience in the design, construction, and maintenance of various landscape situations.

Program Course	Units	Course Description	Total Units
Workplace Human Relations			35
Formulas for Career Success	10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills	15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues	5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components	5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy			75
Center for Financial Responsibility Personal Financial Literacy Certification	75	Topics include: Creating a Personal Budget, Creating a Family Budget, Borrowing Basics, Saving & Investment Strategies, Financial Statements & Recordkeeping, Understanding Personal Taxes, Banking Products & Services, Costs of Education & Training, Employee Compensation Components, Personal Financial Planning, Person Risk Management, Retirement & Estate Planning, Home-Buying Basics: Understanding the Language, Home-Buying Basics, Car-Buying Basics	
Center for Financial Responsibility Personal Financial Literacy Certification Review		A review of main concepts and objectives that will be tested for on the industry certification exam	

Landscape Design			75
Introduction to Landscape Design	25	Discussion and hands-on training in reading and drawing a landscape plan. Topics covered include: drawing instruments, landscape symbols and lettering, calculating materials needed for a job, converting design dimensions to feet and inches, and reading the terrain.	
Principles of Design	25	Topics include: the outdoor room concept, plant selection, flowers, xeriscaping, hardscape, and pricing the proposed design.	
Landscape Plants	25	Introduces methods to determine which plants are best suited to site conditions, designing with plants contrasting the texture and form of plants in a landscape, and plant nomenclature	
Landscape Contracting			40
Understanding Calculations, Contracts, and Contractors	20	Discussion and practice in: Landscape take-off, necessary calculation, contract types & components, and specifications	
Human Resources	20	Staffing, career opportunities, and qualities needed for career success	
Landscape Basics			100
Installing Landscape Plants	25	Topics include: Importance of proper installation, necessary tools, transplanting, soils, and mulching	
Selecting Proper Grass	25	Turfgrass, grass seed, and types of lawns	
Lawn Construction	25	Selecting the method of installation, proper lawn construction, calibrating a spreader	
Landscape Irrigation	25	Instruction on the components of an irrigation system, design and installation of irrigation mainline and laterals, and diagnostics, repair, and maintenance of irrigation systems.	
Landscape Maintenance			75
Maintaining and Caring for Landscape Plants	40	Covers the sustained care of plants, weeds, pest control, pruning, and plant injuries. Detailed information and safety considerations on the chemical used in the landscaping industry is emphasized in this module.	
Care of the Lawn	35	Instruction in mowing, watering, fertilizing, and repair of the lawn.	
Landscaping Practicum			200
Landscape Construction and Maintenance	200	Real world practice in caring for plants and lawns, pruning trees and shrubs, identification of disease, weeds, and insects, the proper use of pesticides, diagnosing the nutrient needs of plants, and the application of fertilizer.	
Landscape Construction and Design			600

Add-on Certificate

SFMA Turfgrass Science Certification is not required for completing Landscape Construction and Design. It is offered solely at the discretion of the instructor.

Turfgrass Science Certification			100
SFMA Turfgrass Science Certification	100	Topics include: Benefits of Turfgrass, Anatomy & Adaptations, Identification, Growth Requirements, Soil Basics, Growing mediums, Management Practices & Controls, Weeds, Insects, Diseases, Equipment & Tools, Understanding Playing Services, Playing Surface Preparation & Management	
SFMA Turfgrass Science Certification Review		A review of main concepts and objectives that will be tested for on the industry certification exam	

Manufacturing Skills

Location

North Central Unit

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

Awards Offered

OSHA 10

CPT 4.0

-Safety

-Quality Practices & Measurement

-Manufacturing Processes & Production

-Maintenance Awareness

CPT+ Skill Boss

TTU Center for Personal Financial Literacy

ACSD Completion Certificate –

Manufacturing Skills

Program Description

This 600 hour program covers the fundamental and technical skills required for individuals seeking a career in the manufacturing industry. Students will have the opportunity to earn multiple industry-recognized certifications coveted by employers and will leave the program with the knowledge and skill-set needed to secure employment in the manufacturing field.

Program Course	Units	Course Description	Total Units
Workplace Human Relations			25
Formulas for Career Success	5	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills	10	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues	5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components	5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy			75
Center for Financial Responsibility Person Financial Literacy Certification	75	Topics include: Creating a Personal Budget, Creating a Family Budget, Borrowing Basics, Saving & Investment Strategies, Financial Statements & Recordkeeping, Understanding Personal Taxes, Banking Products & Services, Costs of Education & Training, Employee Compensation Components, Personal Financial Planning, Person Risk Management, Retirement & Estate Planning, Home-Buying Basics: Understanding the Language, Home-Buying Basics, Car-Buying Basics	

Tooling U SME			175
Workforce Essentials	15	Provides an overview of the manufacturing process and industry, career opportunities in manufacturing, effective workplace communication, interviewing for a job, and the importance of punctuality in the workplace.	
Design for Manufacturing	10	Introduces Design for X methodology and its application to manufacturing processes including Design for Cost and Design for Serviceability. Lightweighting and materials for lightweighting are also covered.	
Supervisor Essentials	25	This course covers the essentials of leadership, best practices and corrective actions for managing performance, basics of manufacturing costs, into to managerial accounting, conflict resolution, team leadership, manufacturing management, personal effectiveness, managing a diverse workplace, harassment and discrimination, and performance management and the law.	
Applied Mathematics	25	This course covers several modules including: Math Fundamentals, Applied & Engineering Sciences, Math: Fractions & Decimals, Units of Measurement, Manufacturing Process Applications, Algebra Fundamentals, Geometry, Trigonometry, Statistics, & Concepts of Calculus.	
Additive Manufacturing	50	This course covers many modules including: Introduction to Additive Manufacturing (AM), AM Safety, Basic AM Process, AM Methods and Materials, Intro to Hybrid Manufacturing, Rapid Prototyping, Prototype to Production, Design for AM, Methodology for AM, Intro to AM Software, AM Materials Science, Integrating AM with Traditional Manufacturing, AM as a Secondary Process, Nondestructive Testing for AM, Reverse Engineering for AM, The AM Supply Chain, Managing the AM Supply Chain, Hybrid Manufacturing with Directed Energy Deposition, Lightweighting with AM, AM Qualification, Design for Fused Deposition Modeling, Design for Material Jetting, Design for Directed Energy Deposition, Design for Laser Powder Bed Fusion, Design for Vat Photopolymerization, Design for Binder Jetting, Design for Sheet Lamination, Setup for FDM, Maintenance for FDM, Setup for Vat Photopolymerization, Setup for Laser Powder Bed Fusion, Maintenance for Laser Powder Bed Fusion	

Inspection	35	Modules include: Basic Measurement, Calibration Fundamentals, Basics of Tolerance, Blueprint Reading, Types of Prints and Engineering Drawings, Hole Standards and Inspection, Thread Standards & Inspection, Surface Texture and Inspection, Nondestructive Testing, Interpreting Prints, Measuring System Analysis, Introduction of GD&T, Major Rules of GD&T, GD&T Applications, Inspecting a Prismatic Part, Cylindrical Part, with Optical Comparators, with CMMs, Introduction to CMMs & Laser Trackers, Calibration & Documentation, Structured Light 3D Scanners, 3D Laser Scanners, and In-Line Inspection Applications	
Virtual Labs	15	Virtual Labs in fire safety, hand and power tool safety, lockout/tagout procedures, safety awareness, safety for lifting and moving devices, assembly with mechanical fasteners, riggings equipment safety & inspection, SMAW, GMAW, inspecting inside & outer diameters, inspecting groove width, thread sizes, and depth	
Certified Production Technician Program			265
Safety	50	Modules include: Introduction to Advanced Manufacturing, Industry 4.0 and IIoT, Safety Responsibilities, Practicing Safety in the Workplace, Types of PPE, Hazardous Materials Standards, Hazardous Material Handling and Storage, Machine Safety, Equipment Safety, Material Handling and Robot Safety, Safety Inspections and Analysis, Work Area Safety, Training, Fire and Electrical Safety, Emergency and Accident Response, Introduction to Communication, Receiving Communication, Communication Methods Communicating Feedback, Introduction to Teams, Production Team Communication, Team Ideation, and Workplace Behavior	
Quality Practices and Measurement	50	Modules include: Introduction to Quality, Dimensional Measurement, Measurement Conversion, Introduction to Print Reading, Multiview Drawing, Blueprint Dimensions and Notes, Manufacturing Drawings and Scales, Welding Symbols, Tolerancing, Caliper Measurement, Micrometer Measurement, Indicator Measurement, Quality Inspections and Audits, Introduction to Quality Tools, Preventive and Corrective Action, Basic Statistical Concepts, Introduction to Control Charts	
Manufacturing Processes and Production	50	Modules include: Principles of Manufacturing Automation, Industry 4.0 Technologies, Advanced Manufacturing Materials, Advanced Manufacturing Processes, Mechanical Power, Basic Mechanical Elements, Power Efficiency, Hand Tools, Band Saw Operation, Introduction to the Drill Press, Machine Operations 1, Machine Operations 2, Introduction to CNC Machining, CNC Workspace, CNC Programming and Operation, Automated System Operations, Machine Adjustments, Machine Troubleshooting, Manufacturing Metrics, Production Planning and Workflow, Introduction to Lean Manufacturing, Lean Manufacturing	

		Organization, Lean Manufacturing Operations, Inventory Management, Production Control, and Material Quality Control	
Maintenance Awareness	50	Modules include: Total Productive Maintenance (TPM), Mechanical Power Transmission, Gear Drives, Belt Drives, Chain Drives, Oil Lubrication, Grease Lubrication, Introduction to Fluid Power, Pneumatic Power, Basic Cylinder Circuits, Hydraulic Power, Basic Hydraulic Cylinder Circuits, Fluid Power Speed Control, Hydraulic Filtration, Basic Electrical Circuits, Electrical Voltage and Current Concepts, Electrical Resistance Measurement, Power in Electrical Circuits, Control Logic Circuits, Electrical Control Diagrams, Relay Control Circuits, Automation Sequence Circuits, Introduction to Electronic Sensors, Programmable Controller Operation, Basic PLC Programming, PLC Motor Control, Basic Robot Operation, Introduction to Welding, Welding Operations, and Weld Types	
Maintenance Awareness Cont.			
Skill Boss	65	Hands-on training and assessment that evaluates over 60 skills, including safety, quality, production processes, maintenance, communication, teamwork, customer awareness, and workplace conduct.	
Forklift Simulation			50
Controls	2	Covers *forklift driving controls and how they operate * fingertip controls, where they are located and how they operate.	
Starting and Parking	2	Covers the fundamentals of safely starting and parking a forklift	
Forward and Backward Driving	6	Participants will learn to follow arrows, maneuver around traffic cones, with and without pedestrians present and without colliding with traffic cones. Participants will also learn to maneuver the course in reverse.	
Handling Loads	6	Participants will learn to pick up and drop off different loads working in a tight environment in both forward and reverse.	
Driving with Load	6	Participants will learn to watch for hazards and pedestrians while transport loads on different surfaces.	
Stacking	6	Participants will learn to pick up stacked pallets and drop off/stack pallets around corners and in narrow aisles.	
Loading and Unloading Trucks	6	Participants will learn to load and unload trucks.	
Loading and Unloading Racks	6	Participants will learn the safe and proper way to load and unload racks.	
Narrow Aisle	4	Participants will learn to maneuver in the limited space of a warehouse.	
Specials	6	To mimic a realistic environment, participants will complete exercises with other moving forklifts and pedestrians and traveling up and down ramps.	

OSHA 10			10
General Industry	10	This course provides foundational knowledge of occupational safety and health standards appropriate for general industry careers.	
Manufacturing Skills			600

Office Basics - Keyboarding

Location

McPherson, ORCU, Pine Bluff

Awards Offered

ACSD Completion Certificate -

Office Basics - Keyboarding

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

Program Description

This is an exploratory program that introduces participants to the basics of administrative office procedures. With an emphasis on keyboarding, Office Basics - Keyboarding will familiarize students with entry level office processes. This programs will also prepare participants for other computer related ACSD-CTE programs.

**This program does not meet the requirements of a Parole Board stipulation*

Program Course	Units	Course Description	Total Units
Workplace Human Relations			35
Formulas for Career Success	10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills	15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues	5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components	5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy			15
Creating a Personal or Family Budget	5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	

Banking Services	5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics	5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	
Skill Building			175
Keyboarding	100	Participants will become familiar with computer keyboards, use and describe the function of non-alphanumeric keys, demonstrate proper typing technique and work to increase typing speed to a minimum of 25 wpm.	
Basic Office Procedures	25	Introduces workplace ethics and etiquette, sorting and filing files and documents, and workplace expectations	
Microsoft Word	25	This module teaches participants the basics of creating, editing, and formatting a document using Microsoft Word	
Microsoft Excel	25	Participants will learn the basics of creating and editing a Microsoft Excel spreadsheet	
Office Basics - Keyboarding			225

Pet Care and Management

Location

McPherson

Awards Offered

ACSD Completion Certificate -

Entrance Requirements

- Able to perform the basic job skills
- Completed initial assignment
- At least a class II with no pending DRs

Pet Care and Management

To be eligible, participants must be a Paws trainer.

Program Description

This is an entry level program that prepares participants to perform a variety of duties required in the care and management of small animals. While the textbook component will cover a variety of small animals, the practical component will be limited to canines.

****This program does not meet the requirements of a Parole Board stipulation***

Program Course	Units	Course Description	Total Units
Financial Literacy			10
Creating a Personal or Family Budget	3	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services	3	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics	4	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	
Pet Care and Management Independent Study and OJT			280
Animals & Society	10	Information on different types of animals and their classifications, animal rights founders, groups, animal welfare groups and laws put into place to protect animals are provided in this presentation. Students will also learn to understand the difference between animal rights and animal welfare and the different laws which have been created to protect animals.	
Benefits & Responsibilities of Owning Companion Animals	10	Discusses both the benefits and responsibilities of owning companion animals, as well as the yearly cost of common companion animals. In addition, animals' roles in society and new pet owner resources are discussed.	

Animals in Research	10	Information on roles of animals in research and the benefits different species have provided to humans through research. Students will analyze the policies, laws, and regulations concerning animal research. Students will also learn about animal research supporters, founders and activists.
Animal Behavior	20	Students will learn to understand the importance of animal behavior in ethology. Also, students will learn about pheromones, hormones, external factors and learned behaviors which affect and animal's behavior as well as being able to describe the importance animal behavior has on human psychology and social sciences.
Basic Canine and Feline Anatomy	10	Students will learn about the eleven body systems— cardiovascular, digestive, endocrine, excretory, immune, integumentary, muscular, nervous, reproductive, respiratory and skeletal— and determine the role each plays in maintaining the health and protection of your pet. This module also classifies the organs found in each body system and explains their importance in the function of the body. The skeletal systems of cats, dogs and humans are also contrasted.
Breeds of Companion Animals: Dogs	10	This module includes detailed information about popular dog breeds and various characteristics related to each breed.
Breeds of Companion Animals: Cats	10	This module includes detailed information about popular cat breeds and various characteristics related to each breed.
Breeds of Companion Animals: Exotics	10	This module includes detailed information about popular exotic small animal breeds and various characteristics related to each breed.
Basic Companion Animal Care	35	This module covers proper vaccines, diet, exercise, grooming and pet proofing your home. Also discussed are annual check-ups, internal and external parasites and traveling tips.
Small Animal Nutrition, Health, & Management	30	Students will explore appropriate diets for different animals as well as identify the foods which should be avoided. An overview of the different digestive systems is also presented. Common diseases which affect companion animals are identified along with their symptoms, allowing for quick treatment and a more informed owner. Finally, we illustrate the responsibilities of owning a pet and highlight the different needs an owner must provide.
Basic Canine Nutrition	35	This module explores the basics of canine nutrition and covers topics such as: essential nutrients a canine needs, different types of dog foods, and special diets canines should follow.

Common Diseases of Small Animals	20	Information on diagnosis, symptoms, treatments and prevention of common animal diseases is presented. Students will learn how physiological, nutritional and morphological defects, along with viruses, bacteria, protozoa and fungi, can harm animals. More than 20 diseases are outlined with the severity and specific preventative practices of each.	
Common Parasites of Small Animals	20	Teaches the students the symptoms, causes, prevention and control of common internal and external parasites which affect small animals. Terminology essential to the transmission, life cycle, treatment and prevention of parasites is also included.	
Canine Grooming	20	Illustrates the basic grooming techniques and grooming tools used to groom a dog for a household.	
Veterinary Laws & Ethics	10	Information on current trends and issues in veterinary medicine, veterinarian responsibility and laws and regulations will be covered. Students will begin to understand professional ethics and laws which relate to veterinary medicine. Students will also learn to understand the importance of veterinarian responsibility and the trends and issues that have affected the profession.	
Veterinary Medical Terms and Terminology	10	Students will learn the importance of word structure which includes root words, prefixes, suffixes, compound words and combining forms as well as body planes, directional terms, common veterinary terms and abbreviations. Students will also be able to identify the various animal systems as well as the purpose and function for each.	
Common Veterinary Medical Equipment	10	This module provides information on electronic technology, imaging equipment, and instruments found in a veterinary hospital. The care, maintenance, safety, and use of equipment and instruments found in a veterinary hospital are explained.	
Paws in Prison - Professional Training Sessions			35
Professional Training Sessions	35	Weekly training sessions with a professional dog trainer on obedience instruction, training and management, behavior assessment, and animal husbandry.	
Pet Care and Management Program Total Units			325

Plumbing

Location

ORCU

Awards Offered

NCCER Core
 NCCER Craft - Plumbing Level 1
 Plumbing Level 2

Entrance Requirements

Able to perform the basic job skills
 Completed initial assignment
 At least a class II with no pending DRs

ACSD Completion Certificate -
Plumbing

Program Description

This is an entry level program that prepares participants to perform a variety of duties in the plumbing industry.

Program Course	Mod ID #	Units	Course Description	Total Units
Workplace Human Relations				35
Formulas for Career Success		10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills		15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues		5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components		5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy				15
Creating a Personal or Family Budget		5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services		5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics		5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	
NCCER Core: Introduction to Basic Construction Skills				77.5

Basic Safety (Basic Site Safety Orientation)	00101	12.5	Work at construction and industrial job sites can be hazardous. Most job-site incidents are caused by at-risk behavior, poor planning, lack of training, or failure to recognize the hazards. To help prevent incidents, every company must have a proactive safety program. Safety must be incorporated into all phases of the job and involve employees at every level, including management.	
Introduction to Construction Math	00102	10	This module reviews and sharpens math skills required in the construction field.	
Introduction to Hand Tools	00103	12.5	Covers hand tool identification, selection, maintenance, storage, and safety.	
Introduction to Power Tools	00104	10	Provides an overview of the common types of power tools and how they function. Describes proper techniques required to ensure their safe and efficient operation.	
Introduction to Construction Drawings	00105	10	Introduces common types of construction drawings, their basic components, standard drawing element, and measurement tools that are typically used when working with construction drawings.	
Basic Communication Skills	00107	7.5	Provides guidance in listening to understand and speaking with clarity. How to use and understand written materials are covered, along with guidelines that will help you to improve your writing skills.	
Basic Employability Skills	00108	7.5	Learn the skills needed to pursue employment successfully.	
Introduction to Materials Handling	00109	5	Provides guidelines for using the appropriate PPE for the material being handled and using proper procedures and techniques to carry out the job.	
NCCER Craft: Plumbing Level 1				145
Introduction to the Plumbing Profession	02101	5	Introduces trainees to the many career options available in today's plumbing profession. Provides a history of plumbing and also discusses the current technology, industries, and associations that make up the modern plumbing profession.	
Plumbing Safety	02102	22.5	Discusses the causes of accidents and their consequences and repercussion in terms of delays, increased expenses, injury, and loss of life. Review the types and proper use of PPE. Instructs trainee in the use of critical safety information conveyed in hazard communication, safety signs, signals, lockout/tagout, and emergency response. Covers confined-space safety, and reviews safety issues related to hand and power tools.	
Tools of the Plumbing Trade	02103	10	Instructs trainees in the care and use of different types of hand and power tools used on the job. Also instructs on selecting appropriate tools, tool maintenance, and safety issues.	
Introduction to Plumbing Math	02104	12.5	Review of basic math concepts and how they apply to on-the-job situations. Teaches participants how to measure pipe using fitting tables, framing squares and how to calculate 45° offsets.	

Introduction to Plumbing Drawings	02105	17.5	Introduces different types of plumbing drawing, including how to interpret and apply the drawings when laying out and installing a plumbing system. Discusses symbols used in drawings and how to recognize how code requirements apply to plumbing drawings.
Plastic Pipe and Fittings	02106	12.5	Introduces participants to different types of plastic pipe and fittings used in plumbing applications. Describes how to measure, cut, join, and support plastic pipe according to manufacturer's instructions and applicable codes. Pressure testing of plastic pipe is also covered.
Copper Tube and Fittings	02107	12.5	Discusses sizing, labeling, and applications of copper tube fittings and reviews the types of valves that can be used on copper tube systems. Proper methods for cutting, joining, and installing copper tube is covered along with pressure testing, seismic codes, and storage and handling requirements.
Cast-Iron Pipe and Fittings	02108	12.5	Introduces trainees to hub-and-spigot and no-hub cast iron pipe and fittings and their applications in DWV systems. Review material properties, storage and handling requirements, and fittings and valves. Joining methods, installation, and testing are also covered.
Steel Pipe and Fittings	02109	12.5	Discusses threading, labeling, and sizing of steel pipe and reviews the differences between domestic and imported pipe. Cover the proper techniques for measuring, cutting, joining, and hanging steel pipe. Also reviews corrugated stainless steel tubing.
Introduction to Plumbing Fixtures	02110	7.5	Discusses the proper applications of code-approved fixtures in plumbing installations. Reviews the different types of fixtures and the materials used in them. Also covers storage, handling, and code requirements.
Introduction to DWV Systems	02111	10	Explains how DWV systems remove waste safely and effectively. Covers how system components such as pipe, drains, traps, and vents work. Reviews drain and vent sizing, grade, and waste treatment. Also discusses how building sewers and sewer drains connect the DWV system to the public sewer system.
Introduction to Water Distribution Systems	02112	10	Identifies the major components of water distribution systems and described their functions. Reviews water sources and treatment methods and covers supply and distribution for the different types of systems that trainees will install on the job.
NCCER: Plumbing Level 2			170
Plumbing Math 2	02201-13	15	Explains the Pythagorean Theorem and reviews methods for laying out square corners. Discusses the techniques used to calculate simple and rolling offsets, as well as offsets on parallel runs of pipe.

Reading Commercial Drawings	02202-13	20	Discusses how to identify and interpret different types of drawings (civic, architectural, HVAC/mechanic, electrical and plumbing). Covers how to ensure accurate dimension, generate RFIs, locate plumbing entry points, how to establish piping routes and fixture locations. Isometric drawings, material takeoffs, approved submitted data, and BIM are covered.
Structural Penetrations, Insulating, and Firestopping	02203-13	20	Introduces methods for adjusting structural members, insulating pipe, and installing fire-stopping. Covers reinforcement techniques for modified structural members, how to identify walls, floors and ceilings that require fire-stopping.
Installing and Testing DWV Piping	02204-13	25	Explains how to locate, install, connect and test a complete drain, waste and vent (DWV) system. Discusses how to develop material takeoff, setup, and use levels, locate building and sewer drains, locate fixtures, and test a DWV system.
Installing Roof, Floor, and Area Drains	02205-13	5	Covers the proper techniques for locating, installing, and connecting roof, floor, and area drains and floor sinks according to code. Also discusses waterproof membranes and flashing, drain components, shower pans, trap primers, and proper drain applications.
Installing and Testing Water Supply Piping	02206-13	20	Covers the proper techniques for locating, installing, and testing complete water service and distribution system, including meters, water heaters, water softeners, and hose bibbs. Introduces basic backflow prevention and water hammer prevention. Discusses the installation of shower and tube valves, ice maker and washing machine boxes, and pipe stubouts
Types of Valves	02207-13	5	Reviews the types of valves, their components, and applications. Also covers valve servicing.
Installing Fixtures and Valves	02208-13	20	Covers the installation of basic plumbing fixtures, including bathtubs, shower stalls, lavatories, sinks, water closets, shower stalls, and urinals. Review the installation of associated valves, faucets, and components. Also discusses how to connect appliances such as dishwashers, food-waste disposers, refrigerators, and ice makers, and wash machines.
Installing Water Heaters	02209-13	10	Discusses gas-fired, electric, tankless, heat pump, and indirect water heaters, components and applications. Review proper installation and testing techniques and covers the latest code requirements for water heaters.
Basic Electricity	02210-13	10	Introduces electrical safety and the principals of electricity including voltage, current, resistance, and power. Includes important electrical formulas, circuitry, land common plumbing-related electrical applications.

Fuel Gas Systems	02211-13	20	Introduces techniques for safe handling of natural gas, liquefied petroleum gas, and fuel oil. Reviews fuel gas and fuel oil safety precautions and potential hazards, application, system installation and testing.	
Practicum				157.5
Advanced Commercial and Residential Plumbing Repair		157.5	Provides instruction and practice in plumbing service and repair. The emphasis is placed on working with existing plumbing systems.	
Plumbing				600

Residential Carpentry

Location

Varner

Awards Offered

NCCER Core

NCCER Craft -

Carpentry Level 1, Fundamentals

Framing and Finishing, Level 2

ACSD Completion Certificate -

Residential Carpentry

Entrance Requirements

Able to perform the basic job skills

Completed initial assignment

At least a class II with no pending DRs

Program Description

This is an entry level program that prepares participants to perform a variety of duties in the field of residential carpentry.

Program Course	Mod ID #	Units	Course Description	Total Units
Workplace Human Relations				35
Formulas for Career Success		10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills		15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues		5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components		5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy				15
Creating a Personal or Family Budget		5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services		5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics		5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	

NCCER Core: Introduction to Basic Construction Skills				77.5
Basic Safety (Basic Site Safety Orientation)	00101	12.5	Work at construction and industrial job sites can be hazardous. Most job-site incidents are caused by at-risk behavior, poor planning, lack of training, or failure to recognize the hazards. To help prevent incidents, every company must have a proactive safety program. Safety must be incorporated into all phases of the job and involve employees at every level, including management.	
Introduction to Construction Math	00102	10	This module reviews and sharpens math skills required in the construction field.	
Introduction to Hand Tools	00103	12.5	Covers hand tool identification, selection, maintenance, storage, and safety.	
Introduction to Power Tools	00104	10	Provides an overview of the common types of power tools and how they function. Describes proper techniques required to ensure their safe and efficient operation.	
Introduction to Construction Drawings	00105	10	Introduces common types of construction drawings, their basic components, standard drawing element, and measurement tools that are typically used when working with construction drawings.	
Basic Communication Skills	00107	7.5	Provides guidance in listening to understand and speaking with clarity. How to use and understand written materials are covered, along with guidelines that will help you to improve your writing skills.	
Basic Employability Skills	00108	7.5	Learn the skills needed to pursue employment successfully.	
Introduction to Materials Handling	00109	5	Provides guidelines for using the appropriate PPE for the material being handled and using proper procedures and techniques to carry out the job.	
NCCER Craft: Carpentry Level 1 Fundamentals				162.5
Orientation to the Trade	27101-13	5	Reviews the history of the trade, describes the apprentice program, identifies career opportunities for carpentry and construction workers, and lists the skills, responsibilities, and characteristics a worker should possess. Emphasizes the importance of safety in the construction industry.	
Building Materials, Fasteners, and Adhesives	27102-13	7.5	Introduces the building materials used in construction work, including lumber, sheet materials, engineered wood products, structural concrete, and structural steel. Also describes the fasteners and adhesives used in construction work. Discusses the methods of squaring a building.	
Hand and Power Tools	27103-13	7.5	Provides descriptions of hand tools and power tools used by carpenters. Emphasizes safe and proper operation, as well as care and maintenance.	

Introduction to Construction Drawings, Specifications, and Layout	27104-13	20	Covers the techniques for reading and using construction drawings and specifications with an emphasis on drawings and information relevant to the carpentry trade. Introduces quantity takeoffs.
Floor Systems	27105-13)	27.5	Covers framing basics and the procedures for laying out and constructing a wood floor using common lumber, as well as engineered building materials.
Wall Systems	27111-13	20	Describes procedures for laying out and framing walls, including roughing-in door and window openings, constructing corners, partition Ts, and bracing walls. Includes the procedure to estimate the materials required to frame walls.
Ceiling Joist and Roof Framing	27112-13	40	Describes types of roofs and provides instructions for laying out rafters for gable roofs, hip roofs, and valley intersections. Covers stick-built and truss-built roofs. Includes the basics of roof sheathing installation.
Basic Stair Layout	27110-13	12.5	Introduces types of stairs and common building code requirements related to stairs. Focuses on techniques for measuring and calculating rise, run, and stairwell openings, laying out stringers, and fabricating basic stairways.
Introduction to Building Envelope Systems	27109-13	12.5	Introduces the concept of the building envelope and explains its components. Describes types of windows, skylights, and exterior doors, and provides instructions for installation.
NCCER Craft: Carpentry Level 2 Framing and Finishing			170
Roofing Applications	27202-13	25	Describes how to properly prepare the roof deck and install roofing for residential and commercial buildings.
Thermal and Moisture Protection	27203-13	7.5	Covers the selection and installation of various types of insulating materials in walls, floors, and attics. Also covers the uses and installation practices for vapor barriers and waterproofing materials.
Exterior Finishing	27204-13	35	Covers the various types of exterior finish materials and their installation procedures, including wood, metal, vinyl, and fiber-cement siding.
Cold-Formed Steel Framing	27205-13	15	Describes the types and grades of steel framing materials, and includes instructions for selecting and installing metal framing for interior and exterior walls, loadbearing and nonbearing walls, partitions, and other applications.
Drywall Installation	27206-13	15	Describes the various types of gypsum drywall, their uses, and the fastening devices and methods used to install them. Also contains detailed instructions for installing drywall on walls and ceilings using nails, drywall screws, and adhesives. A discussion of fire- and sound-rated walls is also presented.

Drywall Finishing	27207-13	17.5	Describes the materials, tools, and methods used to finish and patch gypsum drywall. A discussion of both automatic and manual taping and finishing tools is presented.	
Doors and Door Hardware	27208-13	20	Describes the installation of metal doors and related hardware in steel-framed, wood-framed, and masonry walls, along with their related hardware, such as locksets and door closers. A discussion on the installation of wood doors, folding doors, and pocket doors is also presented.	
Window, Door, Floor, and Ceiling Trim	27210-13	25	Describes the different types of trim used in finish work and focuses on the proper methods for selecting, cutting, and fastening trim to provide a professional finished appearance.	
Cabinet Installation	27211-13	10	Provides detailed instructions for the selection and installation of base and wall cabinets and countertops.	
Carpentry Practicum				140
Application of Carpentry Skills		140	Provides the opportunity for participants to apply the skills and knowledge learned in the completion of Carpentry Level 1, Fundamentals and Carpentry Level 2, Framing and Finishing.	
Residential Carpentry				600

Residential Electricity

Location

Varner

Awards Offered

NCCER Core
NCCER Craft - Electrical Level 1

Entrance Requirements

Able to perform the basic job skills
Completed initial assignment
At least a class II with no pending DRs

ACSD Completion Certificate -

Residential Electricity

Program Description

This is an entry level program that prepares participants for employment in the electrical field.
Participants learn the basic skills needed to be successful in a modern workplace.

Program Course	Mod ID #	Units	Course Description	Total Units
Workplace Human Relations				35
Formulas for Career Success		10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills		15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues		5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components		5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy				15
Creating a Personal or Family Budget		5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services		5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics		5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing.	

NCCER Core: Introduction to Basic Construction Skills				77.5
Build Your Future in Construction	00100	2.5	Details detailing different options in construction	
Basic Safety (Basic Site Safety Orientation)	00101	12.5	Work at construction and industrial job sites can be hazardous. Most job-site incidents are caused by at-risk behavior, poor planning, lack of training, or failure to recognize the hazards. To help prevent incidents, every company must have a proactive safety program. Safety must be incorporated into all phases of the job and involve employees at every level, including management.	
Introduction to Construction Math	00102	10	This module reviews and sharpens math skills required in the construction field.	
Introduction to Hand Tools	00103	12.5	Covers hand tool identification, selection, maintenance, storage, and safety.	
Introduction to Power Tools	00104	10	Provides an overview of the common types of power tools and how they function. Describes proper techniques required to ensure their safe and efficient operation.	
Introduction to Construction Drawings	00105	10	Introduces common types of construction drawings, their basic components, standard drawing element, and measurement tools that are typically used when working with construction drawings.	
Basic Communication Skills	00107	7.5	Provides guidance in listening to understand and speaking with clarity. How to use and understand written materials are covered, along with guidelines that will help you to improve your writing skills.	
Basic Employability Skills	00108	7.5	Learn the skills needed to pursue employment successfully.	
Introduction to Materials Handling	00109	5	Provides guidelines for using the appropriate PPE for the material being handled and using proper procedures and techniques to carry out the job.	
NCCER Electrical Level 1				112.5
Occupational Overview: The Electrical Industry	26101-20	2.5	Overview of electrical careers, highlights modern electrical installations, training on professionalism when using email, text, and social media.	
Safety for Electricians	26102-17	10	Covers safety rules and regulations for electricians, employee/employer responsibilities for safety, including precautions for electrical hazards found on the job. Also covers the OSHA-mandated lockout/tag out procedure.	
Introduction to Electrical Circuits	26103-17	7.5	Introduces electrical concepts used in Ohm's law applied to DC series circuits. Covers atomic theory, electromotive force, resistance, and electric power equations.	
Electrical Theory	26104-17	7.5	Introduces series, parallel, and series parallel circuits. Covers resistive circuits, Kirchhoff's voltage and current laws, and circuit analysis.	
Introduction to the National Electrical Code	26105-17	7.5	Provides a road map for using the NEC®. Introduces the layout and the types of information found within the code book. Allows trainees to practice finding information using an easy-to-follow procedure.	

Device Boxes	26106-17	10	Covers the hardware and systems used by an electrician to mount and support boxes, receptacles, and other electrical components. Also covers NEC® fill and pull requirements for device, pull, and junction boxes under 100 cubic inches.	
Hand Bending	26107-17	10	Introduces conduit bending and installation. Covers the techniques for using hand-operated and step conduit benders, as well as cutting, reaming, and threading conduit.	
Wireways, Raceways, and Fittings	26108-17	20	Introduces the types and applications of raceways, wireways, and ducts. Stresses the applicable NEC® requirements.	
Conductors and Cables	26109-17	10	Focuses on the types and applications of conductors and covers proper wiring techniques. Stresses the applicable NEC® requirement	
Basic Electrical Construction Documents	26110-17	7.5	Describes electrical prints, drawings, and symbols, and the types of information that can be found on schematics, one-lines, and wiring diagrams.	
Residential Wiring	26111-17	15	Covers the electrical devices and wiring techniques common to residential construction and maintenance. Allows trainees to practice making service calculations. Stresses the applicable NEC® requirements.	
Electrical Test Equipment	26112-17	5	Covers proper selection, inspection, and use of common electrical test equipment, including voltage testers, clamp-on ammeters, ohmmeters, multimeters, phase/motor rotation testers, and data recording equipment. Also covers safety precautions and meter category ratings.	
Residential Electricity Practicum				360
Planning and Preparing a Residential Wiring Job		100	With an emphasis on workplace safety, participants gain hands-on experience in the use of hardware and materials, tools, test and measurement instruments. Participants also learn to read and understand residential building plans.	
Residential Service Entrances and Equipment		60	Participants are introduced to residential service entrances, including equipment and installation. Covers residential branch circuit, feeder, and service entrance calculations.	
Residential Electrical System- Rough-in		80	Provides instruction on general requirements for rough-in wiring and hands-on training in: electrical box installation, cable installation, raceway installation, switching circuit installation, special residential wiring situations, and video, voice, and data wiring installation.	
Residential Electrical System - Trim-out		60	Focuses on lighting fixture installation, device installation, and service panel trim-out.	
Maintaining and Troubleshooting a Residential Electrical Wiring System		30	Provides practice and instruction on inspecting and troubleshooting electrical wiring systems.	
Alternative Energy Systems		30	Introduces solar power, wind energy, and hydroelectric power.	
Residential Electricity				600

WELDING

Location

EARU,ORCU, Varner

Awards Offered

NCCER Core
NCCER Craft - Welding
AWS Filet Weld Certification

Entrance Requirements

Able to perform the basic job skills
Completed initial assignment
At least a class II with no pending DRs

ACSD Completion Certificate -
Welding

Program Description

This is an entry level program that prepares participants for employment in the welding/fabrication industry. Students learn the basic skills needed to be successful in a modern workplace.

Program Course	Mod ID #	Units	Course Description	Total Units
Workplace Human Relations				35
Formulas for Career Success		10	Discusses how to: search for a job, fill out a job application, develop a resume, deliver an application or resume to a potential employer, and prepare for an interview	
Employability Skills		15	Understand what it means to be an effective and successful employee. Professionalism, effective communication, ethical behavior, teamwork, leadership, time management, and stress management are discussed.	
Workplace Issues		5	Explores the role of technology in the workplace, organizational structures on the workplace environment, responsibilities and safety practices for employers and employees.	
Employee Compensation Components		5	Discusses various employee benefits, types of income deductions, and how they impact take-home pay.	
Financial Literacy				15
Creating a Personal or Family Budget		5	Discusses the need of identifying current financial situations, developing short-, medium-, and long-term financial goals, separating needs from wants, and incorporating a budget.	
Banking Services		5	Discusses the products and services provided by financial service providers. Explore the process of opening and managing different types of accounts and applying for a loan.	
Borrowing Basics		5	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	

NCCER Core: Introduction to Basic Construction Skills				77.5
Build Your Future in Construction	00100	2.5	Details detailing different options in construction	
Basic Safety (Basic Site Safety Orientation)	00101	12.5	Work at construction and industrial job sites can be hazardous. Most job-site incidents are caused by at-risk behavior, poor planning, lack of training, or failure to recognize the hazards. To help prevent incidents, every company must have a proactive safety program. Safety must be incorporated into all phases of the job and involve employees at every level, including management.	
Introduction to Construction Math	00102	10	This module reviews and sharpens math skills required in the construction field.	
Introduction to Hand Tools	00103	12.5	Covers hand tool identification, selection, maintenance, storage, and safety.	
Introduction to Power Tools	00104	10	Provides an overview of the common types of power tools and how they function. Describes proper techniques required to ensure their safe and efficient operation.	
Introduction to Construction Drawings	00105	10	Introduces common types of construction drawings, their basic components, standard drawing element, and measurement tools that are typically used when working with construction drawings.	
Basic Communication Skills	00107	7.5	Provides guidance in listening to understand and speaking with clarity. How to use and understand written materials are covered, along with guidelines that will help you to improve your writing skills.	
Basic Employability Skills	00108	7.5	Learn the skills needed to pursue employment successfully.	
Introduction to Materials Handling	00109	5	Provides guidelines for using the appropriate PPE for the material being handled and using proper procedures and techniques to carry out the job.	
NCCER Craft: Welding 1				365
Welding Safety	29101-09	5	Covers safety equipment, protective clothing, and procedures applicable to the cutting and welding of metals.	
Oxyfuel Cutting	29102-09	17.5	Explains the safety requirements for oxyfuel cutting. Identifies oxyfuel cutting equipment and setup requirements. Explains how to light, adjust, and shut down oxyfuel equipment. Trainees will perform cutting techniques that include straight line, piercing, bevels, washing, and gouging.	
Plasma Arc Cutting	29103-09	7.5	Explains plasma arc cutting equipment and safe work area preparation. Identifies correct amperage, gas pressures, and flow rates. Covers plasma-arc cutting methods for piercing, slotting, squaring, and beveling metals. Explains how to store equipment and clean the work area.	

Air Carbon Arc Cutting and Gouging	29104-09	5	Describes air carbon arc cutting equipment and processes. Identifies the electrodes and safe operation of the equipment. Provides step-by-step instructions for performing air carbon arc washing and gouging activities.	
Base Metal Preparation	29105-09	10	Describes how to clean and prepare all types of base metals for cutting or welding. Identifies and explains joint design and base metal preparation for all welding tasks.	
Weld Quality	29106-09	10	Identifies the codes that govern welding, including marine welds. Identifies and explains weld imperfections and causes. Describes non-destructive examination practices, visual inspection criteria, welder qualification tests, and the importance of quality workmanship	
SMAW-Equipment and Setup	29107-09	5	Describes SMAW welding and welding safety. Explains how to connect welding current and setup arc welding equipment. Identifies and explains using tools for cleaning welds.	
Shielded Metal Arc Electrodes	29108-09	2.5	Explains electrode characteristics and different types of filler metals. Describes the role of the American Welding Society (AWS) and the American Society of Mechanical Engineers (ASME). Explains proper storage and control of filler metals and identifies the use of codes.	
SMAW-Beads and Fillet Welds	29109-09	100	Describes the preparation and setup of arc welding equipment and the process of striking an arc. Explains how to detect and correct arc blow. Describes how to make stringer, weave, overlapping beads, and fillet welds.	
Joint Fit-Up and Alignment	29110-09	5	Identifies and explains job code specifications. Describes use of fit-up gauges and measuring devices to check fit-up and alignment and use of plate and pipe fit-up and alignment tools to properly prepare joists. Explains how to check for joint misalignment and poor fit.	
SMAW-Groove Welds with Backing	29111-09	60	Identifies and explains job code specifications. Describes use of fit-up gauges and measuring devices to check fit-up and alignment and use of plate and pipe fit-up and alignment tools to properly prepare joists. Explains how to check for joint misalignment and poor fit.	
SMAW-Open V-Groove Welds	29112-09	60	Explains open v-groove welds and how to set up welding equipment for making open v-groove welds. Provides procedures for making flat, horizontal, vertical, and overhead open v-groove welds.	
GMAW Welding				70
GMAW - Equipment and Filler Metals	29205-15	10	Describes general safety procedures for GMAW. Identifies GMAW equipment and explains the filler metals and shielding gases used to perform GMAW. Explains how to set up and use GMAW equipment and how to clean GMAW welds.	

GMAW - Plate	29209-15	60	Explains how to setup and use GMAW equipment and how to select and use different filler metals and shielding gases. Describes how to make multiple-pass fillet and V-groove welds on carbon steel plate in various positions.	
GMAW Welding Practicum				37.5
AWS Fillet Weld Certification Practice Or Skills Check List/NCCER Completion		37.5	<u>If recommended</u> for testing by program instructor, the student will prepare and test for the American Welding Society Fillet Weld Certification. OR If the student is not recommended for AWS testing, the student will complete Skills Check list and NCCER Core.	
Welding				600