# **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 #	Hours	Course Description	Total Hours
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 torqueing 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			<mark>460</mark>

# 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 Testing for State Barber License

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

# **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 Deportment	10	
Barbering		1550

# **Barber Instructor**

#### Location

Grimes

# **Awards Offered**

ACSD Completion Certificate -Barbering

## **Entrance Requirements**

Testing for State Barber License

Completed initial assignment

At least a class II with no pending DRs

Able to perform the basic job skills

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

# **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**

**Basic Residential Mechanics** 

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 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 #	Hours	Course Description	Total Hours
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

#### **Entrance Requirements**

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

## Awards Offered NCCER Core NCCER Craft - Construction Technology ACSD Completion Certificate -*Building and Grounds Maintenance*

## **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 #	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,	
NCCER Core: Introduction to Basic Construction Skills				77.5

			_
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.	
00102	10	This module reviews and sharpens math skills required in the construction field.	
00103	12.5	Covers hand tool identification, selection, maintenance, storage, and safety.	
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.	
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.	
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.	
00108	7.5	Learn the skills needed to pursue employment successfully.	
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.	
			352.5
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.	
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.	
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.	
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.	
27202-13	25	Describes how to properly prepare the roof deck and install	
	00102 00103 00104 00105 00107 00108 00109 28101-13 28105-13	00102 10   00103 12.5   00104 10   00105 10   00107 7.5   00108 7.5   00109 5   00109 5   28101-13 12.5   28105-13 60   27105-13 27.5	0010112.5Most 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.0010210This module reviews and sharpens math skills required in the construction field.0010312.5Covers hand tool identification, selection, maintenance, storage, and safety.0010410Provides an overview of the common types of power tools and how they function. Describes proper techniques required to ensure their safe and efficient operation.0010510Introduces common types of construction drawings, their basic components, standard drawing element, and measurement tools that are typically used when working with construction drawings.001077.5Provides 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.001087.5Learn the skills needed to pursue employment successfully.001095Provides guidelines for using the appropriate PPE for the material being handled and using proper procedures and techniques to carry out the job.28101-1312.5Covers 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.28105-1360Covers characteristics of block and brick; how to setup, layout, and bond block and brick

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> <sup>®</sup> 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)	
<b>Building and Grounds Mainten</b>	ance			600

# **Building Trades - Basics**

#### Location

EARU, ORCU, Varner

**Awards Offered** 

NCCER Core

ACSD Completion Certificate -

## **Entrance Requirements**

**Building Trades - Basics** 

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 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 #	Hours	Course Description	Total Hours
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			150
Practicum			
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

# **Computer Applications Technology**

#### Location

McPherson, ORCU, Pine Bluff

### **Entrance Requirements**

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

# **Awards Offered**

ACSD Completion Certificate -

Computer Application Technology

*Center for Financial Responsibility Personal Financial Literacy Certification* 

Southwest Airlines Professional Communications Certification

### **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	Hours	Course Description	Total Hours
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	
Center for Financial Responsibility Person 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 its 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			34(
Operating Systems and Networking	5	Examines the different types of operating systems and the basic approaches to networking	
Windows <sup>®</sup> 10 Operating Systems 2019 Basics	20	Unit 1 - Welcome to Windows <sup>®</sup> , 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 <sup>®</sup> Word 2019 Basics	75	Unit 1 - Welcome to Microsoft <sup>®</sup> 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 <sup>®</sup> PowerPoint <sup>®</sup> 2019 Basics	75	Unit 1- Welcome to PowerPoint <sup>®</sup> , 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 <sup>®</sup> Excel 2019 Basics	75	Unit 1 - Welcome to Microsoft <sup>®</sup> 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 Technolo	ogy		600

#### **Computer Application Technology**

#### Add on Certificate

# Southwest Airlines Professional Communications Certification is <u>not</u> 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** 

ACSD Completion Certificate -

#### **Entrance Requirements**

Computer Science - Coding and Cybersecurity

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 is designed to provide participants a basic competency in computational thinking, problem solving, text-based coding, networks, and cybersecurity.

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	4	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	]

Computational Thinking and Probl	em 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			175
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	75	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			175
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, whitespace).	
Debugging	50	Tests a computer program with data and evaluate output for accuracy. Finds and debugs errors in a computer program.	
Programming Concepts	75	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.	
<b>Computers and Communications</b>			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, blockchain, 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 Cor	nputing		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 C	ybersecurity	Total Program Hours	600

# **Computerized Accounting**

#### Location

McPherson

#### **Entrance Requirements**

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

ACSD Completion Certificate -Computerized Accounting

# **Program Description**

This is an entry level program that is designed to provide participants a basic competency in accounting procedures.

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	4	Introduces different sources of credit, the importance of and how to read a credit report, and the cost of borrowing,	
Skill Building			75
Keyboarding	40	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.	

Business Communication	35	Participants will learn to express ideas clearly and concisely, develop an accounting vocabulary, compose and produce effective business communication, and demonstrate good listening skills.	
Introduction to Microsoft Office			90
Applications			90
Introduction to Microsoft Word	30	This module introduces participants to Microsoft Word. Instruction includes how to create, edit, and format a document.	
Introduction to Microsoft Excel	50	Participants will learn to create, edit, utilize functions, create conditions and formant spreadsheets using Microsoft Excel.	
Introduction to Microsoft PowerPoint	20	Participants will learn to create, edit, and run slideshows using Microsoft PowerPoint.	
Business Math and the Electronic Calculator			85
Business Math Basics	65	Participants will learn to apply mathematical principles to business transactions such as: cash and trade discounts, commissions, mark-ups, inventory control, depreciation, financial ratios, insurance, interest and present value, and annuities.	
10-Key Calculator	20	Covers the 10-key touch system using electronic calculators to solve business problems and applications.	
Accounting Procedures			300
The Accounting Cycle	50	Covers the accounting cycle and demonstrates the ability to complete the cycle in different types of business organizations.	
Cash and Banking	50	Participants learn to maintain a petty cash fund, prepare deposits, write checks, and reconcile bank statements	
Payroll	50	Prepare payroll register and employee earning records, calculate and journalize employer's payroll taxes. Prepare quarterly and annual reports.	
Sales and Purchasing	50	Participants learn to compute invoices, discounts and interest. Understand preparation of accounts receivable and accounts payable ledgers.	
Financial Statements Analysis	50	Compute and interpret data for trend analysis, component percentage analysis, and ratio analysis. Understand the procedure to analyze the earning's performance of a business.	
Computer Applications	50	Transfer mutual applications to the computer, process business documents of the accounting cycle using the computer, analyze input and output products.	
Computerized Accounting			600

# Cosmetology

#### Location

McPherson

## **Awards Offered**

ACSD Completion Certificate -Cosmetology

## **Entrance Requirements**

Testing for State Cosmetology License

Completed initial assignment

At least a class II with no pending DRs

Able to perform the basic job skills

Must meet all prerequisites required by the State of Arkansas

# **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		
A. A total of fifteen-hundred (1500	)) hours shall be re	equired in the cosmetology program and shall consist
of the following curricula:		
		Instructions is positivity statilization busines lighting and
		Instructions in sanitation, sterilization, hygiene, lighting and ventilation. General sanitation duties performed by students
	80	shall not exceed more than fifteen (15) minutes per day.
		Students are required to maintain their stations as warranted
Hygiene and Sanitation		and are responsible for their actions or mishaps.
		Physiotherapy or cosmetricity (pertaining to electricity used in
	120	cosmetology), Physiology and Histology Anatomy, Neurology,
Related Science		Myology and Osteology.
		A course in cleaning hair, shampooing, haircutting, clipping,
	1000	singeing, dying, tinting, bleaching, scalp massage, brushing and
	1000	combing, curling, permanent waving, and reconditioning hair,
Hairdressing		wiggery, thermal pressing, iron curling, chemical relaxing, etc.
		A course in the construction, filing and shaping of the
	100	fingernails, loosening and removing the dead cuticle and the
Manicuring		art of hand and arm massage. A course in the skin, various kinds of facial massage, cosmetics,
	100	packs, the art of makeup, eyebrow arching, eyebrow and
Aesthetics	100	eyelash dying.
Salasmanshin and Shan		Instruction in how to keep records, knowledge of business law,
Salesmanship and Shop	50	cosmetology law, rules and regulations, booking appointments,
Management		retailing, etc. Courtesy, neatness and professional attitude in meeting the
Shop Deportment	50	public.
B. All schools shall provide a minin	num of five (5) hoι	urs each week in theoretical instruction of reach
student enrolled. This requirement	t may be modified	by pro-rating the hours when necessary depending
upon the school schedule provided	l the student is rec	eiving quality theoretical instruction to prepare
him/her for examination.		
C. The time of the classroom instru		
D. Students shall not be permitted	to leave the class	room during theoretical instructions to work on
<u>clients.</u>		
		ents must acquire a minimum of one-hundred-eighty
(180) hours in theoretical instructi		
		rvices per week, for each student enrolled who has
	ours of instruction	n. Students shall be assigned to clients on the basis of
respective learning needs.		
Cosmetology		

# **Cosmetology Instructor**

#### Location

McPherson

## **Awards Offered**

ACSD Completion Certificate -Cosmetology Instructor

# **Entrance Requirements**

Testing for State Cosmetology Instructor's License

Able to perform the basic job skillsLicenseCompleted initial assignmentAt least a class II with no pending DRsMust meet all prerequisites required by the State of Arkansas

# **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

## **Entrance Requirements**

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

ServSafe Food Handler ServSafe Manager

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	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 D17:D29application 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.	

		Describes the different types of contamination - biological,	
Forms of Contamination	50	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

# **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 #	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,	
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 Equipmer	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				150
Operator Part 2				
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	

Heavy Equipment Operator Tota	I Hours			600
Dozer		35	awareness, good motor skills, and an understanding of basic applications.	
Backhoe		35	providing realistic training scenarios which develop safety	
Wheel Loader		35	start inspection, walk around inspection, control familiarization, and the safe operation of heavy equipment by	
Hydraulic Excavator		35	Participants will utilize the CAT simulator to become familiar with the operation of heavy equipment. Focus will be on pre-	
Heavy Equipment Operator Simulator Lab				140
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	
Track Type Tractor/Dozer			Machine walk around, controls familiarization, steering -wide, steering - narrow, blade steering, level & straight dozing, slot dozing, ripping, backfilling, and dozing over a highwall	

# Horticulture

## Location

NCU

# Entrance Requirements

Able to perform the basic job skills Completed initial assignment

At least a class II with no pending DRs

# **Awards Offered**

ACSD Completion Certificate -Horticulture

# **Program Description**

This is an entry level program that is designed to provide participants a fundamental understanding of the science of horticulture, food production, greenhouse and nursery crops, landscape management, and plant propagation.

Program Course	Hours	Course Description	Total
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,	
Introduction to Horticulture			130
Orientation to Horticulture	15	Introduces the horticulture industry and careers availed in the industry. Covers the necessary math and communication skills and the importance of teamwork.	

Safety in Horticulture	30	Discusses fundamental safety practices related to horticulture enterprises. Participants learn to identify hazards such as poison and chemicals, ladders and scaffolds, electric shock, fire, poisonous insects and snakes, equipment and tool hazards, spills and slips. Also cover the use of PPEs.	
Basic Plant and Soil Science: Plant Structure and Growth	60	Explores plant structures (roots, stems, leaves, flowers) and their functions, how plants are classified, the process of respiration, photosynthesis, and transpiration, environmental factors to plant growth (water, light temp. soil, climate zones), and plant growth media (natural soil, soil-less mix, nutrients, soil samples, fertilizer)	
Horticulture Structures	25	Describes the characteristics and features of different types of greenhouses including environmental controls, establishing a floor plan, and sanitation.	
Horticulture Plant Processes			190
Plant Propagation	50	Discusses sexual and asexual reproduction in plants, seed germination, interpreting a seed tag, demonstrates how to propagate plants from scarified or stratified seeds, identify and describe asexual reproduction techniques (grafting, budding, cuttings, and layering), identify common tools and chemical used in asexual reproduction and demonstrate safe use.	
Principles of Pest Management	40	Participants learn to identify physiological problems and plant pests (insects, wildlife, diseases, weeds), design an integrated pest management plan, and interpret safety and first aid precautions and formulations on pesticide labels. Identification of beneficial insects and how they benefit plants is also covered.	
Greenhouse Crops	60	This section covers the identification of greenhouse crops and common species of each type, to include cultural considerations such as : fertilizer, water, growing medium, pest control, temperature, chemical growth control and stimulation, and light controls.	
Olericulture Production	40	Describes characteristics of common vegetables grown for commercial production including: cultural requirements, direct seeding vs. transplanting, plant growth style, growing season, warm/cool season crops. Participants also identify and demonstrate the use of common tools land equipment used in gardening, and learn to prepare a seedbed.	
Greenhouse and Nursery Management			130
Plant Identification	35	Identify and describe the use of major plants associated with nursery and landscape operations	
Basic Marketing and Business Procedures	25	Describe and apply marketing and business practices associated with horticulture operations such as: maintaining an inventory of plants and supplies, developing a calendar for ordering materials and supplies, describe factors to consider in the pricing of products.	

Container and Field Crop Production	70	Discusses the principles of container and field crop production, advantage and disadvantages of container crop production vs. field crop production, identify and demonstrate the safe use of tools and equipment for container and field crop production.	
Landscape and Turfgrass			100
Landscape Design, Installation, and Maintenance	35	Describe and apply principles of landscape design, installation and maintenance including the safe use of equipment and hand tools used in landscape maintenance, the proper pruning of trees and shrubs, and the maintenance of trees, shrubs, and beds.	
Turfgrass Installation and Maintenance	35	Describe and apply principles of turfgrass installation including factors to consider when selecting a turfgrass for a specific area. Participants will also learn to identify and demonstrate the safe use and maintenance of tools used in the maintenance of turfgrass.	
Principles of Floristry	15	Identify and demonstrate the safe and proper use of tools and supplies used in floristry, learn to apply the basic design principles of balance, transition, rhythm, focal point, proportion, and, scale. Also introduces the basic procedure for receiving and storing of floral materials.	
Pomology Production	15	Discusses the principles of fruit and berry production in Arkansas.	
Horticulture Total Program Hours			600

# HVAC

## Location

EARU, Varner

# **Entrance Requirements**

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

# Awards Offered

NCCER Core NCCER Craft - HVAC ACSD Completion Certificate -

HVAC

# **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 #	Hours	Course Description	Total Hours
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: HVAC Level 1				240
Introduction to HVAC	03101	15	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	20	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	25	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	30	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	60	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	30	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	20	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	20	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	20	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.	
NCCER Craft: HVAC Level 2				232.5
Alternating Current	03206	10	Presents the basic concepts of alternating current generation and use. It also discusses how single- and three-phase alternating current is used to power resistive and inductive circuits in HVAC/R equipment. Various types of transformers used in HVAC systems are identified. The basic operation of single- and three-phase motors is explained. In addition, the process of safely testing AC-powered devices is covered.	
Compressors	03302	25	Presents refrigerant compressors. Since the compressor is considered the heart of any HVAC system, its good health and well-being are crucial to overall system performance and reliability. Compressors can take many forms, but they all perform the same basic function. They create the pressure differential in the system that allows refrigerant to move through the metering device and through the condenser and evaporator coils where heat is exchanged. Because the compressor is the most expensive component in most HVAC systems, it is important that technicians be able to correctly diagnose and correct problems that can affect compressor operation to avoid a costly compressor replacement.	

Refrigerants and Oils	03301	45	Discusses the refrigerants and oils used in modern refrigeration and air conditioning systems. Today, new technologies and stringent environmental laws are driving changes in the HVAC industry. Older refrigerants that damage the environment are being phased out and replaced with more environmentally- friendly refrigerants. These new refrigerants often require new compressor lubricating oils. These modern refrigerants and oils also have new handling and service requirements with which technicians must be familiar.
Leak Detection, Evacuation, Recovery, and Charging	03205	30	Provides trainees with guidance related to servicing the refrigerant circuit of HVAC systems. The four essential service tasks—leak detection, evacuation, recovery, and charging—are covered in detail. In addition, information related to the US EPA's requirements for providing these services in an environmentally sound manner are also provided. Developing the necessary skills to provide these services are vital to the future success of trainees in the HVAC/R trade. To that end, a significant amount of this module is devoted to hands-on practice and the successful completion of its required performance tasks.
Metering Devices	03303	15	Introduces metering devices used in the mechanical refrigeration cycle. The primary function of metering devices is presented, along with related components such as the distributor. The operation of capillary tube, fixed-orifice, and expansion-type metering devices is explored in detail. In addition, the process of selecting and installing thermal expansion valves specifically is covered.
Heat Pumps	03211	20	Introduces heat pumps, a very efficient form of electric heat. Compared to straight electric heat, heat pumps can consistently operate at higher energy efficiency. This module presents the operation of heat pump systems in detail with additional emphasis on the most common form of supplemental heat, electric resistance heating elements. The installation considerations of both split and packaged heat pumps systems are also reviewed.
Basic Maintenance	03215	20	An introduction to common tasks associated with the basic maintenance of HVACR systems. Specific tasks, such as lubrication and belt installation, are discussed in detail. In addition, the module describes the general procedures for performing inspections and periodic maintenance of gas furnaces and common cooling/heat pump systems, including how to complete the required documentation.
Chimneys, Vents, and Flues	03202	5	Covers the chimneys, vents, and flues that are used with fuel- burning furnaces and boilers. All fuel-burning appliances must have adequate air for complete combustion and must have a means to safely remove the products of combustion. Different types of fuel-fired furnaces and boilers have different and unique requirements for venting the products of combustion.

Sheet Metal Duct Systems	03213	10	Covers sheet metal duct systems. While other materials can be used to fabricate air ducts, sheet metal has been and continues to be one of the most popular materials for this purpose. Major advantages of sheet metal ducts systems include low resistance to airflow, strength, and durability. In addition to using time-tested assembly methods, modern sheet metal duct systems need to be sealed to prevent leakage of conditioned air, and insulated to prevent heat loss or heat gain through the walls of the duct.	
Fiberglass and Fabric Duct Systems	03214	7.5	Reviews the application and methods of fabricating fiberglass duct systems. In addition, the installation guidelines for installing a fiberglass system are presented, along with the methods to repair damaged components. The module concludes with coverage of fabric-based duct systems, which have become increasingly popular in a variety of applications.	
Commercial Airside Systems	03201	25	Introduces the air distribution systems used in commercial structures such as schools and office buildings that are divided into comfort heating and cooling zones. The module covers the various types of systems, as well as the air terminals and air source equipment used in these systems. Accessories commonly used with commercial systems are also covered.	
Air Quality Equipment	03204	5	Introduces the factors related to indoor air quality and human comfort. Since humidity is a common comfort factor for all types of buildings, the equipment used to control humidity is presented in detail. The module also covers the air filtration materials and the introduction of outside air into the indoor environment.	
Introduction to Hydronic Systems	03203	15	Introduces hydronic heating systems. In hydronic heating systems, fluids (typically water) are used to transfer heat. Fuels such as gas or oil are used to heat the water in a boiler. Pumps then circulate that heated water throughout the structure where terminal devices such as radiators release the heat into different areas.	
HVAC				600

# Landscape Construction and Design

#### Location

RLW

#### **Entrance Requirements**

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

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	Mod ID #	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,	
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.	
Landscape Construction and				472.5
Design Safety and First Aid		22.5	Provides instruction in basic first aid and demonstrates the safe operating procedures for tools and equipment commonly used in the care and maintenance of the lawns and gardens.	
Introduction to Landscape Design		40	Discussion and hands-on training in reading a landscape plan. Topics covered include: calculating materials needed for a job, interpreting plant, irrigation and equipment legend/keys, converting design dimensions to feet and inches, determine the north direction on a site.	
Landscape Plants		40	Introduces methods to determine which plants are best suited to site conditions based on: suitability of plants according to their sunlight, temperature, water, soil, and drainage requirements, contrasting the texture and form of plants in a landscape, and hazardous versus non-hazardous plants.	

Planting and Staking/Guying Techniques	20	Instructs how to properly prepare a planting site, determine planning depth, watering-in techniques, and water basin forming. Also teaches participants correct tree support: installation of tree stakes, ties and duck bill anchors, proper placement of stakes in prevailing wind, and proper place of wires relative to tree height.
Turf Basics	40	Covers soil preparation techniques such as soil amendments and proper grading techniques and how to calculate square footage of the site. Also teaches methods of installing sod, seed, and vegetative cover, determine a watering and fertilizing schedule, and differentiating between means to establish a lawn.
Maintenance of the lawns and athletic fields	50	Participants devise lawn/athletic field maintenance plans. Turf aerifying and power raking, weed identification and control and integrated pest management are covered.
Grading and Drainage	20	Provides instruction and practice in understating the topographical dimensions of a landscape plane. Interpreting a topographic map, using a builders level, and calibrating a slope are part of this module.
Irrigation	40	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 Equipment	40	Participants learn the proper use and maintenance needs of commonly used landscaping equipment.
Paver Installation	20	Covers basic skills required to create a walk or patio surface: brick laying, design interpretation, tools and materials, and math skills
Carpentry	40	Participants learn the carpentry skills needed to complete an aesthetically pleasing, safe, and functional landscape. Materials, decks, platforms, stairs, railings, seating, skirting, fencing, and walls are discussed.
Landscape Maintenance	100	Classroom instruction and real world practice in 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		6

# **Office Basics - Keyboarding**

#### Location

#### Awards Offered

ACSD Completion Certificate -

McPherson, ORCU, Pine Bluff

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	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,	

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**

Pet Care and Management

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 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	Hours	Course Description	Total Hours
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 fora 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 T	raining Sessions		35	
Pet Care and Management Pro	ogram Total Hours	Pet Care and Management Program Total Hours		

# Plumbing

#### Location

ORCU

# **Entrance Requirements**

Able to perform the basic job skills Completed initial assignment At least a class II with no pending DRs Awards Offered NCCER Core NCCER Craft - Plumbing Level 1 Plumbing Level 2

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 #	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,	

NCCER Core: Introduction to				77.5
Basic Construction Skills				//.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.	

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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 coper 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

#### **Entrance Requirements**

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

# **Awards Offered**

NCCER Core NCCER Craft -Carpentry Level 1, Fundamentals Framing and Finishing, Level 2 ACSD Completion Certificate -*Residential Carpentry* 

# **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 #	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,	
NCCER Core: Introduction to Basic Construction Skills				77.5

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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**

ACSD Completion Certificate -

**Residential Electricity** 

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 for employment in the electrical field. Participants learn the basic skills needed to be successful in a modern workplace.

Program Course	Mod ID #	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.	
NCCER Core: Introduction to Basic Construction Skills				77.5

Build Your Future in	00100	2.5	Details detailing different options in construction	
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 <sup>®</sup> . 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 <sup>®</sup> 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.	

Residential Electricity				600
Alternative Energy Systems		30	Introduces solar power, wind energy, and hydroelectric power.	
Maintaining and Troubleshooting a Residential Electrical Wiring System		30	Provides practice and instruction on inspecting and troubleshooting electrical wiring systems.	
Residential Electrical System - Trim-out		60	Focuses on lighting fixture installation, device installation, and service panel trim-out.	
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 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.	
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 Electricity Practicum				360
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 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 <sup>®</sup> requirements.	
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.	- -
Conductors and Cables	26109-17	10	Focuses on the types and applications of conductors and covers proper wiring techniques. Stresses the applicable NEC <sup>®</sup> requirement	
Wireways, Raceways, and Fittings	26108-17	20	Introduces the types and applications of raceways, wireways, and ducts. Stresses the applicable NEC <sup>®</sup> requirements.	

# WELDING

EARU,ORCU, Varner

### **Entrance Requirements**

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

### Awards Offered

NCCER Core NCCER Craft - Welding 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 #	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,	
NCCER Core: Introduction to				77.5
Basic Construction Skills				11.5
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				402.5
Welding Safety	29101-09	2.5	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	12.5	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	12.5	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 Describes non-destructive examination practices, situal inspections and causes. Describes non-destructive examination practices, visual inspection criteria, welder, inferioding and mediag safety. Equiants how to SMAW-Equipment and Setup   SMAW-Equipment and Setup 29107-09 5 Concertifies and explains using tools for cleaning welds.   Shielded Metal Arc Electrodes 29108-09 5 Concertifies and explains using tools for cleaning welds.   SMAW-Beads and Fillet Welds 29109-09 130 Describes the role of the American Welding Society (ASME) and the American Society of Mechanical Tegines is (ASME). Explains proper storage and control of filler metals and identifies to use of codes.   SMAW-Beads and Fillet Welds 29109-09 130 Describes the preparation and setup of arc welding equipment and the process of straking an arc. Explains how to check fit up and alignment and use of plate and pipe fit up and alignment tools to property prepare joists. Explains how to check fit up and alignment and use of plate and pipe fit up and alignment tools to property prepare joists. Explains how to check fit up and alignment and use of plate and pipe fit up and alignment tools to property prepare joists. Explains how to check fit up and alignment tools to property prepare joists. Explains how to check fit up and alignment and use of plate and pipe fit up and alignment tools to property prepare joists. Explains how to check fit up and alignment and use of plate and pipe fit up and alignment tools to property prepare joists. Explains how to check fit up and alignment and poor fit.   SMAW-Groove Welds with Backing<		<b>I</b>		,	
SMAW-Equipment and Setup 29107-09 5 connect welding current and setup arc welding equipment. Identifies and explains using tools for cleaning welds.   Shielded Metal Arc Electrodes 29108-09 5 Explains electrode chracteristics and different types of filler (AWS) and the American Society of Mechanical Engineers (AWS) and the American Society of Arc welding equipment.   SMAW-Beads and Fillet Welds 29109-09 130 Describes the proparation and setup of arc welding equipment correct arc blow. Describes how to make stringer, weave, overlapping beads, and fillet welds.   Joint Fit-Up and Alignment 29110-09 70 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 fitup and alignment tools to properly prepare joists. Explains how to check for joint misalignment and use of plate and pipe fitup and alignment tools to properly prepare joists. Explains how to check for joint   SMAW-Groove Welds 29112-09 90 Explains open v-groove welds and how to set up welding equipment for making gate. Explains how to check for joint   SMAW-Open V-Groove Welds 29112-09 90 Explains open v-groove welds. 70   GMAW - Equipment and Filler Metals 29205-15 5 Describes general safety p	Weld Quality	29106-09	10	welds. Identifies and explains weld imperfections and causes. Describes non-destructive examination practices, visual inspection criteria, welder qualification tests, and the	
Shielded Metal Arc Electrodes29108-095metals. Describes the role of the American Society of Mechanical Engineers (AWS) and the American Society of Mechanical Engineers (AWE) Explains proper storage and control of filler metals and identifies the use of codes.SMAW-Beads and Fillet Welds29109-09130Describes 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 Alignment29110-0970identifies and explains job code specifications. Describes use of 	SMAW-Equipment and Setup	29107-09	5	connect welding current and setup arc welding equipment.	
SMAW-Beads and Fillet Welds29109-09130and 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 Alignment29110-0970identifies 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 jointSMAW-Groove Welds with Backing29111-0940identifies 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 jointSMAW-Groove Welds with Backing29112-0990identifies 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 set up welding equipment for making open v-groove welds. Provides procedures for making flat, horizontal, vertical, and overhead open v-groove welds.70GMAW - Equipment and Filler Metals29205-155Sesribes general safety procedures for GMAW. Identifies GMAW equipment and how to set up and use GMAW equipment and filler Metals29209-1540GMAW - Plate29209-155Explains how to setup and use GMAW equipment.GTAW - Equipment and Filler Metals29207-155Explains GTAW safe	Shielded Metal Arc Electrodes	29108-09	5	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	
Joint Fit-Up and Alignment29110-0970fit-up gauges and measuring devices to check fit-up and alignment tools alignment and use of plate and upipe fit-up and alignment tools to properly prepare joists. Explains how to check for joint misalignment and poor fit.SMAW-Groove Welds with Backing29111-0940identifies and explains job code specifications. Describes use of fit-up gauges and measuring devices to check fit-up and alignment tools 	SMAW-Beads and Fillet Welds	29109-09	130	and the process of striking an arc. Explains how to detect and correct arc blow. Describes how to make stringer, weave,	
SMAW-Groove Welds with Backing29111-0940fit-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 Welds29112-0990Explains open v-groove welds and how to set up welding equipment for making open v-groove welds. Provides procedures for making open v-groove welds. Provides procedures for making flat, horizontal, vertical, and overhead open v-groove welds.70GMAW - Equipment and Filler Metals29205-155Describes general safety procedures for GMAW. Identifies GMAW equipment and how to clean GMAW welds.70GMAW - Plate29209-1540Explains how to set up and use GMAW equipment and how to clean GMAW welds.Explains how to set up and use GMAW equipment and how to clean GMAW welds.GTAW - Equipment and Filler Metals29207-155Explains GTAW safety. Identifies and shielding gases. Describes how to make multiple-pass fillet and V-groove welds on carbon steel plate in various positions.Frage of GTAW equipment.GTAW - Equipment and Filler Metals29207-155Explains GTAW safety. Identifies and explains the use of GTAW equipment.GTAW Plate29208-1520Secribes how to weld pad on carbon steel plate using GTAW and carbon steel filler metal. Also explains how to make multiple-pass GTAW filler welds on carbon steel plate using GTAW and carbon steel filler metal. Also explains how to make multiple-pass GTAW filler welds on carbon steel plate using GTAW and carbon steel filler metal. Also explains how to make multiple-pass GTAW filler welds on carbon st	Joint Fit-Up and Alignment	29110-09	70	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	
SMAW-Open V-Groove Welds29112-0990equipment for making open v-groove welds. Provides procedures for making flat, horizontal, vertical, and overhead open v-groove welds.70ICCER Craft: Introduction to Welding 270GMAW - Equipment and Filler Metals29205-155Describes 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.70GMAW - Plate29209-1540Explains how to set up and use GMAW equipment and how to clean GMAW welds.70GTAW - Equipment and Filler Metals29207-155Explains for the metals and shielding gases. Describes how to make multiple-pass fillet and V-groove welds on carbon steel plate in various positions.70GTAW - Equipment and Filler Metals29207-155Explains GTAW safety. Identifies and explains the use of GTAW equipment.70GTAW Plate29208-1520Describes how to build pad on carbons steel plate using GTAW and carbon steel filler metal. Also explains how to make multiple-pass GTAW fillet welds on carbon steel plate coupons in the 1F, 2F, 3F, and 4F positions, and how to make GTAW V-groove welds in the 1G, 2G, 3G, and 4G positions.		29111-09	40	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	
GMAW- Equipment and Filler Metals29205-155Describes 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 - Plate29209-1540Explains 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.GTAW - Equipment and Filler Metals29207-155Explains GTAW safety. Identifies and explains the use of GTAW equipment, filler metals, and shielding gases. Covers the setup of GTAW equipment.GTAW Plate29208-1520Describes how to build pad on carbons steel plate using GTAW and carbon steel filler metal. Also explains how to make multiple-pass GTAW fillet welds on carbon steel plate coupons 	SMAW-Open V-Groove Welds	29112-09	90	equipment for making open v-groove welds. Provides procedures for making flat, horizontal, vertical, and overhead	
GMAW - Equipment and Filler Metals29205-155GMAW 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 - Plate29209-1540Explains 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.GTAW - Equipment and Filler Metals29207-155Explains GTAW safety. Identifies and explains the use of GTAW equipment, filler metals, and shielding gases. Covers the setup of GTAW equipment.GTAW Plate29208-1520Describes how to build pad on carbons steel plate using GTAW and carbon steel filler metal. Also explains how to make multiple-pass GTAW fillet welds on carbon steel plate coupons in the 1F, 2F, 3F, and 4F positions, and how to make GTAW V- groove welds in the 1G, 2G, 3G, and 4G positions.	NCCER Craft: Introduction to Wel	ding 2			70
GMAW - Plate29209-1540select 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.GTAW - Equipment and Filler Metals29207-155Explains GTAW safety. Identifies and explains the use of GTAW equipment, filler metals, and shielding gases. Covers the setup of GTAW equipment.GTAW Plate29208-1520Describes how to build pad on carbons steel plate using GTAW and carbon steel filler metal. Also explains how to make multiple-pass GTAW fillet welds on carbon steel plate coupons in the 1F, 2F, 3F, and 4F positions, and how to make GTAW V- groove welds in the 1G, 2G, 3G, and 4G positions.		29205-15	5	GMAW equipment and explains the filler metals and shielding gases used to perform GMAW. Explains how to set up and use	
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Velding 600	GTAW Plate	29208-15	20	and carbon steel filler metal. Also explains how to make multiple-pass GTAW fillet welds on carbon steel plate coupons in the 1F, 2F, 3F, and 4F positions, and how to make GTAW V-	
	Welding				600