



2020-2021

**PROGRAM GUIDE FOR: NEWLY ADOPTED COURSE
OF STUDY**

AGRICULTURE,

FOOD AND NATURAL RESOURCES CLUSTER,

AND

ARGISCIENCE MIDDLE SCHOOL



JUNE 30, 2020

ALSDE

CAREER AND TECHNICAL EDUCATION

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Career Pathway Program	SCED CODE	General Agriculture Program Pathway (Must teach three courses from this program list within two years) This program is designed to deliver a variety of agricultural disciplines which will provide students a general understanding of the scope of agriculture as it relates to the following areas: animal science, plant science, food science, forestry and wildlife sciences, agricultural construction and agricultural mechanics.		
Code Number	Code Number	Career Program Pathway Courses	Career Readiness Indicator (CRI)	Workforce Careers
		Fundamentals of Agriscience	<ul style="list-style-type: none"> • NCCER Core • Urban Forestry Technician • Landscape Management Technician • Landscape Design (LD) Permit • Landscape Design and Plant Materials Certification • Integrated Pest Management Certification • Forestry Worker Certification • Adult Beef Quality Assurance (BQA – all three areas required): <ol style="list-style-type: none"> 1. Cow/Calf 2. Feed yard 3. Stocker • Briggs and Stratton Technician (Two of the following areas REQUIRED) <ol style="list-style-type: none"> 1. Theory of Operation 2. Carburetors and Fuel Systems 3. Governors 4. Compression 5. Ignition Systems • Construction and Skilled Trade Assessment (CAST) • Specialty Crops • Aquaculture Training and Online Learning (ATOLL) Aquaculture or Aquaponics • MSSC – Certified Production Technician (CPT): Each module will count as a CRI. The CPT 4.0 program consists of five individual certificate assessments: <ol style="list-style-type: none"> 1. Safety 2. Quality Practices & Measurement 3. Manufacturing Processes & Production 4. Maintenance Awareness 	<ul style="list-style-type: none"> • Agriscience Teacher • Construction Manager • Post-Secondary Agricultural Sciences Teacher • Agricultural Equipment Operator • Warehouse Facility Manager • Food Quality Assurance • USDA Inspector • Construction Laborer • Maintenance Technician • Agricultural Engineer • Welder • Plumber • Electrician • HVAC Technician • Industrial Maintenance Technician • Agricultural Sales
		Intermediate Agriscience		
		Advanced Agriscience		
		Applied Agricultural Mechanics		
		Agribiology		
		Agricultural and Biosystems Engineering		
		Agricultural Industrial Maintenance		
		Agricultural Communications and Technology		
		Agricultural Marketing and Management		
		Aquaculture Science		
		Fish and Wildlife Management		
		Food Safety and Microbiology		
		Forestry		
		Forestry Industrial Maintenance (Requires Agricultural Industrial Maintenance as a prerequisite)		
		Horticulture Science		
		Introduction to Agricultural Construction		
		Introduction to Animal and Dairy Science		
		Poultry Science		
		Poultry Industrial Maintenance (Requires Agricultural Industrial Maintenance as a prerequisite)		
		CTE Lab in AFNR		
		Career Pathway Project in AFNR (Must successfully complete any two courses in the AFNR Cluster as a prerequisite to this course)		
		<i>Elective courses may be added from within the Agriculture, Food and Natural Resources Cluster course list – See complete listing on page 4</i>		

Career Pathway Program	SCED CODE	Animal Science Program Pathway (Must teach three courses from this program list within two years) This program is designed to provide students with an understanding of livestock management, veterinary science, poultry science, equine science and food processing.		
Code Number	Code Number	Career Pathway Program Courses	Career Readiness Indicator (CRI)	Workforce Careers
		Fundamentals of Agriscience	<ul style="list-style-type: none"> • Adult Beef Quality Assurance (BQA – all three areas successfully completed and required): <ul style="list-style-type: none"> ○ Cow/Calf ○ Stocker ○ Feed yard • Aquaculture Training and Online Learning (ATOLL) Aquaculture or Aquaponics • MSSC – Certified Production Technician (CPT): Each module will count as a CRI. The CPT 4.0 program consists of five individual certificate assessments: <ol style="list-style-type: none"> 1. Safety 2. Quality Practices & Measurement 3. Manufacturing Processes & Production 4. Maintenance Awareness 	<ul style="list-style-type: none"> • Food Science Technician • Farm Worker • Artificial Insemination Technician • Veterinarian • Veterinary Technician • Farm Products Purchasing Agent • Agricultural Sales • Non-Farm Animal Worker • Livestock Manager • Poultry Operator • Ag Field Service Representative • Food Quality Assurance • USDA Inspector
		Agricultural and Biosystems Engineering		
		Agribiology		
		Agricultural Industrial Maintenance		
		Aquaculture Science		
		Aquatic Biology		
		Equine Science		
		Food Safety and Microbiology		
		Introduction to Veterinary Science		
		Introduction to Animal and Dairy Science		
		Poultry Industrial Maintenance (Requires Agricultural Industrial Maintenance as a prerequisite)		
		Poultry Science		
		Veterinary Science		
		CTE Lab in AFNR		
		Career Pathway Project in AFNR (Must successfully complete any two courses in the AFNR Cluster as a prerequisite to this course)		
		<i>Elective courses may be added from within the Agriculture, Food and Natural Resources Cluster course list – See complete listing on page 4</i>		

Career Pathway Program	SCED CODE	Plant Science Program Pathway (Must teach three courses from this program list within two years) This program is designed to provide students with an understanding of the greenhouse, horticulture and nursery/landscape industries.		
Code Number	Code Number	Career Pathway Program Courses	Career Readiness Indicator (CRI)	Workforce Careers
		Fundamentals of Agriscience	<ul style="list-style-type: none"> • Landscape Management Technician • Urban Forestry Technician • Setting of Landscape Plans (SLP) Permit • Tree Surgery (TS) Permit • Landscape Design (LD) Permit • Landscape Design and Plant Materials Certification • Forestry Worker Certification • Turfgrass Management Certification • Specialty Crops 	<ul style="list-style-type: none"> • Chemical Engineer • Soil Scientist • Pesticide Handler/Applicator • Pest Control Worker • Landscape Designer • Landscape Worker • Agronomy Sales • Golf Course Superintendent • Turfgrass Producer • Lab Technician • Florist • Florist Worker • Event Planner
		Agricultural and Biosystems Engineering		
		Agribiology		
		Agricultural Industrial Maintenance		
		Dendrology		
		Floriculture and Floral Design		
		Food Safety and Microbiology		
		Forestry		
		Forestry Industrial Maintenance		
		Greenhouse and Nursery Production		
		Horticulture Science		
		Landscape Design and Management		
		Plant Biotechnology		
		Turfgrass Management		
		Urban Forestry		
		CTE Lab in AFNR		
		Career Pathway Project in AFNR (Must successfully complete any two courses in the AFNR Cluster as a prerequisite to this course)		
		<i>Elective courses may be added from within the Agriculture, Food and Natural Resources Cluster course list – See complete listing on page 4</i>		

Career Pathway Program	SCED CODE	Environmental and Natural Resources Program Pathway (Must teach three courses from this program list within two years) This program is designed to provide students with an understanding of the greenhouse, horticulture and nursery/landscape industries.		
Code Number	Code Number	Career Pathway Program Courses	Career Readiness Indicator (CRI)	Workforce Careers
		Fundamentals of Agriscience	<ul style="list-style-type: none"> • NCCER Core (Only) • Urban Forestry Technician • Integrated Pest Management Certification • Forestry Worker Certification • Tree Surgery (TS) Permit • MSSC – Certified Production Technician (CPT): Each module will count as a CRI. The CPT 4.0 program consists of five individual certificate assessments: <ol style="list-style-type: none"> 1. Safety 2. Quality Practices & Measurement 3. Manufacturing Processes & Production 4. Maintenance Awareness 	<ul style="list-style-type: none"> • Forester • Environmental Engineer • Forest and Conservation Worker • Conservation Officer • Lab Technician • Hunters and Trappers • Wildlife Biologist • Soil Scientist • Professional Fisherman • Logger • Recreation Worker
		Agricultural and Biosystems Engineering		
		Agricultural Industrial Maintenance		
		Dendrology		
		Environmental Management		
		Fish and Wildlife Management		
		Forestry		
		Forestry Industrial Maintenance		
		Urban Forestry		
		Wildland Firefighting and Controlled Fire		
		CTE Lab in AFNR		
		Career Pathway Project in AFNR (Must successfully complete any two courses in the AFNR Cluster as a prerequisite to this course)		
		<i>Elective courses may be added from within the Agriculture, Food and Natural Resources Cluster course list – See complete listing on page 4</i>		

Career Pathway Program	SCED CODE	Industrial Agriculture Program Pathway (Must teach three courses from this program list within two years) This program is designed to provide students with a general understanding of agricultural power equipment and modern construction and building practices along with a basic understanding of metal fabrication and welding.		
Code Number	Code Number	Career Pathway Program Courses	Career Readiness Indicator (CRI)	Workforce Careers
		Fundamentals of Agriscience	<ul style="list-style-type: none"> • NCCER Core • NCCER Carpentry Level 1 • NCCER Welding Level 1 • MSSC – Certified Production Technician (CPT): Each module will count as a CRI. The CPT 4.0 program consists of five individual certificate assessments: <ol style="list-style-type: none"> 1. Safety 2. Quality Practices & Measurement 3. Manufacturing Processes & Production 4. Maintenance Awareness 	<ul style="list-style-type: none"> • Construction Laborer • Agricultural Contractor • Pipe Layer • Welder • Electrician • Plumber • Industrial Maintenance Technician • HVAC Technician • Agricultural Engineer • Construction Manager • Mechanical Drafter
		Agricultural and Biosystems Engineering		
		Agricultural Engines		
		Agricultural Industrial Maintenance		
		Agricultural Welding 1		
		Agricultural Welding 2		
		Introduction to Agricultural Wiring		
		Construction Finishing and Interior Systems		
		Construction Framing		
		Construction Site Prep and Foundations		
		Forestry Industrial Maintenance		
		Introduction to Agricultural Construction		
		Poultry Industrial Maintenance		
		Residential and Commercial Power Equipment		
		Career Pathway Project in AFNR (Must successfully complete any two courses in the AFNR Cluster as a prerequisite to this course)		
		<i>Elective courses may be added from within the Agriculture, Food and Natural Resources Cluster course list – See complete listing on page 4</i>		

Career Pathway Program	SCED CODE	Middle School Program Pathway (Must teach three courses from this program list within two years) This program is designed to provide students with a general understanding of agricultural power equipment and modern construction and building practices along with a basic understanding of metal fabrication and welding.		
Code Number	Code Number	Career Pathway Program Courses	Career Readiness Indicator (CRI)	Workforce Careers
		Orientation to Agriscience (6 th Grade)		Middle School
		Agriscience Exploration (7 th Grade)		
		PreAgriscience (8 th Grade)		
		Fundamentals of Agriscience (Recommended 9 th Grade)		
		<i>Elective courses may be added from within the Agriculture, Food and Natural Resources Cluster course list – See complete listing on page 4</i>		

Subject and Personnel Codes**Agriculture, Food and Natural Resources
and Agriscience Middle School Program**

This cluster prepares students for employment in career pathways that relate to the \$70 billion plus industry of agriculture. The mission of agriscience education is prepare students for successful careers and a lifetime of informed choices in the global agriculture, food, fiber and natural resources systems. There are 6 program areas in this cluster: General Agriculture, Animal Science, Plant Science, Environmental and Natural Resource Systems, Industrial Agriculture and Middle School.

Agriculture, Food and Natural Resources Cluster Courses (Grades 9-12)			
Code Number	Course Name	Code Number	Course Name
	Advanced Agriscience		Floriculture and Floral Design
	AgriBiology *		Food Safety and Microbiology
	Agricultural Engines		Forestry
	Agricultural Industrial Maintenance		Forestry Industrial Maintenance
	Agricultural Welding Processes 1		Fundamentals of Agriscience
	Agricultural Welding Processes 2		Greenhouse and Nursey Production
	Agriculture and Bio systems Engineering		Horticultural Science
	Agriculture Communications and Technology		Intermediate Agriscience
	Agriculture Marketing and Management		Introduction to Agricultural Construction
	Applied Agriscience		Introduction to Agricultural Wiring
	Aquaculture Science *		Introduction to Animal and Dairy Science
	Aquatic Biology		Introduction to Veterinary Science
	Career Pathway Project in Agriculture, Food, and Natural Resources		Landscape Design and Management
	Construction Finishing and Interior Systems		Plant Biotechnology
	Construction Framing		Poultry Industrial Maintenance
	Construction Site Prep and Foundations		Poultry Science
	CTE Lab in Agriculture, Food and Natural Resources		Residential and Commercial Power Equipment
	Dendrology		Turfgrass Management
	Environmental Management		Urban Forestry
	Equine Science		Veterinary Science
	Fish and Wildlife Management		Wildland Firefighting and Controlled Fire
	MIDDLE SCHOOL PROGRAM COURSES		
	Orientation to Agriscience (6 th Grade)		
	Agriscience Exploration (7 th Grade)		
	PreAgriscience (8 th Grade)		

Note: The course of study with content standards are located on the agriscience program page:

<https://alabamaffa.org/wp-content/uploads/2020/04/Final-2020-AFNR-COS.pdf>