PROGRAM CONCENTRATION: Architecture, Construction, Communications & Transportation

CAREER PATHWAY: Construction

This Pathway is designed to prepare a student with foundational knowledge and skills for a construction career in one of four possible construction crafts. It also is a good pathway for a student to prepare for a variety of opportunities in addition to the craft areas, such as Architecture, Construction Engineering and Construction Management.

As the student progresses through the pathway, they are given the opportunity to explore four construction craft areas on an introductory level. Once they have completed the foundational and introductory levels they are then given the option to “major” in at least one of four craft areas. These areas are Carpentry, Masonry, Electrical, and Plumbing. Upon successful completion of four units within this Pathway, in an Industry Accredited Program, the student will earn at least two industry credentials with the possibility of others.
The Construction Career Pathway Map

Occupational Safety and Fundamentals

Introduction to Construction

- CARPENTRY I
- CARPENTRY II

- ELECTRICAL I
- ELECTRICAL II

- MASONRY I
- MASONRY II

- PLUMBING I
- PLUMBING II

- Apprenticeship
- Technical College
- Carpentry/Cabinetry
- Construction Management
- Architecture
- Superintendent
- General Contractor
- Remodeling Trades
- Entrepreneur

- Apprenticeship
- Technical College
- Electrical
- Electrical Project Mgt.
- Communications Cabling
- Electrical Engineer
- Security Systems Installer
- Entrepreneur

- Apprenticeship
- Technical College
- Masonry
- Project Management
- Structural Engineer
- Entrepreneur

- Apprenticeship
- Technical College
- Plumbing
- Pipe Fitter
- Project Manager
- Sprinkler Fitter
- Entrepreneur
PROGRAM CONCENTRATION: Architecture, Construction, Communications & Transportation
CAREER PATHWAY: Construction
COURSE TITLE: Introduction to Construction

This course is preceded by the Occupational Safety and Fundamentals course. This course offers an opportunity for students to build on their knowledge and skills developed in Occupational Safety. It introduces them to four construction craft areas and is also the second step towards gaining a Level One Industry Certification in one of the craft areas.

The goal of this course is to introduce students to the history and traditions of the carpentry, masonry, plumbing, and electrical craft trades. Students will explore how the various crafts have influenced and been influenced by history. The student will also learn and apply knowledge of the care and safe use of hand and power tools as related to each trade. In addition, students will be introduced to, and develop skills to differentiate between blueprints, as is related to each individual craft area.

ACT-IC-1. Students will explain history and traditions of the four building trades.
   a. Explain the history of carpentry, masonry, plumbing, and electrical.
   b. Associate the history of the trades with other events in history.
   c. Demonstrate a basic understanding of the history of the tools related to each craft.

ACADEMIC STANDARDS:

SSCG4. The student will demonstrate knowledge of the organization and powers of the national government.

SSCG15. The student will explain the functions of the departments and agencies of the federal bureaucracy.

SSWH7. The student will analyze European medieval society with regard to culture, politics, society, and economics.

SSWH9. The student will analyze change and continuity in the Renaissance and Reformation.

SSEM13. The student will explain how markets, prices and competition influence economic behavior.

ELA9RL5. Student understands and acquires new vocabulary and uses it correctly in reading and writing.
ACT-IC-2. Students will identify and use the basic tools used in the four building trades.

a. Demonstrate knowledge of safety as related to the basic tools of the four trade areas.
b. Demonstrate basic knowledge of the care and maintenance of these tools.
c. Demonstrate knowledge of proper application for each tool.

ACADEMIC STANDARDS:

MC1P3. Students will communicate mathematically.

SSCG15. The student will explain the functions of the departments and agencies of the federal bureaucracy.

ELA9RC4. The student establishes a context for information acquired by reading across subject areas.

ACT-IC-3. Students will differentiate between the four building trade’s plans and specifications.

a. Demonstrate basic knowledge of the specific types of plans and drawings.
b. Demonstrate knowledge of the differences in symbols between the four building trades.
c. Demonstrate knowledge of the terms and abbreviations for each building trade area.

ACADEMIC STANDARDS:

MC1P3. Students will communicate mathematically.

MC1P4. Students will make connections among mathematical ideas and to other disciplines.

SSCG15. The student will explain the functions of the departments and agencies of the federal bureaucracy.

SSCG18. The student will demonstrate knowledge of the powers of Georgia’s state and local governments.

ELA9C1. The student demonstrates understanding and control of the rules of the English language, realizing that the usage involves appropriate applications of conventions and grammar in both written and spoken formats.
CTAE Foundation Skills

The Foundation Skills for Career, Technical and Agricultural Education (CTAE) are critical competencies that students pursuing any career pathway should exhibit to be successful. As core standards for all career pathways in all program concentrations, these skills link career, technical and agricultural education to the state’s academic performance standards.

The CTAE Foundation Skills are aligned to the foundation of the U. S. Department of Education’s 16 Career Clusters. Endorsed by the National Career Technical Education Foundation (NCTEF) and the National Association of State Directors of Career Technical Education Consortium (NASDCTEc), the foundation skills were developed from an analysis of all pathways in the sixteen occupational areas. These standards were identified and validated by a national advisory group of employers, secondary and post secondary educators, labor associations, and other stakeholders. The Knowledge and Skills provide learners a broad foundation for managing lifelong learning and career transitions in a rapidly changing economy.

CTAE-FS-1 Technical Skills: Learners achieve technical content skills necessary to pursue the full range of careers for all pathways in the program concentration.

CTAE-FS-2 Academic Foundations: Learners achieve state academic standards at or above grade level.

CTAE-FS-3 Communications: Learners use various communication skills in expressing and interpreting information.

CTAE-FS-4 Problem Solving and Critical Thinking: Learners define and solve problems, and use problem-solving and improvement methods and tools.

CTAE-FS-5 Information Technology Applications: Learners use multiple information technology devices to access, organize, process, transmit, and communicate information.

CTAE-FS-6 Systems: Learners understand a variety of organizational structures and functions.

CTAE-FS-7 Safety, Health and Environment: Learners employ safety, health and environmental management systems in corporations and comprehend their importance to organizational performance and regulatory compliance.

CTAE-FS-8 Leadership and Teamwork: Learners apply leadership and teamwork skills in collaborating with others to accomplish organizational goals and objectives.
CTAE-FS-9 Ethics and Legal Responsibilities: Learners commit to work ethics, behavior, and legal responsibilities in the workplace.

CTAE-FS-10 Career Development: Learners plan and manage academic-career plans and employment relations.

CTAE-FS-11 Entrepreneurship: Learners demonstrate understanding of concepts, processes, and behaviors associated with successful entrepreneurial performance.