

# GILES COUNTY TECHNOLOGY CENTER STUDENT/PARENT PLANNING GUIDE 2018-19

## Career Pathways



# *Giles County Technology Center*

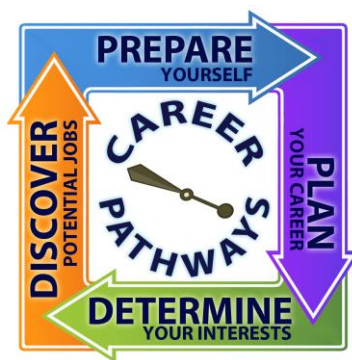
## **Career Pathways**

The Career and Technical Education (CTE) programs at Giles County Technology Center offer students career pathways to achieve their goals of employment and further education. Your career pathway is the unique route you choose, from the many routes available, to reach your career goals. Giles High School and Narrows High School students can get on the fast track to higher learning and higher wages through a career pathway that includes a technical education program at the Tech Center. The career pathways offered at Giles County Technology Center are Architecture & Construction; Health Science; Human Services; Information Technology; Manufacturing; Science, Technology, Engineering & Mathematics (STEM); and Transportation.

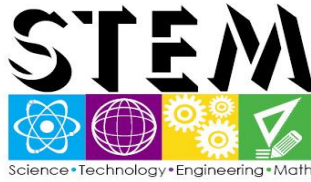
Career pathways include a technical education program with academics that prepare a student for career and college readiness. Other essential elements of the career pathways at Giles County Technology Center are strong connections with business and industry, dual enrollment with New River Community College and industry certification or state licensure. Also all seniors develop employment and college success skills through a course taught by the Career Counselor at Giles County Technology Center.

In this planning guide the technical programs are listed under the career pathway they are associated with. Each program will have a brief description, a list of occupational objectives the pathway supports, a general schedule for Standard Diploma option, dual enrollment information and the industry certifications or license students may earn through the program. There are, as well, STEM options for the technical programs at Giles County Technology Center. STEM course options are outlined on the next page.

Career Counseling services are available to all Giles County students grades 8-12. Each year students will participate in career activities that will offer opportunities for career exploration. The Career Counselor, Tonya Vaden, is located at Giles County Technology Center and may be contacted at 921-1166 or tvaden@gilesk12.net.



**STEM (Science, Technology, Engineering & Mathematics)** scheduling options are identified in the chart below for those students that wish to pursue high tech/high skilled careers that require an Associates, Bachelors or higher degree.



*The STEM academic options are marked with an \*. Students should take the highest levels of Math, Science and English for STEM.*

Grade 9	Grade 10	Grade 11	Grade 12
English (CP*)	English (CP*)	English (CP*)	English (CP or NRCC*)
Algebra I	Geometry	Algebra II* or Alg Functions & Data Analysis	Adv Algebra/ Trigonometry*
Earth Science	Biology I	Chemistry*	Biology II* or Ecology
World History I	World History II	VA/US History (NRCC*)	Government
<b>Career &amp; Technical Education Courses</b>			
Economics & Personal Finance	General Mechanics	Tech Center Program for Two Years*	
Agriculture	Construction	(Automotive Service Technology, Building Trades,	
Intro to Technology	Woodworking	Computer Systems Technology, Cosmetology,	
	Agriculture	Drafting/Pre-engineering, Machine Technology,	
	Computer	Welding, Nursing Assistant and Practical Nursing)	
	Information Systems		



Giles County Technology Center offers dual enrollment with New River Community College for many of the technical programs. Dual enrolled community college

course(s) are identified under each program. Dual enrollment is restricted to high school juniors and seniors. All students admitted to NRCC through dual enrollment must demonstrate readiness for college, meet the applicable college placement requirements and parental permission is required. Teachers will review dual enrollment policy and procedures and assist students with the admission application.



**BUILDING TECHNOLOGY.** Two year program for students in grades 11 & 12. The program trains students in the building and repair of residential homes including excavation layout, laying block, carpentry, electrical wiring and plumbing. Students gain hands on experience through building projects that have included modular homes and storage buildings.

**Occupational Objectives:** Bricklayer, Carpenter, Concrete Mason, Construction Laborer, Drywall Installer, Construction Manager, Electrician, Flooring Installer, Insulator, Home Inspector, Plumber, Painter, General Contractor, Cost Estimator, Building Maintenance Laborer

**Academic Courses for Standard Diploma.**

Grade 9	Grade 10	Grade 11	Grade 12
English	English	English	English
Algebra I	Geometry	Algebra II or Algebra Functions & Data Analysis	
Earth Science	Biology I	Ecology	
World History I		VA/US History	Government

**Career & Technical Education Courses**

Economics & Personal Finance	General Mechanics Construction	Building Trades I 3 credits	Building Trades II 4 credits
Agriculture Intro to Technology	Woodworking Agriculture		

**Dual Enrollment:** BLD 110 – Introduction to Construction (3 credits)  
BLD 125 – Introduction to Carpentry (3 credits)

**Certifications:** OSHA 10 Hour Construction Safety Training  
SkillsUSA Workforce Connect - Carpentry Skills Assessment



**COMPUTER SYSTEMS TECHNOLOGY.** Two year program for students in grades 11 and 12. Students learn to construct, troubleshoot, service, and repair computer systems, related components and software, and install and maintain local area networks. Students will be exposed to the basics of Cyber Security.

**Occupational Objectives:** Computer Technician, Computer Network Technician, Computer Support Specialist

**Academic Courses for Standard Diploma.**

Grade 9	Grade 10	Grade 11	Grade 12
English	English	English	English
Algebra I	Geometry	Algebra II or Algebra Functions & Data Analysis	
Earth Science	Biology I	Ecology	
World History I		VA/US History	Government

**Career & Technical Education Courses**

Economics & Personal Finance	Desktop Publishing Advanced Computer Information Systems	Computer Systems Technology I 3 credits	Computer Systems Technology II 4 credits
Computer Information Systems			

**Dual Enrollment:** ITN 107 – Personal Computer Hardware & Troubleshooting (4 credits)  
ITN 106 – Microcomputer Operating Systems (4 credits)  
ITN 101 – Introduction to Network Concepts (3 credits)

**Certifications:** OSHA 10 Hour General Industry Safety Training  
SkillsUSA Workforce Connect – Computer Maintenance Technology Skills Assessment



**AUTOMOTIVE SERVICE TECHNOLOGY.** Two year program for students in grades 11 & 12. The program trains students in the repair and troubleshooting of cars and light trucks. Students learn to use tools and equipment to diagnose and repair problems in engines, suspensions, exhaust, transmission and electrical systems.

**Occupational Objectives:** Automotive Technician, Automotive Specialty Technician & Mechanics, Aircraft Mechanic, Automobile Salesperson, Automotive Parts Salesperson, Farm & Heavy Equipment Technician, Industrial Machinery Mechanic, Race Car Technician, Recreation Vehicle Service Technician, Tow Truck Driver, Motor Vehicle Inspector

**Academic Courses for Standard Diploma.**

Grade 9	Grade 10	Grade 11	Grade 12
English	English	English	English
Algebra I	Geometry	Algebra II or Algebra Functions & Data Analysis	
Earth Science	Biology I	Ecology	
World History I		VA/US History	Government

**Career & Technical Education Courses**

Economics & Personal Finance	General Mechanics Agriculture	Auto Service Technology I 3 credits	Auto Service Technology II 4 credits
Agriculture Intro to Technology			

**Dual Enrollment:** AUT 101 – Introduction to Automotive Systems (4 credits)  
AUT 265 – Automotive Braking Systems (4 credits)

**Certifications:** OSHA 10 Hour General Industry Safety Training  
ASE Student Certifications



**COSMETOLOGY.** Two year program for students in grades 11 & 12. The program prepares students for state licensing as cosmetologists. Instruction includes, hair styling techniques, hair cutting, permanent waving and chemical straightening, hair coloring and hair lightening, nail technology, skin esthetics and makeup techniques, scalp and hair care. Professional ethics, beauty salon management, customer relations and retailing are also covered.

**Occupational Objectives:** Hairstylist, Nail Technician, Image Consultant, Makeup Artist, Esthetician

**Academic Courses for Standard Diploma.**

Grade 9	Grade 10	Grade 11	Grade 12
English	English	English	English
Algebra I	Geometry	Algebra II or Algebra Functions & Data Analysis	
Earth Science	Biology I	Ecology	
World History I		VA/US History	Government

**Career & Technical Education Courses**

Economics & Personal Finance Life Skills I	Computer Information Systems Child Development/ Family Relations	Cosmetology I 3 credits Accounting I	Cosmetology II 4 credits
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**Dual Enrollment:** Not Applicable

**License:** Cosmetology through the Virginia Board of Cosmetology



**NURSING ASSISTANT.** A one year program for students in either grade 11 or 12. The program provides training in the provision of basic care needs of patients/residents, measuring and recording vital signs, and CPR instruction. Students take the state competency exam after successful completion of this program to be a Certified Nursing Assistant. This program is required to be admitted to the Licensed Practical Nursing program.

**Occupational Objectives:** Certified Nursing Assistant, Home Health Aide

**Academic Courses for Standard Diploma.**

Grade 9	Grade 10	Grade 11	Grade 12
English	English	English	English
Algebra I	Geometry	Algebra II or Algebra Functions & Data Analysis	
Earth Science	Biology I	Ecology	
World History I		VA/US History	Government

**Career & Technical Education Courses**

Economics & Personal Finance	Computer Information Systems	Nursing Assistant I & II 3 credits	Licensed Practical Nursing 4 credits
Life Skills I	Child Development/ Family Relations		

**Dual Enrollment:** NUR 27 – Nurse Aide I (5 credits)

**Certification:** Nursing Assistant through the Virginia Board of Nursing



**LICENSED PRACTICAL NURSING.** Two year program starting in 12<sup>th</sup> grade and student completing the program a year after high school graduation. This program provides training in the care of patients of all ages, in various stages of sickness or wellness, and with a variety of disease conditions. Instruction includes Human Anatomy and Physiology, Nursing Fundamentals I and II, Nutrition, Pharmacology, Medical Surgical Nursing, Psych Nursing, Maternal and Pediatric Nursing, as well as other subject matters. The first nine months is an academic school year taught at the Tech Center in the afternoon. The second nine month session is theory three days a week and clinical experience at various health care facilities two days a week. *Pre-requisites for high school students includes: 1) Enroll and pass with at least a B average in each course of Nursing Assistant I and II in their junior year, 2) pass the Virginia Nursing Assistant certification exam, 3) Obtain satisfactory scores on the Practical Nursing pre-entrance test.*

**Occupational Objectives:** Licensed Practical Nurse, Registered Nurse

**Academic Courses for Standard Diploma.**

Grade 9	Grade 10	Grade 11	Grade 12
English	English	English	English
Algebra I	Geometry	Algebra II or Algebra Functions & Data Analysis	
Earth Science	Biology I	Biology II	Chemistry
World History I		VA/US History	Government

**Career & Technical Education Courses**

Economics & Personal Finance	Computer Information Systems	Nursing Assistant I & II 3 credits	Licensed Practical Nursing 4 credits
Life Skills I	Child Development/ Family Relations		

**Dual Enrollment:** Not Applicable

**License:** Licensed Practical Nursing through the Virginia Board of Nursing





**DRAFTING/PRE-ENGINEERING.** Two year program for students in grades 11 & 12. Each student will be exposed to Architectural, Electrical, Structural, and Mechanical drawings. Students are also introduced to 3D Animation. During the second year students will be given problems to solve where one researches, designs, drafts, and constructs their ideas. This is a class where students actually have freedom to create and build their designs.

**Occupational Objectives:** CAD Specialist, CAD Technician, Mechanical Drafter/Engineer, Architectural Drafter/Architect, 3D Solid Modeling

**Academic Courses for Standard Diploma.**

Grade 9	Grade 10	Grade 11	Grade 12
English	English	English	English
Algebra I	Geometry	Algebra II or Algebra Functions & Data Analysis	
Earth Science	Biology I	Ecology	
World History I		VA/US History	Government

**Career & Technical Education Courses**

Economics & Personal Finance	General Mechanics	Drafting/Pre-engineering I 3 credits	Drafting/Pre-engineering II 4 credits
Intro to Technology	Introduction to Drafting		

**Dual Enrollment:** CAD 111 - Technical Drafting I  
CAD 151 - Engineering Drawing Fundamentals I  
CAD 152 - Engineering Drawing Fundamentals II

**Certifications:** OSHA 10 Hour General Industry Safety Training  
American Design Drafting Association Mechanical Drafter



**MACHINE TECHNOLOGY.** Two year program for students in grades 11 & 12. This program trains students in the use of lathes, milling machines, surface grinders and layout tools for the shaping of metals into machine parts. Students also gain experience in CNC programming and mechanical blueprint reading and sketching.

**Occupational Objectives:** Machinist, CNC Operator/Programmer, Industrial Machinery Mechanic, Mechanical Inspector, Materials Inspector

**Academic Courses for Standard Diploma.**

Grade 9	Grade 10	Grade 11	Grade 12
English	English	English	English
Algebra I	Geometry	Algebra II or Algebra Functions & Data Analysis	
Earth Science	Biology I	Ecology	
World History I		VA/US History	Government

**Career & Technical Education Courses**

Economics & Personal Finance	General Mechanics	Machine Technology I 3 credits	Machine Technology II 4 credits
Agriculture	Introduction to Drafting		
Intro to Technology			

**Dual Enrollment:** MAC 106 – Machine Shop Operations (8 credits)

**Certifications:** OSHA 10 Hour General Industry Safety Training  
National Institute for Metalworking Skills Level 1 – Manual Milling



**WELDING.** Two year program for students in grades 11 & 12. This program trains students in the use of oxy-acetylene welding and cutting, arc, MIG, TIG and plasma arc cutting. Students will develop skill in fabrication of metals according to diagrams, blueprints, or written specifications. Students will also learn layout and blueprint reading.

**Occupational Objectives:** Welder, Pipefitter, Metal Worker, Metal Fabricator, Boilermaker, Materials Inspector

**Academic Courses for Standard Diploma.**

Grade 9	Grade 10	Grade 11	Grade 12
English	English	English	English
Algebra I	Geometry	Algebra II or Algebra Functions & Data Analysis	
Earth Science	Biology I	Ecology	
World History I		VA/US History	Government

**Career & Technical Education Courses**

Economics & Personal Finance	General Mechanics	Welding I	Welding II
Agriculture	Agriculture	3 credits	4 credits
Intro to Technology	Introduction to Drafting		

**Dual Enrollment:** WEL 100 – Fundamentals of Welding (3 credits)  
WEL 123 – Shielded Metal ARC Welding (Basic) (4 credits)

**Certifications:** OSHA 10 Hour General Industry Safety Training  
SkillsUSA Workforce Connect - Welding Skills Assessment

**TECH CENTER ORIENTATION**

**GILES COUNTY TECHNOLOGY CENTER** begins orientation activities with 10<sup>th</sup> grade students. An Open House for 10<sup>th</sup> grade parents and students will be held during parent/teacher conferences. All students will be given a tour of the Tech Center and visit all program areas for a brief introduction to each program prior to applying to the Tech Center. Applications will be available after students have visited the Tech Center.

After application forms are received student grades, discipline and attendance records are reviewed. Recommendations from current teachers regarding personal qualities such as responsibility, initiative, and respect may be obtained as well. This review of records and recommendations is significant when more students sign up for a program than there is space available. The Tech Center staff will use this information to determine which students are selected for the slots available. If you have any questions about orientation and registration for programs at the Tech Center contact Tonya Vaden, Career Counselor, at (540) 921-1166.

Giles County Public Schools does not discriminate on the basis of race, color, national origin, sex, disability, or age in its programs and activities and provides equal access to the Boy Scouts and other designated youth groups. The following persons have been designated to handle inquiries regarding the non-discrimination policies:

Title IX Coordinator  
Assistant Superintendent of Curriculum  
151 School Road  
Pearisburg, VA 24134  
(540) 921-1421 X16

Section 504 Coordinator  
Director of Special Education  
151 School Road  
Pearisburg, VA 24134  
(540) 921-1421 X21