

GILES COUNTY TECHNOLOGY CENTER STUDENT/PARENT PLANNING GUIDE 2016-2017

Career Pathways



Giles County Technology Center

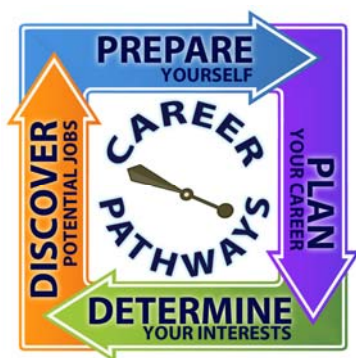
Career Pathways

The Career and Technical Education (CTE) programs at Giles County Technology Center offers 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 Tech Center are Architecture & Construction; Health Science; Human Services; Information Technology; Manufacturing; Science, Technology, Engineering & Mathematics (STEM); Transportation.

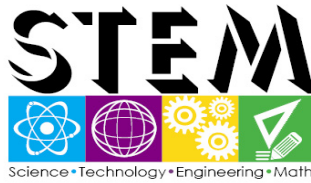
Career pathways include a technical education program with academics that prepare a student for career and college readiness. Other essential elements of the career pathways at Giles Tech Center are strong connections with business and industry, dual enrollment with New River Community College and industry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

In this planning guide the technical programs are listed under the career pathway each is 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 Tech Center. STEM course options are outlined on the next page.

Career Counseling services are available to all Giles County students grade 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.org.



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
Career & Technical Education Courses			
Economics & Personal Finance	General Mechanics	Tech Center Program for Two Years*	
Agriculture	Construction	(Automotive Service Technology, Building Technology,	
Intro to Technology	Woodworking	Computer Systems Technology, Cosmetology,	
	Agriculture	Drafting/Pre-engineering, Machine Technology,	
	Computer	Welding, Nursing Assistant and Practical Nursing)	
	Information Systems		

Dual Enrollment

Earn college credit while still in high school!

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 Technology I	Building Technology II
Agriculture Intro to Technology	Woodworking Agriculture	3 credits	4 credits

Dual Enrollment: BLS 110 – Introduction to Construction (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.

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	Computer Systems Technology I	Computer Systems Technology II
Computer Information Systems	Information Systems	3 credits	4 credits

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	Computer Information Systems	Cosmetology I 3 credits	Cosmetology II 4 credits
Life Skills I	Child Development/ Family Relations	Accounting I	

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 Life Skills I	Computer Information Systems Child Development/ Family Relations	Nursing Assistant I & II 3 credits	Licensed Practical Nursing 4 credits
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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 12th 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 Life Skills I	Computer Information Systems Child Development/ Family Relations	Nursing Assistant I & II 3 credits	Licensed Practical Nursing 4 credits
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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	Drafting/Pre-engineering II
Intro to Technology	Agriculture	3 credits	4 credits
	Introduction to Drafting		

Dual Enrollment: CAD 114 – Drafting I (3 credits)
CAD 201 – Computer Aided Drafting and Design I (4 credits)

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	Machine Technology II
Agriculture	Agriculture	3 credits	4 credits
Intro to Technology	Introduction to Drafting		

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, Shielded Metal Arc Welding (SMAW), Gas Metal Arc Welding (GMAW), Gas Tungsten Arc Welding (GTAW), plasma arc cutting, and arc gauging. 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 3 credits	Welding II 4 credits
Agriculture	Introduction to Drafting		
Intro to Technology			

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 10th grade students. An Open House for tenth 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 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