Audio and Visual Production Pathway

MR. ZAC LANDRETH, INSTRUCTOR

PATHWAY OVERVIEW

This pathway focuses on the technical and creative aspects of media production, including camera operation, editing, lighting, and sound design skills highly sought after in film, broadcasting, live events, and corporate media. Students research and explore the benefits and value of using AI as a tool. Students leaving this pathway are prepared for careers in film, photography, journalism, script writing, graphic design, and television broadcasting.

Opportunities in the Audio and Visual Production Pathway

In this program, students gain experience with many aspects of the production of audio and video projects. They learn the basics of camera operations, audio mixing, video editing, and adjustment and optimization of lighting in various production settings. Students design and write the school newspaper and write, video, create graphics, anchor, edit, and produce the school morning announcements. They gain additional experience by creating promotional videos for local businesses and school organizations. Creating a portfolio of silent film and short film is a favorite activity for this course.

INDUSTRY CERTIFICATIONS

- OSHA 10
- ADOBE PREMIER PRO
- ADOBE PHOTOSHOP

IS THIS FOR ME?

ARE YOU CREATIVE AND LIKE WORKING WITH TECHNOLOGY?

DO YOU HAVE AN EAR FOR SOUND AND MUSIC?

ARE YOU A VISUAL STORY-TELLER?

A Look at the Courses

Year 1 - A/V Production I:
Students will be presented with an overview of occupations and career choices that stem from the audio visual production field. Students will learn about the phases of the production process including pre-production, production, and post-production. Students will establish basic skills in operating cameras, basic audio equipment, and other production equipment.

Year 2 - A/V Production II:
This course advances technical skills in utilizing industry equipment related to lighting and audio, and it places special emphasis on the research and technical writing involved in planning productions. Upon completion of this course, proficient students will be able to plan, capture, and edit research based productions of increasing complexity, individually and through collaboration in teams.

Year 3 - A/V Production III:
Students will use industry equipment and technology to complete all phases of the production process, including planning, coordinating, capturing, editing, and distributing productions. Standards in this course include policies and regulations, independent and collaborative productions, distribution of media, and the production of live events.

Get Involved

SkillsUSA

Students have the opportunity to compete at a state level in video production, news production, and digital cinema. During the competition, students use the knowledge and skills learned in class to create a specific product based on the provided information and requirements within a competitive time frame. These students practice teamwork and learn the importance of industry standards.

Meet the Instructor

Zac Landreth

Mr. Landreth brings real-world experience and creative energy to the classroom with his five years in the audio-video production industry. He began his career in news production and has collaborated with a variety of film and media outlets, gaining hands-on experience that he now pours into his teaching. This is his third year leading the Audio-Visual Production pathway at SCHS where he helps students turn ideas into powerful visual stories. He has directed several impactful Veteran's Day programs, contributed to multiple play productions, and proudly oversees both the school newspaper and the morning news broadcast.

Outside the classroom, Mr. Landreth stays just as active coaching tennis, teaching CPR and First Aid, and investing in his community. Above all, he is a proud husband of 11 years to his wonderful wife and a devoted dad to their two boys, who keep life full of laughter, adventure, and inspiration.

Automotive Technology Pathway

SEQUATCHIE COUNTY CTE

MR. RANDY HARPER, INSTRUCTOR

PATHWAY OVERVIEW

Automotive maintenance involves inspecting, repairing, and maintaining various components of cars and light trucks to keep them working properly, Topics include engines, brakes, steering, suspension, electrical systems, tires, and heating and air conditioning systems. Students apply skills learned from text, lecture, and demonstration in the automotive work bays adjoining the classroom. During the Maintenance and Light Repair courses, students may take ASE certifications which are recognized in the automotive service industry.

Opportunities in the Automotive Maintenance and Light Repair Pathway

Students in this pathway are prepared to work as service technicians at local automotive repair shops and dealership service centers throughout the region. Students in this pathway have experience taking apart and putting together engines and transmissions, performing alignments, and tire rotation and balancing. They learn to replace wheels, brakes, and have experience tracking electrical issues. Students can change the oil and perform other routine maintenance on various types of cars. Students are also prepared to pursue careers in Automotive Engineering.

INDUSTRY CERTIFICATIONS

- ASE ENTRY LEVEL
- NC3 SNAP-ON: PRECISION MEASUREMENT INSTRUMENTS CERTIFICATION

IS THIS FOR ME?

DO YOU LOVE CARS? DO YOU LIKE FIXING THINGS? ARE YOU A PROBLEM SOLVER?

ARE YOU DETAIL ORIENTED? DO YOU HAVE GOOD CUSTOMER SERVICE SKILLS?

A Look at the Courses

Year 1 - Maintenance and Light Repair I:
Students explore career opportunities and requirements of a professional service technician. Content emphasizes beginning transportation service skills and workplace success skills. Students study safety, tools, equipment, shop operations, basic engine fundamentals, tires and wheels, and basic technician skills.

Year 2 - Maintenance and Light Repair II:
Students study and service suspension and steering systems and brake systems.

Year 3 - Maintenance and Light Repair III:
Students study automotive general electrical systems, starting and charging systems, batteries, lighting, and electrical accessories.

Year 4 - Maintenance and Light Repair IV:
Students study and service automotive HVAV systems, engine performance systems, automatic and manual transmissions/transaxle systems, and practice workplace readiness skills.

Get Involved

Automotive students compete in Skills USA Regional and State Competition each year. Students have consistently earned medals in Maintenance and Light Repair and Automotive Service Technology at the state level. The Skills USA club meets weekly throughout the year to work on projects such as building a Rat Rod, preparing for the SCHS Annual Car Show, and gathering for the occasional cookout. The Skills USA club also takes field trips to the Pigeon Forge Rod Run, hosts guest speakers from a variety of automotive businesses, and tours automotive schools.

Meet the Instructor

Randy Harper

Mr. Randy Harper has been in the automotive service industry for over 46 years. He received his training at the Nashville Auto Diesel College, now Lincoln Tech, and multiple corporate automotive trainings. He has managed two dealership service centers and has run his own automotive service business. Mr. Harper has been an instructor at SCHS for fourteen years. He has led many students to success at competition with SKILLS USA.

He and his wife have three children and ten grandchildren. In his spare time he enjoys working on hotrods and camping.

Business & Entrepreneurship Pathway

MRS. AVERY CAMPBELL, INSTRUCTOR

PATHWAY OVERVIEW

The Business and Entrepreneurship pathway teaches students about starting a business. Students learn about risk-taking, launching a new product or service or improving on an existing one. Examples of this might include owning your own hair salon, landscaping business, food truck or even a restaurant. Entrepreneurs do it all, from identifying a market need, developing a business plan, raising money to fund the business, and hiring employees to running the business. They also must provide exceptional customer service to their clients to ensure the business is successful.

Opportunities in the Business & Entrepreneurship Pathway

Students in this pathway experience planning a new business. Students will learn skills like budgeting, marketing, creating a business plan and design, how to generate income and even best practices on managing employees. Students will learn about all sides of a new business. They also have the opportunity for a “Shark Tank” experience where they create and present an innovative product to peers and adults. This pathway gives students the experience of looking at businesses from the owner perspective. It also ulilizes the skills learned in other classes to provide students the knowledge needed to work for themselves.

INDUSTRY CERTIFICATIONS

- HUBSPOT SOCIAL MEDIA MARKETING CERTIFICATION

IS THIS FOR ME?

DO YOU HAVE THE DESIRE TO START YOUR OWN BUSINESS?

DO YOU WANT TO LEARN MORE ABOUT HOW BUSINESS OPERATES?

DO YOU WANT TO SET GOALS AND ACHIEVE THEM FOR YOURSELF?

A LOOK AT THE COURSES

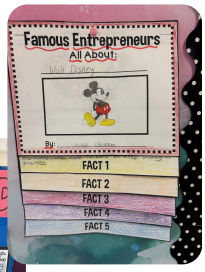
Year 1 - Introduction to Entrepreneurship:
Students will learn the foundations of entrepreneurship and small business ownership, business concepts and operations, finance and budgeting, marketing principles, leadership and management functions, and professional communications.

Year 2 - Marketing and Management:
Students will examine the risks and challenges that marketers face to establish a competitive edge in the sale of products and services. Topics covered include foundational marketing functions such as promotion, distribution, and selling, as well as coverage of social media, digital and mobile marketing, economics fundamentals, and international marketing.

Year 3 - Entrepreneurship:
Students research local, national, and international social and economic trends and analyze the feasibility of their own proposed businesses, both from market demand and revenue-producing standpoints. Based on their entrepreneurial endeavors, students will prepare, write, and revise a business plan. In preparation for the business plan, students will conduct market research, study ownership structures, evaluate risks, examine startup costs, determine essential vendors, and identify sources of capital and financing options.

Get Involved

Students in this pathway have the opportunity to compete in business management skills. They interact with local business owners through speaking opportunities and interviews. Students can volunteer in the school spirit store to practice their customer service skills and can volunteer with locally owned businesses as well. They also work in teams to practice conflict resolution and interpersonal skills. In addition, they develop skills in critical thinking, communication and professionalism.



Meet the Instructor

Avery Campbell

Mrs. Campbell is completing her first year with the SCHS faculty as an instructor for the Business & Entrepreneurship pathway. She received her B.S. Degree in Education from Western Governors University and has extensive knowledge of the business sector. Mrs. Campbell has worked in the business industry for ten years with hands-on experience in property management, restaurant management, and business start-up.

Construction and Electrical Pathway

MR. JAY FRIZZELL, INSTRUCTOR

PATHWAY OVERVIEW

This pathway prepares students for careers in designing, planning, managing, building, and maintaining structures. Learning job site and tool safety is a consistent focus of the program. Students enjoy the hands-on aspect of the courses that teach increasingly complex skills in the building process. Careers in this field involve new structures, restorations, additions, alterations and repairs, and residential, commercial, and industrial electricity. Aspiring Architects, Construction Engineers, Electrical Engineers, Carpenters, and Electricians are given a solid foundation of the understanding of structure development.

Opportunities in the Construction and Electrical Pathway

Students in this field work in a variety of areas. Many of our construction and electrical students work with contractors around the region. Students also have the practical skills needed to help them succeed in many areas including the Construction and Electrical Unions. Students can further their education at TCAT programs throughout the region as well as Construction Management degree programs and Architecture and Engineering degree programs.

INDUSTRY CERTIFICATIONS

- OSHA 10
- NC3 SNAP-ON: PRECISION MEASUREMENT INSTRUMENTS CERTIFICATION
- OSHA 30
- NCCER

IS THIS FOR ME?

DO YOU LOVE TO BUILD?

ARE YOU A PROBLEM SOLVER?

ARE YOU DETAIL ORIENTED?

DO YOU HAVE GOOD CUSTOMER SERVICE SKILLS?

A Look at the Courses

Year 1 - Fundamentals of Construction:
Students will learn about the various construction fields and be able to outline the steps necessary to advance in specific construction careers. This class will focus on tool and shop safety. Students will use measurement and math while utilizing blueprints.

Year 2 - Residential and Commercial Construction I:
Students will learn about the earlier phases of building construction, including site layout, foundation systems, concrete, framing systems, and electrical systems. Students will be exposed to the following processes: concrete work; frame walls, ceilings, and floors of a structure; and install proper wiring. Safety remains a key focus in this second class.

Year 3 - Residential and Commercial Construction II:
Students will learn to complete the later phases of building construction including roofing systems, exterior finishing, stair framing systems, masonry systems, and plumbing systems. They will be able to use construction drawings to complete a project.

Year 2 - Mechanical, Electrical, and Plumbing:
Students will learn about electrical systems, plumbing, piping, HVAC, construction drawings and specifications, and business project management.

Year 3 - Electrical Systems:
Students will learn about requirements in the National Electric Code, identification and installation of device boxes, cutting and bending conduit, functions, types, and installation of raceway systems conductors and cables, electrical drawings and specifications, residential services, basic maintenance and repair, power systems, and project management.

Get Involved

SkillsUSA

Construction and Electrical students compete in Skills USA Regional and State Competitions each year. The Skills USA club meets weekly throughout the year to work on projects and assists with building projects in the community to gain hands-on experience and connect with local industry professionals. Networking with these professionals often leads to mentorship and employment opportuniites.

Meet the Instructor

Jay Frizzell

Mr. Jay Frizzell has been in the construction industry for over 37 years. He attended Tennessee Technological University and Chattanooga State. He has extensive experience in residential construction, custom cabinetry, electrical, and plumbing. He has taught the Construction and Electrical pathway for sixteen years.

He and his wife have two children and two grandchildren. In his spare time, he enjoys camping, hunting, and being in the outdoors.

Criminal Justice Pathway

MS. EMILY PRICE, INSTRUCTOR

PATHWAY OVERVIEW

The Criminal Justice Pathway is designed to provide a foundational study of the criminal justice system. Topics include the components of the criminal justice system, investigative techniques, criminal law and juvenile justice. This pathway prepares students for careers in law enforcement, corrections, and forensics. Students will focus on legal systems, ethics, and overall skill development.

Opportunities in the Criminal Justice Pathway

Students in this field are prepared for work in corrections, law enforcement, or are prepared to further their education in legal fields. Students learn from guest speakers who are professionals in these career fields. They have the opportunity to visit many of the worksites that utilize the skills learned in the engaging courses offered in Criminal Justice.

INDUSTRY CERTIFICATIONS

- OSHA 10

IS THIS FOR ME?

DO YOU HAVE A STRONG SENSE OF RIGHT AND WRONG?

ARE YOU COMMUNITY MINDED?

ARE YOU FULL OF COURAGE AND INTEGRITY?

A Look at the Courses

Year 1- Criminal Justice I:
This class explores how the law enforcement, legal, and correctional systems interact with each other in the United States. Students will learn about local, state, and federal laws, the concepts of crime control and the judicial process, and the importance of communication and professionalism in law enforcement.

Year 2- Criminal Justice II:
Students will learn the impact of the Constitution on law enforcement, law enforcement and police procedures, alcohol and beverage laws, sentencing, and the importance of communication and professionalism in law enforcement.

Year 3- Criminal Justice III/ Forensic Criminal Investigations:
Students will learn terminology and investigation skills related to the crime scene, aspects of criminal behavior, and applications of scientific inquiry to solve crimes. By utilizing the scientific inquiry method, students will obtain and analyze evidence through simulated crime scenes and evaluation of case studies.

Get Involved

SkillsUSA

Criminal Justice students have the opportunity to meet throughout the year to explore career opportunities and gain hands on experience with investigative methods used in the field. Students prepare for Skills USA competitions where they are evaluated by industry professionals committed to mentoring the next generation of Criminal Justice leaders.

Meet the Instructor

Emily Price

Ms. Emily Price has served as a Criminal Justice instructor for three years at SCHS. She holds a degree in Politics and Government with a Pre-Law concentration from Bryan College. She completed an internship at Austin, Davis and Mitchell Attorneys at Law. While working there, she gained valuable experience and knowledge in the legal field, assisting attorneys with managing case files, organizing documents, and supporting daily office operations

Outside of the classroom, she enjoys working on her family's sheep farm and embracing the responsibilities that come with farm life. She loves spending time with her family, making memories, and supporting those closest to her.

Health Science Pathway

MRS. LAUREN MCINTYRE, RN, INSTRUCTOR

PATHWAY OVERVIEW

Nursing is one of the many pathways students can pursue within the healthcare field. This program helps students explore those options and narrow their interests by developing hands-on skills in the lab. Healthcare offers a wide range of career opportunities, including Emergency Services, Nursing, Radiology, Dental, Laboratory Science, Sports Medicine, Physical Therapy, and Respiratory Therapy. Taking Health Science courses not only strengthens college applications but also opens the door to meaningful volunteer opportunities. These experiences help students build confidence, gain practical knowledge, and take important steps toward a rewarding future in healthcare.

Opportunities in the Health Science Pathway

Students in this pathway complete rigorous coursework that allows them the opportunity to use their skills to prepare for the Certified Nursing Assistant and Patient Care Tech exams. Through clinical hours, students gain the hands-on skills, direct patient care, and real-world work exposure that give them a distinct advantage when applying to medical programs after high school. Successful students also have the opportunity to experience rotations at nine health care facilities to broaden their experience in multiple career fields.

INDUSTRY CERTIFICATIONS

- OSHA 10 HEALTHCARE
- BASIC LIFE SUPPORT (BLS)
- CERTIFIED NURSING ASSISTANT (CNA)
- PATIENT CARE TECH (PCT)

IS THIS FOR ME?

ARE YOU INTERESTED IN BECOMING A DOCTOR, NURSE, OR OTHER HEALTH CARE WORKER?

ARE YOU EMPATHETIC AND LIKE TO HELP PEOPLE?

DO YOU ENJOY SCIENCE AND THE HUMAN ANATOMY?

A Look at the Courses

Year 1 - Health Science Education:
Students will learn to identify careers in healthcare fields, compare and contrast the features of healthcare systems, explain the legal and ethical ramifications of the healthcare setting, learn about infection control and microbiology, and begin to perform foundational health care skills.

Year 2 - Anatomy & Physiology:
Students will learn to identify the organs and structures of the support and movement systems, relate the structure and function of the communication, control, and integumentary system, and demonstrate a professional, working understanding of the transportation, respiration, excretory, and reproduction systems.

Year 3 - Medical Therapeutics:
Student will learn to identify careers in therapeutics services; assess, monitor, evaluate, and report patient/client health status; and identify the purpose and components of treatments.

Year 4 - Nursing Education:
Student will be able to implement communication and interpersonal skills, maintain patient and/or residents' rights and independence, provide care safely, prevent emergency situations, prevent infection through infection control, and perform the skills required of a Certified Patient Care Technician or Certified Nursing Assistant. At the conclusion of this course students may sit for the Certified Nursing Assistant (CNA) exam.

Year 4 - Clinical Internship:
This is a capstone course and work-based learning experience designed to provide students with real-world application of skills and knowledge obtained in pre-requisite courses. At the conclusion of this course, students may sit for the Certified Patient Care Technician (CPCT) exam.

Get Involved

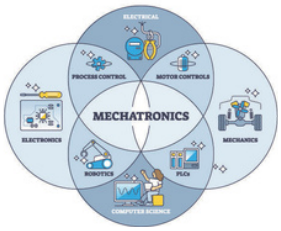
SkillsUSA

Students in the health science pathway have the opportunity as a group to serve their community at several local events. They participate in the Alzheimer's Walk, Walk for Life, Spook Stroll, Christmas for Kids, and serve at the Next Step banquet. Health Science students gain experience by performing health screenings for Griffith Elementary School. They can showcase their knowledge and skills at state level competitions in Medical Terminology, Dental Assisting, Nurse Assisting, and First Aid/CPR.

Meet the Instructor

Lauren McIntyre, RN

Mrs. Lauren McIntyre has been a registered nurse for 18 years. She has a wide array of professional experiences working in the ICU, ER, dialysis clinic, and for a plastic surgeon. She has taught in the Health Science pathway for nine years, first at Cleveland Middle School, then building a program for Fayetteville High School. She has been at SCHS for five years and has built the Health Sciences pathway into the largest pathway at SCHS. She enjoys seeing the seniors gain experience in local health care facilities and assisting students to find their career path in the medical field.



Mechatronics Pathway

SEQUATCHIE COUNTY CTE

MR. WILL FRIZZELL, INSTRUCTOR

PATHWAY OVERVIEW

This pathway blends mechanical, electrical, and software engineering, leading to diverse roles in robotics, automation, automotive, aerospace, medical devices, and consumer products. This prepares students to pursue careers in Robotics Engineering, Automation Engineering, Controls Engineering, Systems Engineering, and Project Engineering. Students pair lecture with hands-on learning to gain valuable knowledge of multiple types of operating systems.

Opportunities in the Mechatronics Pathway

Modern factories rely heavily on automation. Instead of hiring separate mechanical and electrical specialists, companies prefer technicians who understand both systems together. Students have a better grasp of these concepts and skills after completing this pathway. Students also have the opportunity to participate in Drone Club and earn a license in FAA Unmanned Aircraft.

INDUSTRY CERTIFICATIONS

- OSHA 10
- NC3 SNAP-ON: PRECISION MEASUREMENT INSTRUMENTS CERTIFICATION

IS THIS FOR ME?

ARE YOU CURIOUS HOW PRODUCTS ARE CREATED AND OPERATE?

DO YOU ENJOY MATH AND SCIENCE AND ARE TECHNOLOGY MINDED?

ARE YOU DETAIL ORIENTED AND A CRITICAL THINKER?

A Look at the Courses

Year 1 - Principals of Manufacturing:
Students will develop an understanding of the general steps involved in the manufacturing process and master the essential skills to be an effective team member in a manufacturing production setting. Students will learn basic quality principles and processes, blueprints and schematics, and systems.

Year 2 - Digital Electronics:
Digital Electronics is intended to provide students with an introduction to the basic components of digital electronic systems and equip them with the ability to use these components to design more complex digital systems.

Year 3 - Mechatronics I:
This course covers basic electrical and mechanical components of mechatronics systems as well as their combined uses with instrument controls and embedded software design.

Year 4 - Mechatronics II:
This course covers the basics of pneumatic, electro pneumatic, and hydraulic control circuits in a complex mechatronic system. In addition, the course addresses basic digital logic and programmable logic controllers (PLCs) employed in the mechanical, electronic, and control systems in a mechatronics system.

Get Involved

SkillsUSA

Students in this pathway meet on a regular basis to learn skills while having fun with students who have similar interests. Students have time to work with 3D printing, electrical training equipment, robot building and programming, and drone technology. Skills USA competitions are held each year in a variety of areas in this career field.

Meet the Instructor

Will Frizzell

Mr. Will Frizzell has been the Mechatronics instructor at SCHS for three years. He is a 2009 graduate of Sequatchie County High School. Mr. Frizzell has a dual Associate's Degree from Chattanooga State Technical Community College in Computer Systems and Automated Control Systems as well as a NIMS Certification in Electrical Systems.

Mr. Frizzell has been married to his wife, Holli, for almost five years. Outside of school he enjoys anything to do with sports. He also enjoys coaching.

Teaching as a Profession Pathway

SEQUATCHIE COUNTY CTE

MS. AMY LAYNE, INSTRUCTOR

PATHWAY OVERVIEW

This pathway is for students interested in learning more about becoming a teacher, school counselor, trainer, librarian, psychologist, coach, or youth leader. This course explores strategies through hands-on activities and immersion in real life situations through guided and supervised activities in the community. It helps members explore teaching styles, develop lesson plans, mentor others, and understand the education profession. Students learn from industry professionals and gain insight through observation then hands-on work in classrooms in a variety of grades.

Opportunities in the Teaching as a Profession Pathway

Students in this pathway connect with others who are interested in education or human services as a career through a variety of in-school and out-of-school activities. They have the opportunity to tutor younger students in a supervised program at Griffith Elementary School and showcase their skills at children's events in their community. Students are connected with post-secondary options in many of the fields related to this pathway during college tours, guest speaker appearances, and college mentorship activities.

INDUSTRY CERTIFICATIONS

- TN ALLCORPS TUTORING CERTIFICATE

IS THIS FOR ME?

DO YOU ENJOY TEACHING AND HELPING CHILDREN?

ARE YOU A COMPASSIONATE, LIFE-LONG LEARNER?

ARE YOU A STRONG YET ADAPTIVE COMMUNICATOR?

A Look at the Courses

Year 1 - Introduction to Teaching as a Profession:
Students will learn about the history of education in the United States, careers in education, and the influence of human development on learning. Students will learn the physical and cognitive stages of human development and explore a variety of learning theories.

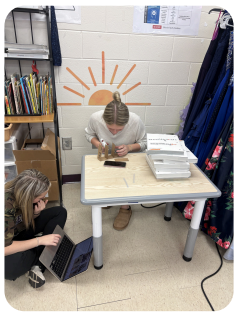
Year 2 - Teaching as a Profession I:
This course covers the components of instruction, teaching strategies, types of assessments, student learning, special populations, and educational technology.

Year 3 - Teaching as a Profession II:
This course covers classroom management, concepts of higher order thinking, scaffolding instruction, and strategies of effective classroom planning. Students in this course will demonstrate their skills in laboratory settings while building a course portfolio of work.

Year 4- Teaching as a Profession/WBL Practicum:
Students gain hands on experience to grow employability skills and/or career specific knowledge. Students can partner with local daycare providers and Sequatchie County schools to recieve this experience.

Get Involved

This club prepares students for careers in human services and education through hands-on experience, leadership training, and competitive events. This club is a unique opportunity to showcase skills, celebrate achievements, and connect with peers in the same field. Students from SCHS FCCLA regularly assist with community activities like GES PTO events, the Sequatchie County Public Library events, Christmas for Kids, and Give a Kid a Chance.



Meet the Instructor

Amy Layne

Ms. Amy Layne is completing her 20th year as an educator. She received her BS degree from Tennessee Technological University, a Master's Degree in English from UT, Chattanooga, additional coursework in Secondary Education from Bryan College and Special Education Interventionist coursework from UT, Knoxville. She has taught a variety of classes at SCHS in addition to creating the Teaching as a Profession pathway.

Amy and her husband have two children, Mason and Charlee. In her spare time she enjoys reading, sunshine, traveling, and spending time with family and friends.

Veterinary and Animal Science Pathway

SEQUATCHIE COUNTY CTE

MS. TAMMIE AKIN, INSTRUCTOR

PATHWAY OVERVIEW

This pathway is for students interested in learning more about becoming a veterinarian, vet tech, vet assistant, or pursuing a variety of scientific, health, or agriculture professions. Students study livestock, companion, and exotic animals. Students explore elements such as diet, genetics, habitat, and behavior to create humane, ecological, and sustainable animal production systems. The pathway includes the study of animal anatomy and physiology, nutrition, reproduction, genetics, health and welfare, animal production, technology, and the management and processing of animal products and by-products.

Opportunities in the Veterinary and Animal Science Pathway

Students in this field have a number of opportunities both in and out of school. Some students have the privilege of working in one of our local businesses that focus on animal welfare or food production. Many choose to participate in the extra-curricular activities offered that not only build employability skills but are also fun for the students and allow them to engage with others with a similar interest. Students also have the opportunity to earn college credit while taking Agriscience and more advanced levels of this course.

INDUSTRY CERTIFICATIONS

- ELANCO VET

IS THIS FOR ME?

DO YOU LOVE WORKING WITH ANIMALS?

DO YOU LIKE SCIENCE AND ANATOMY?

ARE YOU INTERESTED IN HEALTHCARE?

A Look at the Courses

Year 1 - Agriscience:
Students will learn about agriscience safety and careers, environmental systems, cell structure and processes, genetics, genomics, and heredity, anatomy and physiology, biochemistry of animal digestion, plant and soil science, plant and animal reproduction, machines, power and energy systems, and engines.

Year 2 - Small Animal Science:
This course covers the anatomy and physiological systems of different groups of companion animals, as well as careers, leadership, and history of the industry. Students will learn about responsible pet ownership, animal ethics, nutrition and digestive systems, genetics, reproduction, and the fundamental care and health of dogs, cats, and a variety of other companion and exotic animals.

Year 3 - Large Animal Science:
Students will learn about the history of domestication, animal ethics, nutrition and digestive systems, genetics, reproduction, and the fundamental care and health of horses, cattle, small ruminants, swine, and poultry.

Year 4 - Veterinary Science:
This course covers principles of health and disease, basic animal care and nursing, clinical and laboratory procedures, and additional industry-related career and leadership knowledge and skills.

Get Involved

FFA is the Nation's premier youth organization preparing members for leadership and careers in the science, business, and technology industries. FFA students have the opportunity to meet throughout the year to learn more about career field opportunities. They also spend time preparing for FFA competitions. These competitions are judged by industry professionals who pride themselves in mentoring the next generation of workers in the Agricultural & Animal Science field. SCHS FFA members work to exemplify the FFA Motto "...living to serve." by hosting and participating in many community events.

Meet the Instructor

Tammie Akin

Ms. Tammie Akin has been a teacher at SCHS for 13 years. She began her career as a Biology instructor and took over the Agriculture Pathway seven years ago. She received her Associates Degree from Chattanooga State and her BS in Education at Western Governors University. Her deep understanding of this field comes from her 24 years as a cattle and hay farmer and the extensive Ag training she attends regularly.

She and her husband, Larry, have four children and seven grandchildren. In her spare time she enjoys horseback riding, farming, and spending time outside with her family.

Welding Technology Pathway

American Welding Society

SEQUATCHIE COUNTY CTE

MR. CHRIS RENFRO, INSTRUCTOR

PATHWAY OVERVIEW

The welding pathway is designed to provide students with opportunities to effectively perform cutting and welding applications of increasing complexity used in the advanced manufacturing industry. In this pathway, students will have the opportunity to earn AWS welding certifications in D:1.1 Shielded Metal Arc Welding, Gas Metal Arc Welding, Flux Core Arc Welding, and Gas Tungsten Arc Welding, and combination welding process certifications.

Opportunities in the Welding Pathway

Students leaving this pathway are prepared to enter the pipefitting, sheet metal, ironworking, and boilermakers' apprenticeships. Students are also prepared to work at manufacturing apprenticeships using the welding skills learned in the program. Students have the opportunity to gain hands-on experience in a pre-apprenticeship at one of our industry partners like Komatsu Manufacturing or Valmont Industries. Some students gain summer work experiences and part-time positions at a local manufacturer.

INDUSTRY CERTIFICATIONS

- OSHA 10
- OSHA 30
- AWS D:1.1 WELD CERTIFICATIONS

IS THIS FOR ME?

DO YOU LOVE TO BUILD THINGS WITH YOUR HANDS?

ARE YOU DETAIL ORIENTED?

DO YOU APPRECIATE QUALITY OF WORK?

A Look at the Courses

Year 1 - Principles of Manufacturing:
Students will develop an understanding of the general steps involved in the manufacturing process and master the essential skills to be an effective team member in a manufacturing production setting. Course content covers basic quality principles and processes, blueprints and schematics, and systems. Upon completion of this course, proficient students will advance from this course with a nuanced understanding of how manufacturing combines design and engineering, materials science, process technology, and quality.

Year 2- Welding I:
This class is designed to provide students with the skills and knowledge to perform cutting and welding applications. The class will focus on fundamental safety practices in welding, interpreting drawings, creating computer aided drawings, identifying and using joint designs, efficiently laying out parts for fabrication, basic shielded metal arc welding (SMAW), mechanical and thermal properties of metals, and quality control.

Year 3- Welding II:
This course will provide students with opportunities to perform cutting and welding applications of increasing complexity. Specifically, students will learn fundamental safety practices in welding, gas metal arc welding (GMAW), flux core arc welding (FCAW), gas tungsten arc welding (GTAW), and quality control methods.

Year 4- Welding/WBL Practicum:
Capstone course focusing on real-world application, fabrication projects, and potential work-based learning, such as internships or pre-apprenticeships.

Get Involved

Students in the student chapter of the American Welding Society at SCHS meet twice weekly to gain additional skills in welding processes. Students compete at schools around the area to gain additional welding certifications. Students practice skills on structural fabrication projects and projects using a CNC plasma cutter.

American Welding Society

Meet the Instructor

Mr. Chris Renfro

Mr. Renfro has 41 years of experience in pipe and structural fabrication. He has taught at the secondary, post-secondary and the apprenticeship levels. Mr. Renfro has worked in the commercial and industrial HVAC industry and in commercial pipe fabrication including spending time at Oak Ridge's SNS project. He holds certifications in AWS SMAW, GMAW, FCAW and GTAW.

Mr. Renfro and his wife, Tracy, have been married for 26 years. He enjoys spending time with their Aussiedoodle, Tucker.