

CTAE PATHWAY GUIDE

FORSYTH CENTRAL HIGH SCHOOL



131 Almon C. Hill Dr, Cumming, GA 30040 | www.forsyth.k12.ga.us/fchs

Automotive Technology



AUTOMOTIVE TECHNOLOGY students will learn the basic skills needed to gain employment as an entry level automotive technician. Students will be exposed to courses in automotive preventative maintenance, brakes, steering and suspension, electrical systems, engine repair, engine performance, automatic transmission, manual transmission and differential & automotive HVAC. The hours completed in this course are aligned with ASE standards and are a base for the entry-level technician.

PATHWAY COURSES

General Automotive Technology 1, 2 and 3
Advanced Automotive Technology 4, 5 and 6
Automotive Service Technology Internship 1, 2 and 3

CAREER CHOICES

Auto Manufacturer Sales or Service
Auto or Body Technician
Automotive Engineer
Automotive Mechanist
Automotive Sales
Body Shop Manager
Dealership or Shop Owner
Parts Professional
Quality Control Technician
Service Advisor
Specialized Technician Teacher
Technician (ASE Certified)

INDUSTRY CREDENTIAL (Credential of Value): ASE Student Certification – 10 Areas

A/V Technology and Film



A/V TECHNOLOGY AND FILM students will design, manufacture, operate and/or repair audio visual equipment, create presentations of sound, video, and data in a variety of formats, gather information, prepare broadcasts, build sets, and operate equipment used to record and transmit programs and/or motion pictures, and operate sound mixing and/or video editing equipment.

PATHWAY COURSES

Audio and Video Technology and Film I
Audio and Video Technology and Film II
Audio and Video Technology and Film III

CAREER CHOICES

Audio and Video Equipment Technician
Broadcast News Analyst
Broadcast Technician
Camera Operator
Control Room Technician
Editor
Journalist
Radio and Television Announcer
Reporter
Sound Technician
Station Manager

INDUSTRY CREDENTIAL (Credential of Value): Adobe Certified Associate

Cloud Computing



CLOUD COMPUTING students will develop an overall understanding of cloud computing, cloud concepts, core services, security, architecture, and support. Technical content includes designing, developing, and deploying a virtual private network, creating a cloud environment that is scalable, and demonstrating safe use of big data. Students will also dive deeply into cloud computing best practices and learn how cloud computing helps users develop a global infrastructure.

PATHWAY COURSES

Introduction to Software Technology
Computer Science Principles or AP CS Principles
Cloud Computing

CAREER CHOICES

Software Engineer
Cloud Engineer
Data Engineer
System Engineer
Full Stack Developer
Java Developer
Data Scientist
Systems Administrator
.NET Developer
Front-end Developer

INDUSTRY CREDENTIAL (Credential of Value): Not Yet Approved by the Georgia Department of Education

For more education on each pathway, download a complete Program of Study:

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/Programs-of-Study.aspx>

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Computer Science



COMPUTER SCIENCE students will prepare for entry-level, technical, and professional IT careers, including the design, development, implementation, and maintenance of computer systems and software. Students will also gain knowledge of computer operating systems, programming languages, and gain knowledge of required cutting-edge technologies. Students will build a solid understanding and foundation of computer science which emphasis on computational thinking practices: connecting computing, developing computational artifacts, abstracting, analyzing problems and artifacts, communicating, and collaborating.

PATHWAY COURSES

Introduction to Software Technology
Computer Science Principles or AP CS Principles
AP Computer Science A

CAREER CHOICES

Computer Hardware Engineer
Computer Network Architect
Computer Programmer
Computer System Analyst
Database Administrator
Information Security Analyst
Information Systems Manager
Network Administrator
Software Developer
Software Engineer
Video Game Designer

INDUSTRY CREDENTIAL (Credential of Value): Microsoft Technology Associate (MTA): Software Development Fundamentals

Cosmetology



COSMETOLOGY students will learn both fundamental theory and practices of the personal care professions. Emphasis will be placed on professional practices and safety. Areas addressed include state rules and regulations, professional image, bacteriology, decontamination and infection control, chemistry fundamentals, safety, Hazardous Duty Standards Act compliance, and anatomy and physiology. Students will master shampooing, permanent waving, haircutting, basic skin care, and make-up application while maintaining safety and sanitation in the workplace set forth by OSHA standards.

PATHWAY COURSES

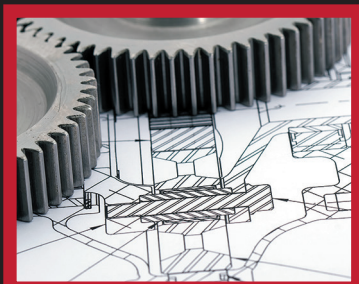
Introduction to Personal Care Services
Cosmetology Services II
Cosmetology Services III

CAREER CHOICES

Barber Stylist
Chemical Texture Specialist
Color Specialist Chemist
Cosmetologist
Cutting Specialist
Esthetician
Hair Color Specialist
Hairstylist
Make-up Artist
Nail Technicians
Salon Owner
Shampoo Tech
Wig Stylist

INDUSTRY CREDENTIAL (Credential of Value): NOCTI Cosmetology

Engineering and Technology



ENGINEERING AND TECHNOLOGY students will combine hands-on projects and rigorous curriculum to be prepared for challenging postsecondary engineering and technology problems; and build solid technical writing, comprehension, calculation, problem-solving, and technical skills. Students are encouraged to take relevant math and science courses, such as advanced algebra, chemistry, calculus, geometry, trigonometry, physics, design, and engineering concepts.

PATHWAY COURSES

Foundations of Engineering and Technology
Engineering Concepts
Engineering Applications

CAREER CHOICES

Civil Engineer
Designer
Drafter
Electrical Engineer
Industrial Engineer
Machinist
Manufacturing
Materials Engineer
Mechanical Engineer
Quality Control Inspector

INDUSTRY CREDENTIAL (Credential of Value): NOCTI Engineering and OSHA 10

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Film Production



FILM PRODUCTION prepares students with technical skill and employment needs for an entry level film production worker. Students participate in multiple class-created film production team simulations and film projects to develop a professional film portfolio. This portfolio may include documents, projects, documented work activities in various simulated film production departments and film clips and related projects showcasing student activities. Topics covered may include terminology, safety on a set, production teams, equipment, script writing, production, editing, post-production, and professional ethics.

PATHWAY COURSES

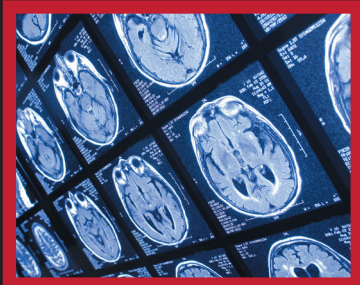
Audio and Video Technology and Film
Introduction to Film Production
Film Production Applications

CAREER CHOICES

Assistant Director
Audio and Video Equipment Tech
Broadcast Technician
Camera Operators
Director of Photography
Grip
Lighting Technician
Photographer
Reporter
Script Supervisor
Set and Exhibit Designer
Sound Engineering Technician
Station Manager
Technical Directors/Manager

INDUSTRY CREDENTIAL (Credential of Value): Not Yet Approved by the Georgia Department of Education

Healthcare-Biotechnology



HEALTHCARE - BIOTECHNOLOGY students will gain a broad understanding of the fundamentals of biotechnology and the impact on society. The knowledge and skills in this pathway provide a basic overview of current trends and careers in biotechnology, with an emphasis on basic laboratory skills, along with the business, regulatory, and ethical aspects of biotechnology. Additional applications and techniques in biotechnology that expand and increase the student's comprehension of how biotechnology utilizes living systems to create products and enhance lives are also an important part of the pathway.

PATHWAY COURSES

Introduction to Healthcare Science
Essentials of Biotechnology
Applications of Biotechnology

CAREER CHOICES

Biological or Medical Illustrator
Crime Lab Technician
Emergency Medical Technician
Field Biologist or Ecologist
Forensic Service Technician
Laboratory Technician
Licensed Practical Nurse
Medical Writer
Mortician
Nutritionist
Pediatric Nurse
Phlebotomist
Radiology Technician

INDUSTRY CREDENTIAL (Credential of Value): Precision Biotechnology

Marketing and Management



MARKETING AND MANAGEMENT students will focus on managing the processes responsible for identifying, anticipating, and satisfying customer requirements in a manner that is profitable for the business. Student skills include management and entrepreneurship, marketing, buying and merchandising, marketing communications and promotion, professional sales, marketing information management and research, channel management, global marketing, and internet/online marketing.

PATHWAY COURSES

Marketing Principles
Marketing and Entrepreneurship
Marketing Management

CAREER CHOICES

Advertising Account Executive
Communications Specialist
Customer Service Representative
Entertainment Marketer
Insurance Agent
Logistics Specialist
Market Research Analyst
Marketing Specialist
Media Buyer
Product Development Management
Public Relations Specialist

INDUSTRY CREDENTIAL (Credential of Value):MBA Standard Marketing Program of Study/End of Program HS Exam

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Marketing Communications and Promotions



MARKETING COMMUNICATIONS AND PROMOTIONS

students will focus on the performance of key responsibilities required in a retail environment and develop skills in pricing, visual merchandising, advertising, special promotions, professional sales, and customer service. They will also better understand the communication aspects of business in relation to customer/consumer relationships. Students develop knowledge and skills in advertising, direct marketing, public relations, sales promotions, and digital marketing communications.

PATHWAY COURSES

Marketing Principles
Promotional and Digital Marketing
Integrated Marketing Communications

CAREER CHOICES

Advertising and Promotions Manager
Advertising Sales Agent
Green Marketer
Market Research Analyst
Marketing Manager
Marketing Strategist
Public Relations Specialist
Sales Manager
Sales Representative

INDUSTRY CREDENTIAL (Credential of Value): MBA Standard Marketing Program of Study/End of Program HS Exam

Nutrition and Food Science



NUTRITION AND FOOD SCIENCE students will focus on healthy food and lifestyle choices. Students will investigate the interrelationship of food, nutrition and wellness to promote good health. The most common nutritional concerns, their relationship to food choices and health status and strategies to enhance well-being at each stage of the lifecycle are also emphasized, and students will evaluate the effects of processing, preparation, and storage on the quality, safety, wholesomeness, and nutritive value of foods.

PATHWAY COURSES

Food, Nutrition, and Wellness
Food for Life
Food Science

CAREER CHOICES

Chef and Head Cook
Dietician/Nutritionist
Food Inspector
Food Scientist and Technologist
Food Services Manager
Geriatric Food Designer
Health Educator

INDUSTRY CREDENTIAL (Credential of Value): ServSafe Food Safety Handler Certification

Sports and Entertainment Marketing



SPORTS AND ENTERTAINMENT MARKETING students will learn about the major segments of the sports and entertainment industry and the social and economic impact the industry has on the local, state, national, and global economies. The products and services offered to consumers and the impact of marketing on these products and services are examined. Students will also have opportunities to develop managerial and analytical skills and deepen their knowledge in sports/entertainment marketing.

PATHWAY COURSES

Marketing Principles
Introduction to Sports and Entertainment Marketing
Advanced Sports and Entertainment Marketing

CAREER CHOICES

Agent
Communications Specialist
Customer Service Representative
Demonstrator and Product Promoter
Entertainment Marketer
Entrepreneur
Market Research Analyst
Marketing Specialist
Media Buyer
Product Development Management
Public Relations Specialist

INDUSTRY CREDENTIAL (Credential of Value): MBA Standard Marketing Program of Study/End of Program HS Exam

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Teaching as a Profession



TEACHING AS A PROFESSION students will learn to plan, manage, and provide education and training services, and related learning support services such as administration, teaching/training, administrative support, and professional support services. They will be engaged in observations, interactions, and analyses of critical and contemporary educational issues and investigate issues influencing the social and political contexts of educational settings in Georgia and the United States and actively examines the teaching profession from multiple vantage points both within and outside of the school.

PATHWAY COURSES

Examining the Teaching Profession
Contemporary Issues in Education
Teaching as a Profession Practicum

CAREER CHOICES

Adult Educator
After-School Program Supervisor
Coach
Education Evaluator
Educational and Teacher Aide
K-12 School Teacher
Media Specialist
Post-Secondary Vocational Education
Recreation Attendant
School Administration
Special Education Teacher

INDUSTRY CREDENTIAL (Credential of Value): NOCTI Teaching as a Profession (College EDUC 2110 Credit in Georgia)

Veterinary Science



VETERINARY SCIENCE students will learn the major areas of scientific agricultural production and research and learn problem solving lessons, introductory skills, and knowledge in agricultural science and agri-related technologies. This pathway also covers the basics of animal care. Topics covered include disease, parasites, feeding, shelter, grooming, and general animal care.

PATHWAY COURSES

Basic Agricultural Science
Animal Science and Biotechnology
Veterinary Science

CAREER CHOICES

Animal Physical Therapist
Animal Welfare Specialist
Animal Care Specialist
Artificial Insemination Technician
Breed Association Sales/Promotion
Cell Culture Specialist
Companion Animal Breeder
Companion Animal Nutrition Specialist
Dairy Unit Herdsman/Manager
Embryo Transfer Technician
Veterinarian
Veterinary Tech

INDUSTRY CREDENTIAL (Credential of Value): Precision Veterinary Assistant

Workforce Ready



WORKFORCE READY provides students with heavy exposure to all aspects of workplace readiness and employability skills development through integration of course content into hands-on class activities as applications of the concepts; not to be treated as a unit or separate body of knowledge. Also included is project-based learning, frequent interaction with business and industry; community as subject matter experts, virtual industry tours, job shadowing, internships and jobs.

PATHWAY COURSES

Introduction to Career Competencies
Career Competencies
Advanced Career Competencies

CAREER CHOICES

All Careers

INDUSTRY CREDENTIAL (Credential of Value): OSHA 10, GeorgiaBEST

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