

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:

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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, as well as knowledge of computer operating systems, programming languages, and software development required of 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

CAREER CHOICES

Computer Hardware Engineers
 Computer Network Architects
 Computer Programmers
 Computer System Analysts
 Database Administrators
 Information Security Analysts
 Information Systems Managers
 Network Administrators
 Software Developers
 Software Engineers
 Video Game Designers

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

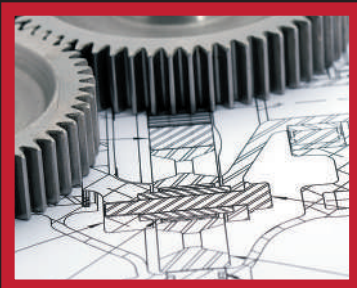
Introduction to Personal Care Services
 Cosmetology Services II
 Cosmetology Services III

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

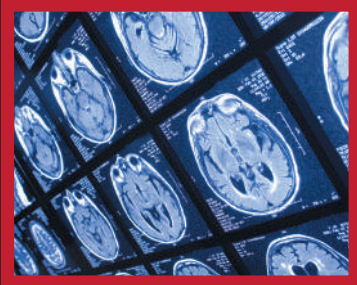
- Audio and Video Technology and Film
- Introduction to Film Production
- Film Production Applications

CAREER CHOICES

- Assistant Director
- Audio and Video Equipment Techs
- Broadcast Technician
- Camera Operators
- Director of Photography
- Grip
- Lighting Technician
- Photographers
- Reporter
- Script Supervisor
- Set and Exhibit Designers
- Sound Engineering Technician
- Station Manager
- Technical Directors/Managers

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 Agents
 - Green Marketers
 - Market Research Analysts
 - Marketing Managers
 - Marketing Strategists
 - Public Relations Specialists
 - Sales Managers
 - Sales Representatives

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

Nutrition and Food



NUTRITION AND FOOD students focus of the pathway is centered 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 Internship

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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