

# CTAE PATHWAY GUIDE

## NORTH FORSYTH HIGH SCHOOL



3635 Coal Mountain Drive, Cumming, GA 30028 | [www.forsyth.k12.ga.us/nfhs](http://www.forsyth.k12.ga.us/nfhs)

### 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**

### 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**

### Education as a Profession



**EDUCATION 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

- Education as a Profession I
- Education as a Profession II
- Education 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)**

**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>

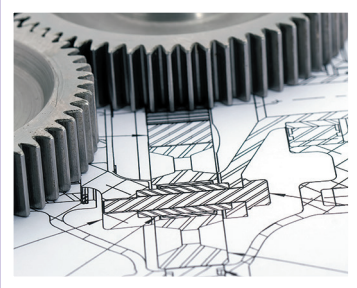
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### Engineering and Technology



**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**

### Healthcare- Public Health



**HEALTHCARE - PUBLIC HEALTH** allows students to explore occupations and skill sets in environmental health, community health, epidemiology, disaster management, and geriatrics. Students will gain a deeper understanding of the legal, ethical responsibilities of today's healthcare worker and will have a competitive edge to be the better candidate for either an entry level position into the healthcare global marketplace and/or post-secondary institution to continue their education and training.

#### PATHWAY COURSES

Introduction to Healthcare Science  
Essentials of Healthcare  
Applications of Public Health

#### CAREER CHOICES

Community Health Worker  
Emergency Management  
Environmentalist  
Epidemiologist  
Health Educator  
Nursing  
Physician

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

### Healthcare- Sports Medicine



**HEALTHCARE - SPORTS MEDICINE** students will learn about the musculoskeletal system, injury assessment, injury prevention, or rehabilitation for careers in sports medicine and rehabilitative services. This pathway enables students to receive initial exposure to therapeutic services skills and attitudes applicable to the healthcare industry. The concepts of anatomy and physiology, assessment, preventative and rehabilitative care are also introduced. Fundamental healthcare skills development is initiated, including medical terminology, kinesiology, patient assessment, record keeping, and basic life support.

#### PATHWAY COURSES

Introduction to Healthcare Science  
Essentials of Healthcare  
Sports Medicine

#### CAREER CHOICES

Athletic Trainer  
Chiropractor  
Doctor of Osteopathic Medicine  
Doctor of Podiatric Medicine  
Massage Therapist  
Occupational Therapist  
Orthopedic Doctor  
Physical Therapy Assistant  
Physician's Assistant  
Radiologist  
Radiologist Technician

**INDUSTRY CREDENTIAL (Credential of Value): Athletic Training Student Aide**

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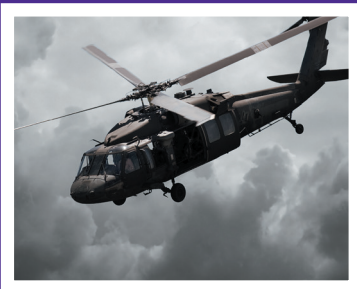
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### JROTC



**JROTC** students will learn the foundation for subsequent Leadership Education courses by teaching the basics of leadership, citizenship, personal growth, appearance and responsibility, general Marine Corps knowledge, drill, and physical training. An introduction to career awareness is also introduced, along with an emphasis placed on development of leadership skills, citizenship, physical training and drill.

#### PATHWAY COURSES

- MCJROTC Leadership Education I/II
- MCJROTC Leadership Education III/IV
- MCJROTC Leadership Education V/VI
- MCJROTC Leadership Education VII/VIII

#### CAREER CHOICES

- Administration
- Air Traffic Controller
- Aviation Ordnance
- Broadcast Specialist
- Computer
- Criminal Investigation
- Flight Crew
- Intelligence
- Military Police
- Missile Fire Control Operator
- Naval Aviation (Pilot)
- Transportation Management

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

### 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**

### 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**

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### 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**

### 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**

### Web Development



**WEB DEVELOPMENT** students will learn to develop and design responsive web sites through coding, testing, debugging and implementation of web-based services. This pathway will also allow students to learn about content management systems, client side languages, server side languages, and database concepts. It is designed to give students foundational knowledge of "front-end" and "back-end" development to address the presentation and data access layers of web site development.

#### PATHWAY COURSES

Introduction to Software Technology  
Computer Science Principles  
Web Development

#### CAREER CHOICES

Computer Specialist  
Database Developer  
Internet Specialist  
Multimedia Developer  
Network Analyst  
Network Engineer  
Programmer  
Video Game Developer  
Web Developer  
Webmaster  
Website Designer  
Software Trainer

**INDUSTRY CREDENTIAL (Credential of Value): CIW Site Development Associate**

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