

CTAE PATHWAY GUIDE

NORTH FORSYTH HIGH SCHOOL



3635 Coal Mountain Drive, Cumming, GA 30028 | www.forsyth.k12.ga.us/nfhs

Animation and Digital Media



ANIMATION AND DIGITAL MEDIA students will learn the basic components of 2-D and 3D animation development from storyboarding elements to fundamental software capabilities. The pathway serves as an introduction to the animation history, keyboarding shortcuts, project filing, and career awareness, as well as the physics and anatomy of motion, technology of animation, properties and use of color, cameras and lighting, fundamentals of modeling and animating, creating a portfolio and file management.

PATHWAY COURSES

Introduction to Digital Media
Principles and Concepts of Animation
Advanced Animation, Game, and App Design

CAREER CHOICES

Animation Producers
Artistic Director
Camera Operators
Forensic Animator
Graphic Designer
Film and Video Editors
Multimedia Artist and Animators
Storyboard Artist
3D Animator
3D Modeler
TV Director
TV Producer

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-AAVTC-Digital-Media.pdf>

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

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-AAVTC-Audio-Video-Tech-Film.pdf>

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 Digital 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

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-Information-Technology-Computer-Science.pdf>

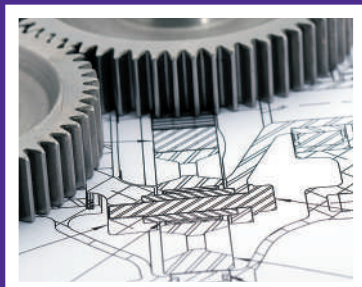
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Engineering and Technology



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

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-STEM-Engineering-Technology.pdf>

Environmental Agriculture Systems



ENVIRONMENTAL AGRICULTURE SYSTEMS students will delve into the environment, natural resources, ecosystems, soils, land use, chemicals in the environment, and water and air quality. Students will also learn how to implement production and marketing practices that are profitable and environmentally sound while meeting the needs of both the present and future generations.

PATHWAY COURSES

Basic Agriculture Science
Environmental Science and Stewardship
Sustainable Agriculture

CAREER CHOICES

Agricultural Chemist
Agriculture Policymaker
Agricultural Science Professor
Agriculture Technician
Conservation Scientist
Environmental Economist
Environmental Engineer
Food Scientist
Greenhouse Technician
Natural Resource Manager
Park Naturalist

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-BMA-Entrepreneurship.pdf>

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

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-Health-Science-Therapeutic-Services-Sports-Medicine.pdf>

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Internet of Things



INTERNET OF THINGS students will learn more about the ubiquitous world of personal devices, smart cars, intelligent factories, and even more. These systems interact with us directly, as well as with each other, so this pathway focuses on the interaction of programming and devices, using data from various sensors and sources in order to make decisions, take actions, and more. A common industry term to describe this work is Internet of Things. Students will show first-hand how programming and machines interact to accomplish common and essential tasks throughout our society.

PATHWAY COURSES

Introduction to Digital Technology
Computer Science or Principles
Embedded Computing

CAREER CHOICES

App Developer
Business Intelligence Analysts
Computer Programmer
Computer Systems Analysts
Cyber Security Consultant
Data Miner
Database Administrator
Game Developer
Information System
IT Consultant
Multimedia Programmer
Software Engineer
System Analyst

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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 Ordinance
Broadcast Specialist
Computer
Criminal Investigation
Flight Crew
Intelligence
Military Police
Missile Fire Control Operator
Naval Aviation (Pilot)
Transportation Management

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-GPA-JROTC-Marine-Corp.pdf>

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

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-Marketing-Marketing-Management.pdf>

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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

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-Human-Services-Food-Nutrition.pdf>

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

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-Hospitality-Tourism-Sports-Entertainment-Marketing.pdf>

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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

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-Education-Training-Teaching-as-a-Profession.pdf>

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 Digital 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

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-Information-Technology-Web-Digital-Design.pdf>