

CTAE PATHWAY GUIDE

DENMARK HIGH SCHOOL



645 Mullinax Road, Alpharetta, GA 30004 | www.forsyth.k12.ga.us/dhs

Companion Animal Systems



COMPANION ANIMAL SYSTEMS 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 introduces students to the scientific principles that underlie the breeding and husbandry of agricultural animals, and the production, processing, and distribution of agricultural animal products. Students will also learn skills and concepts involved with the care and management of companion animals.

PATHWAY COURSES

- Basic Agriculture Science
- Animal Science and Biotechnology
- Small Animal Care

CAREER CHOICES

- Agricultural Animals
- Agricultural Inspectors
- Agriculture Teachers
- Animal Breeders
- Animal Care and Service Workers
- Animal Scientists
- Biological Technicians
- Nonfarm Animal Caretakers
- Ranch Managers
- Veterinarians
- Veterinary Assistants
- Veterinary Technicians

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/AFNR-POS-Companion-Animal-Systems.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>

Culinary Arts



CULINARY ARTS students will complete a variety of skills required by the restaurant and food industry such as knife skills, cooking techniques, menu planning, food purchasing and costing, food safety and sanitation, and front of the house service. The pathway allows students to develop in-depth knowledge and hands-on skill mastery of culinary arts and allows them to refine hands-on production of the classic fundamentals in the commercial kitchen.

PATHWAY COURSES

- Introduction to Culinary Arts
- Culinary Arts I
- Culinary Arts II

CAREER CHOICES

- Cake Designer
- Caterer
- Chef and Head Cook
- Dining Room Management
- Food and Beverage Director
- Food Services Manager
- Food Stylist and Photographer
- Food Writer and Critic
- Kitchen Manager
- Pastry Chef
- Personal Chef
- Restaurant Entrepreneur

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

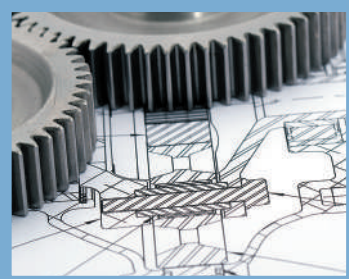
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Engineering and Technology



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>

Entrepreneurship



ENTREPRENEURSHIP students focus on recognizing a business opportunity, starting a business, operating and maintaining a business. Students will align business goals that focus on planning, organizing, coordinating, and controlling the resources needed to produce and provide goods and/or services that lead to owning and operating a small business. They will learn statutes and regulations affecting businesses, families, and individuals.

PATHWAY COURSES

- Introduction to Business and Technology
- Legal Environment of Business
- Entrepreneurship

CAREER CHOICES

- Advertising and Promotion Manager
- Business Educator
- Chief Executive Officer
- Claims Adjuster or Examiner
- Computer Systems Analyst
- Cost Estimator
- Database Administrator
- Financial Analyst or Manager
- Network and Computer System
- Paralegal and Legal Assistant
- Personal Financial Advisor
- Training and Development Manager

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

Fashion Marketing



FASHION MARKETING students will be introduced to the retail industry including the fundamentals of fashion marketing, key marketing concepts essential to every business, types of businesses involved in the industry, and an array of career opportunities. Students will develop skills in such areas as fashion economics, marketing segmentation and target marketing, product selection and buying, and inventory system. The pathway will also help them develop skills necessary for managing pricing, visual merchandising, advertising, special promotions, professional sales, and customer service.

PATHWAY COURSES

- Marketing Principles
- Fashion, Merchandising, and Retailing Essentials
- Advanced Fashion, Merchandising, and Retailing

CAREER CHOICES

- Advertising and Promotions Manager
- Brand Managers
- Entrepreneurs/Company Owners
- Fashion Designers
- General Merchandise Managers
- Merchandise Analysts
- Manufacturer's Sales Representatives
- Online Merchants
- Product Developers
- Retail Buyers
- Visual Merchandisers
- Wholesale and Retail Buyers

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

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Financial Services



FINANCIAL SERVICES students will focus on recognizing a business opportunity, starting a business, operating and maintaining a business. Students will align business goals that focus on planning, organizing, coordinating, and controlling the resources needed to produce and provide goods and/or services that lead to owning and operating a small business. Methods for measuring the financial performance of financial institutions and investments are also analyzed.

PATHWAY COURSES

Introduction to Business and Technology
Financial Literacy
Banking, Investing and Insurance

CAREER CHOICES

Accountant
Auditor
Business Teacher
Claims Adjuster
Financial Project Specialist
Financial Planner
Insurance Sales Agent
Research
Sales and Service

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/POS-Finance-Financial-Services.pdf>

Manufacturing



MANUFACTURING students are provided an overview of the safe use of tools and equipment used in the industry. Students will be able to apply their knowledge of computer aided design (CAD), computer numerical control (CNC), robotics, computer assisted manufacturing (CAM), programmable logic controllers (PLC), automated guided vehicles (AGV), and computer integrated manufacturing (CIM). The pathway provides an understanding of how to design and implement a production system and how businesses engage in the production of products.

PATHWAY COURSES

Introduction to Manufacturing and Materials Science
Robotics and Automated Systems
Production Enterprises

CAREER CHOICES

Control System Analyst
Department Manager
Manufacturing Engineer
Manufacturing Supervisor
Plant Manager
Production Supervisor
Quality Supervisor
Technician
Welder

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

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>

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

<https://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Documents/AFNR-POS-Veterinary-Science.pdf>