



DENMARK HIGH SCHOOL

645 Mullinax Rd, Alpharetta, GA 30004
470-533-2521 | www.forsyth.k12.ga.us/dhs

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>

CLUSTER	PATHWAY	DETAIL	COURSE 1	COURSE 2	COURSE 3	COURSE 4	CAREER CHOICES	
ADVANCED MANUFACTURING CLUSTER	Engineering and Technology Pathway	The major focus of the Introduction to Engineering Design (IED) course is to expose students to design process, research and analysis, teamwork, communication methods, global and human impacts, engineering standards, and technical documentation. It allows students to develop strategies to enable and direct their own learning.	Foundations of Engineering and Technology	Engineering Concepts	Engineering Applications	Internship Forsyth	• Civil Engineer • Drafter • Electrical Engineer • Industrial Engineer	• Machinist • Manufacturing • Materials/Mechanical Engineer • Quality Control Inspector
AGRICULTURE CLUSTER	Companion Animal Systems Pathway	Companion animals are cared for by performing routine tasks under the supervision of veterinarians, scientists, and veterinary technologists and technicians. Animal care and service workers feed, water, groom, bathe, and exercise pets and other nonfarm animals.	Basic Agriculture Science	Animal Science and Biotechnology	Small Animal Care	Internship Forsyth	• Agricultural Animal Specialist • Agricultural Inspector • Animal Breeder • Animal Care and Service Worker	• Biological Technician • Nonfarm Animal Caretaker • Ranch Manager • Veterinarian
	Veterinary Science Pathway	This pathway covers the basics of animal care. Topics covered include disease, parasites, feeding, shelter, grooming, and general animal care. Courses allow students entering the workforce after graduating high school to develop entry-level skills to become employed and to continue their education on the job.	Basic Agriculture Science	Animal Science and Biotechnology	Veterinary Science	Internship Forsyth	• Animal Physical Therapist • Animal Welfare Specialist • Cell Culture Specialist • Companion Animal Breeder	• Dairy Unit Herdsman/Manager • Embryo Transfer Technician • Veterinarian • Veterinary Technician
DIGITAL TECHNOLOGY CLUSTER	Artificial Intelligence Pathway	Artificial Intelligence sits at the intersection and synergy of critical components from a variety of fields including programming, data science, mathematical reasoning, creative problem solving, ethics, and applied experiences. Students will apply professional software development tools and processes to create functional, real-world applications of AI using machine learning.	Foundations of Artificial Intelligence	Artificial Intelligence Concepts	Artificial Intelligence Applications	Internship Forsyth	• Big Data Engineer/ Architect • Business Intelligence Developer • Computer Vision Engineer • Data Scientist	• Machine Learning Engineer • Researcher/Research Scientist • Robotics Engineer • Software/AI Engineer
	Cloud Computing Pathway	This pathway provides a foundational knowledge in programming languages, software development, app creation and the basics of cloud computing. 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.	Introduction to Software Technology	Computer Science Principles or AP Computer Science Principles	Cloud Computing	Internship Forsyth	• .NET Developer • AWS Certified Cloud Practitioner • Cloud Engineer • Computer Systems Engineer	• Data Scientist • Java Developer • Software Engineer • Systems Engineer
	Computer Science Pathway	Careers in Computer Science lead individuals to create, modify, and test codes - all while inventing and designing new approaches to computing technology and finding innovative uses for existing technology. Career area focus requires solving complex problems in computing for business, medicine, science, and other fields.	Introduction to Software Technology	Computer Science Principles or AP Computer Science Principles	AP Computer Science A	Internship Forsyth	• Computer Programmers • Computer Hardware Engineers • Computer Network Architects • Computer System Analysts	• Database Administrators • Information Security Analysts • Software Developers • Software Testers
EDUCATION CLUSTER	Education as a Profession Pathway	Educational services is the second largest industry. This includes education institutions from elementary schools to universities. The overall demand for educational services will increase as growing emphasis on improving education along with retirements will create large numbers of job openings.	Education as a Profession I	Education as a Profession II	Education as a Profession Practicum	Internship Forsyth	• Adult Educator • After-School Supervisor • Educational and Teacher Aide • K-12 School Teacher	• Media Specialist • Post-Secondary Vocational • School Administration • Special Education Teacher
FINANCIAL CLUSTER	Financial Services Pathway	This pathway introduces students to the basics of the banking system, bank operating procedures, negotiable instruments, and the deposit and credit functions of banks. Current issues and future trends in banking are examined. Students explore the major functions of bank employees by completing a flow-of-work simulation.	Introduction to Business and Technology	Financial Literacy	Banking, Investing and Insurance	Internship Forsyth	• Accountant • Auditor • Claims Adjuster • Financial Planner	• Insurance Sales Agent • Loan Officer • Salesperson • Tax Associate
HEALTHCARE AND HUMAN SERVICES CLUSTER	Allied Health and Medicine Pathway	The healthcare industry offers jobs in a variety of establishments: hospitals, nursing and residential care facilities, physicians, dental, and other health practitioners offices, home health care services, outpatient care centers, ambulatory health care services and medical and diagnostic laboratories.	Introduction to Healthcare Science	Essentials of Healthcare	Allied Health and Medicine	Internship Forsyth	• Clinical Laboratory Technician • Medical Doctor • Medical Laboratory Technician • Paramedic	• Pharmacist • Physical Therapist • Radiologic Technologist • Surgical Technologist
HOSPITALITY, EVENTS AND TOURISM CLUSTER	Culinary Arts Pathway	Students learn fundamental food preparation terms, concepts, and methods in culinary arts. Fundamental techniques, skills, and terminology are covered and mastered with an emphasis on basic kitchen and dining room safety, sanitation, equipment maintenance and operation procedures.	Introduction to Culinary Arts	Culinary Arts I	Culinary Arts II	Internship Forsyth	• Caterer • Chef and Head Cook • Food Stylist and Photographer • Food Writer and Critic	• Kitchen Manager • Pastry Chef • Personal Chef • Restaurant Entrepreneur
	Sports and Entertainment Marketing Pathway	Students will master the industry's terminology, market arenas and venues, obtain sponsorships, maintain solid media relations, coordinate and manage campaigns and events, etc. Students have the opportunity to take the MBA Research "A*S*K Marketing Concepts" or the NOCTI "Marketing Education Manager Trainee".	Marketing Principles	Introduction to Sports and Entertainment Marketing	Advanced Sports and Entertainment Marketing	Internship Forsyth	• Event Coordinator • Market Researcher Promoter • Public Relations Salesperson • Social Media Manager	• Sports Agent • Sports Manager • Sports Marketing Professional • Sports Writer
MANAGEMENT AND ENTREPRENEURSHIP CLUSTER	Entrepreneurship Pathway	Entrepreneurs, innovators, and small businesses play a key role in Georgia's economy. Business professionals may be managers, owners, accountants, economists, administrators, or analysts. These individuals must possess excellent communication skills and be able to establish working relationships with many different people.	Introduction to Business and Technology	Legal Environment of Business	Entrepreneurship	Internship Forsyth	• Advertising and Promotion • Business Educator • Chief Executive Officer • Computer Systems Analyst	• Cost Estimator • Database Administrator • Paralegal and Legal Assistant • Personal Financial Advisor
MARKETING AND SALES CLUSTER	Marketing and Management Pathway	Students develop knowledge and skills of marketing (economics, human relations and business basics) and the functional areas of marketing (product and service planning, management, purchasing and pricing, selling and promotion, risk management, financing and distribution), as well as international marketing, management and entrepreneurship.	Marketing Principles	Marketing and Entrepreneurship	Marketing Management	Internship Forsyth	• Advertising Account Executive • Communications Specialist • Customer Service • Entertainment Marketer	• Insurance Agent • Marketing Specialist • Media Buyer • Public Relations Specialist