



ALLIANCE ACADEMY FOR INNOVATION

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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	Mechatronics Pathway	Mechatronics is a diverse field including Electronics, Mechanics, Fluid Power, Electrical Control Systems, Programmable Logic Controllers (PLC), Computers, and Robotics. People employed in the mechatronics field deal with automated systems in a wide variety of applications.	Introduction to Mechatronics	AC Theory, Electric Motors, and Hydraulic Systems	Semiconductors, Mechanical Systems, and Pump and Piping Systems	Internship Forsyth	• Chemical Plant Operator • Computer Support Specialist • Electrical/Electronics Repairer • Electronics Engineering Tech	• Industrial Engineer • Industrial Engineering Tech • Industrial Equipment Repairer • Industrial Machinery Mechanic
ARTS, ENTERTAINMENT AND DESIGN CLUSTER	Graphic Design Pathway	This pathway starts with graphic design principals while exploring the techniques of creative problem solving. Students will explore the various printing techniques including screen-printing and offset printing. Students will choose either Graphic Design or Graphic Production focusing on the demand.	Introduction to Graphics and Design	Graphic Design and Production	Advanced Graphic Design	Internship Forsyth	• Art Director • Creative Designer • Film and Video Editor • Graphic Designer	• Illustration • Multimedia Artist/Animator • Photography • 3D Animation
DIGITAL TECHNOLOGY CLUSTER	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
	Cybersecurity Pathway	This pathway introduces students to the field of cybersecurity while examining best practices related to the management of security, ethics, trust, internal/external threats, cryptography, and wireless technologies. Computer related jobs are generally high paying.	Introduction to Hardware Technology	Introduction to Cybersecurity	Advanced Cybersecurity	Internship Forsyth	• Computer Network Support • Computer Operator • Computer Support Specialist • Computer User Support	• Information Systems Manager • Network System Administrator • Specialist First-Line Supervisors • System Administrator
	Game Design Pathway	After establishing foundational knowledge, game genres and modes of play are explored in terms of the psychology of incentives, motivation to play, and social networking. Virtual characters and non-player characters are reviewed from concept drawing to 2D and 3D art, rigging, and animation.	Introduction to Software Technology	Computer Science Principles or AP CP Principles	Game Design: Animation and Simulation	Internship Forsyth	• Audio Engineer • Computer Systems Manager • Computer Game Designer • Information Systems Manager	• Multimedia Artists • Software Developer • Technology Support Specialist • Video Game Tester
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 Technology (FINTECH) Pathway	Focuses are on the usage of technology that powers financial ecosystems, digital finance platforms, mobile payments, and digital asset management. Students explore the characteristics and functions of electronic and mobile payment systems and the design and development of dynamic, data-driven financial applications.	Introduction to Financial Technology	Financial Technologies and Services	Coding for FinTech	Internship Forsyth	• Account Manager • Analytics Specialist • Business Systems Analyst • Data Scientist	• Database Administrator • Email Marketing Specialist • Senior NET Developer • Software Engineer/Developer
HEALTHCARE AND HUMAN SERVICES CLUSTER	Clinical Lab Diagnostic Pathway	Persons with a strong interest in the initial phase of detecting health problems includes procedures such as X-rays, fluoroscopies, sonograms, and clinical laboratory tests examining blood and other body fluids. Occupations are increasingly more varied because of complex new technology seeking to explain how the human body works.	Introduction to Healthcare Science	Essentials of Healthcare	Clinical Lab I	Internship Forsyth	• Clinical Chemistry Technologist • Clinical Laboratory Technician • Immunology Technologist • Medical Lab Technologist	• Medical and Health Service • Medical Lab Assistants • Microbiology Technologist • Nuclear Medicine Technologist
	Emergency Medical Responder Pathway	Demand for emergency services will increase as a large segment of the population ages and becomes more likely to have medical emergencies. Those certified in EMT-Intermediate and EMT-Paramedic fields will have favorable job prospects. There will also be a demand for parttime, volunteer EMTs and paramedics in rural areas.	Introduction to Healthcare Science	Essentials of Healthcare	Emergency Medical Responder	Internship Forsyth	• Ambulance Drive • Emergency Nurse • EMR Analyst • EMT and Paramedic	• Firefighter • Licensed Practical Nurse • Paramedic Technologist • Registered Nurse
	Emergency Medical Technician Pathway	A growing aging population is expected to increase the likelihood of medical emergencies, thus increasing the need for EMTs and paramedics. Plus, emergency rooms are frequently overcrowded, which increases the amount of time that EMTs and paramedics must spend with each patient.	Introduction to Healthcare Science	Essentials of Healthcare	Emergency Medical Technician	Internship Forsyth	• Air Ambulance Attendant • Ambulance Driver • Emergency Dispatcher • Emergency Room Technician	• Forensic Science Technicians • Industrial Medic • Offshore Medic • Paramedic



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HOSPITALITY, EVENTS AND TOURISM CLUSTER	Hospitality, Recreation and Tourism Pathway	This industry includes lodging, hotels and resorts; conventions, meetings, trade shows and events; restaurants and food service; recreation, attractions, sporting events and travel. A service-oriented industry, workers will need good communication skills, and they will have to understand the importance of meeting the needs of individuals.	Marketing Principles	Hospitality, Recreation, and Tourism Essentials	Hospitality, Recreation, and Tourism Management	Internship Forsyth	• Country Club Management • Cruise Director • Hotel Management • International Tourism	• Social Media Marketer • Tourism Director • Travel Blogger • Travel Planner
MANAGEMENT AND ENTREPRENEURSHIP CLUSTER	International Business Pathway	Key concepts include global awareness, spirit of entrepreneurship, and cultural competency. At the end of this pathway, students will have developed the project management and business management skills that are the basis for developing and managing a business in an international market.	Introduction to International Business	Global Awareness and Cultural Competency	International Business Concepts	Internship Forsyth	• Economist • Foreign Exchange Trader • Logistics Manager • International Foreign Advisor	• International Trade Manager • Import/Export Coordinator • Supply Chain Manager • Trade Specialist
PUBLIC SAFETY AND SERVICES CLUSTER	Fire and Emergency Services Pathway	Firefighters control and extinguish fires or respond to emergency situations where life, property, or the environment is at risk. Duties may include fire prevention, emergency medical service, hazardous material response, search and rescue, and disaster assistance.	Introduction to Law, Public Safety, Corrections and Security	Essentials of Fire and Emergency Services	Emergency Medical Responder	Internship Forsyth	• Arson Investigator • Basic Fire Company Officer • Emergency Medical Responder • Firefighters	• First Line Supervisor • Forest Fire Inspector • Incident Safety Officer • Public/Private Crisis Manager
	Law Enforcement-Criminal Investigation Pathway	This pathway is designed to provide students with career-focused educational opportunities in various public safety fields. Each course has elements which cover tactics, methods, and skills utilized in law enforcement and other public safety organizations.	Introduction to Law, Public Safety, Corrections and Security	Criminal Justice Essentials	Criminal Investigations	Internship Forsyth	• Attorney • Bailiff • Correctional Officer Detective • Dispatcher	• Jailer • Law Enforcement Technician • Police Officer • Probation Officer
	Law Enforcement-Forensic Science Pathway	Students will examine the basic concepts of law related to citizens' rights and the responsibilities, and students will receive instruction in critical skill areas including: communicating with diverse groups, conflict resolution, ethics, CERT, basic firefighting, report writing, terrorism, civil and criminal law.	Introduction to Law, Public Safety, Corrections and Security	Criminal Justice Essentials	Forensic Science and Criminal Investigations	Internship Forsyth	• Coroner • Detective • Evidence Technician • Fingerprint Technician	• Forensic Pathologist • Medical Examiner • Police Officer • Sheriff's Officer Special Agent
	Legal Services-Applications of Law Pathway	Courses are designed to provide students with the understanding of the various services which ensure the proper function of our nation's legal system. A more security conscious society and concern about drug-related crimes should contribute to the increasing demand.	Introduction to Law, Public Safety, Corrections and Security	Essentials of Legal Services	Applications of Law	Internship Forsyth	• Attorney • Correction Officers & Jailer • Court Reporter • Criminal Investigator	• Information Security • Paralegals and Legal Assistans • Public Safety Communication • Security and Protective Service
SUPPLY CHAIN AND LOGISTICS CLUSTER	Aerospace-Flight Operations Pathway	This pathway will introduce students to the basics of aircraft navigation and the communication methods necessary for safe aircraft operations. Additionally, students will gain a meteorological foundation for understanding the forecasting and charting of weather patterns as applied to the air transportation industry.	Fundamental of Aerospace	Flight Operations I	Flight Operations II	Internship Forsyth	• Aerospace Engineer • Air Traffic Controller • Aircraft Cargo Handler • Airfield Operations Specialist	• Aviation Safety Specialist • Avionics Inspector • Commercial Pilot • Flight Attendant
	Drone Unmanned Aircraft Systems Pathway	Student can earn a commercial license to pilot an unmanned aircraft system. Topics covered will be weather and effects of weather on an unmanned aircraft, types and uses of unmanned aircraft, pre-flight planning and checks, FAA requirements, technology and remote instruction, radio communications, and more.	Fundamental of Aerospace	Flight Operations I	Unmanned Aircraft Systems	Internship Forsyth	• Delivery Service • Insurance and Claim Research • Operator and Editor • Photographer	• Public Safety • Surveyors and Mapping • TV, Video, and Film Camera • Unmanned Aircraft Vehicle