

		Agriculture Food and Natural Resources
Pathway	Class Name	
Animal Systems	Small Animal Care I & II	Are you interested in working with animals someday? How about right now?!
		In Small Animal Care I and II, students spend half of the time in the classroom learning about animals and how to care for them. The other half of the time, students are assigned a real animal to take care of during class! We have over 200 animals spanning over 60 different species in our program. Students are responsible for preparing the animals' diets, grooming and training them, providing physical and mental exercise, and cleaning up after them! Take a rabbit for a walk! Teach a cockatiel how to sing! Use chemistry to create a frog-safe pond! Help a snake to shed their skin! Train a rat to move through an obstacle course!
		We cover topics like the history of animal domestication, breeds and characteristics, reproduction, health and disease, and more! We even bring in industry professionals and take field trips to teach students about many of the different animal-related careers that exist. This is the perfect class for someone who is interested in pursuing a career with animals and would like to learn more, gain experience, and build industry connections. We also have a partnership with the NOVA Vet Tech program for students who are interested in taking their passion for animals to the next level.
Animal Systems	Veterinary Science I & II	These courses prepare students for careers in veterinary medicine and related fields. Key topics include: Animal care and safety practices, anatomy and nutrition, medical terminology and sanitation, clinical exams. Students also learn important skills such as communication, facility operations, and professional etiquette. Practical skills include first aid, surgery preparation, aseptic techniques, and medication administration, with hands-on experience working with live animals. Who Should Take This Class: Students should be comfortable caring for animals and understand the risks of getting bitten or scratched. It's important not to have severe allergies to pet dander. This class is NOT just a "play" with animals class —there is real content involved that can be quiet challenging. That being said, if students keep up with the classwork, attend regularly, and use the study guide to help them prepare for tests, most students will find that they can be successful in this class.
		Architecture and Construction
Pathway	Class Name	
Construction - Architecture	Technical Drawing & Design	This is a beginning level mechanical drawing class which introduces the skills required to communicate effectively using graphic language. Students use three methods of graphic representation: freehand sketching, mechanical drafting, and computer-assisted drawing. The course content includes career opportunities in the field of technical drawing, freehand sketching, lettering techniques, line types, geometric constructions, multiview drawings, dimensioning, sectional views, auxiliary views, and computer assisted design. This course is especially recommended for future engineers, architects, or home builders, including students involved in the construction trades
	Architectural Drawing & Design	Research architectural styles and designs over time Explore developments in building techniques Use Autodesk Revit to... Practice industry standard design strategies Develop a full set of Architectural plans included floor plans, elevations, sections and site plans Build a 3D model
	Advanced Drawing & Design (CAD)	Prerequisite: Architectural Drawing & Design or Introduction to Engineering Design This class expands CAD knowledge learned in IED. We make 3D models out of various material, from plastic, wood, concrete, and more. There is a strong emphasis on using 3D printers, laser cutters, and CNC routers. For most students, this class provides a lot of creative freedom and room to bring out their design skills in a maker space environment.
	Carpentry I	Explore & practice safe use of hand & power tools Learn how to harvest raw materials (turn logs into lumber) Calculate lumber volume, grading, and value Read and interpret blueprints and project plans Layout, cut, drill, rasp, sand and finish a wooden project <i>Example projects include a wooden tool box, cutting board, sawhorse, and small garden shed</i>
Construction - Carpentry	Carpentry II	Practice safe use of hand & power tools Maintain and service woodworking equipment Read and interpret blueprints and project plans Explore residential construction practices such as floor framing, wall framing, roof framing and stair construction Layout, cut, drill, rasp, sand and finish a wooden project <i>Example projects include a small residential structure, advanced cutting board & coasters, Adirondack Patio Chair and/or Shaker End Table</i>
	Carpentry III	Carpentry III is an advanced course where students gain hands-on experience in construction skills. They focus on areas like building decks and porches, alternative framing, interior finishes, and drywall installation. The course also covers energy efficiency, green technology, licensure requirements, and entrepreneurial opportunities. Students participate in activities that enhance leadership and career skills, while high-quality work-based learning offers practical experiences aligned with their career goals, in partnership with local businesses.
Construction - Electricity	Electricity I	Students will earn OSHA 10 certification which is a required safety certification on many jobs. They will learn Ohm's law and how to build circuits. They will also receive HBI (Home Builders Institute) core certification
	Electricity II	Builds on level 1 skills. They will explore the National Electrical Code (NEC) and learn conduit bending. This class also does a lot of work around the school
	Electricity III	Level III is in class with level II. They often help in the lab. They learn alternative energy and basic motor controls as well.
		Arts, A/V Technology and Communication, Journalism
Pathway	Class Name	
Autio, Video Tech & Film	TV & Media Production I - DE ONLY	Dual-enrolled with NOVA- PHT 130- Video 1- Earn 3 college credits. Students stretch themselves through enjoyable, creative, engaging projects. They create short films, commercials, green screen projects, documentaries, how-to videos, PSA's and more. Students will utilize the State of the Art Professional Studio, Lab and Equipment and have access to our state of the art television studio with HD equipment that mirrors industry standards. Students will also use professional cameras and edit footage in our high-powered computer lab, and participate in SkillsUSA and other Video Contests. All students join SkillsUSA which is a student organization that holds contests at the local, state and national levels. We are state champions and former national champions!
	TV & Media Production II - DE ONLY	Dual enrolled with NOVA- PHT 131- Video 2- Earn 3 college credits. Students shoot sophisticated videos using professional gear such as DSLRs and Panasonic film cameras and gliders to gather footage to be edited in our high-powered computer lab. They become certified in Adobe Premiere Pro which is the industry standard for professional video editing. Students compete in SkillsUSA at the local, state and national level. Many travel to compete in state and national contests. Also, students work on NOVA video projects, non-narrative videos, short stories, radio, and the in-house Archers' TV show.
Audio, Video Tech & Film	Technical Drawing & Design	In this advanced computer-aided design (CAD) course, students will dive deeper into the world of digital product design and technical illustration. Using industry-standard software, including Autodesk Fusion, they will increase their proficiency in CAD and learn advanced 3D modeling techniques for designing products used in manufacturing and construction. Students will research and explore design-related fields, analyze and reverse engineer existing products, and apply the design process to create innovative solutions. By constructing physical models and creating multimedia presentations, they will bring their designs to life and build a portfolio that showcases their skills and creative vision. This course prepares students for cutting-edge careers in fields such as product design, architecture, engineering, and related technical disciplines.

	Entertainment Design & Technology	Students will learn and apply skills related to the creative process of live entertainment production. They will explore scenic design and construction, lighting design and technology, and live sound reinforcement. Hands-on experiences using techniques used in the industry will help students investigate the dynamic and growing industry of live entertainment. Students will also explore job opportunities and careers in live entertainment production
Visual Arts	Animation & Digital Content Technology	We do 2D and 3D. In 2D is Adobe Animate and it's like cartoons. 3D is Autodesk 3D Studio Max and it's like video games. We can animate not only the figures and objects but the cameras we view the scenes through. Again, you don't have to be an artist, the programs do the work. This class is very scaffolded. Now that you know how to do this, let's add this to the animation. Now that you can do that, too, let's add another level of skill.
	Graphic Communication Systems	We use Adobe Photoshop and Adobe Illustrator. You don't need artistic skills... this is a CTE class. I'm grading on did you use the Adobe technical skills introduced for the assignment. Most assignments are "open ended" and students bringing their ideas and creativity. There's no homework because students don't have the Adobe programs on their laptops. We take the Adobe Certified Professional certification exams (Adobe Illustrator and Adobe Photoshop).
Visual Arts - Full-Time ACC Students ONLY	Art I	Best for kids who enjoy using their hands and want to explore their own creativity. We do traditional painting and drawing projects but also do fiber arts (embroidery, felting), paper building and folding (tunnel books, origami sculptures), and create work for an end of year gallery show. Lots of flexibility and choice are given in this class but don't expect to get an A just by showing up.
	Art II	A continuation of the same environment in Art I, except with more individual choice and expression. We do projects around printmaking, bookmaking, stained glass, and screen-printing. Art II students are in charge of conceptualizing and curating our end of year gallery show. Expect at least two field trips during the year and to have a visiting artist in class once a quarter.
	Digital Photography I	A rigorous course with most projects needing to be completed outside of class time. You'll learn all about how cameras work, the creative choices you can make when creating an image and why visuals are so important in our lives. Expect technical and abstract assignments with written reflections accompanying your images. Personal responsibility is a must- you'll be in charge of an \$850 camera for the entire school year (you break it/loose it, you pay for it).
	Digital Photography II	For students who genuinely enjoyed Photo I, expect lots of creative freedom and choice with projects. There are some graphic design assignments peppered throughout the year so students can learn how imagery works with text and branding/packaging. Usually this class is on the smaller side so you get to know your peers really well and critiques are much more focused/individualized. Expect to work on photo projects for longer periods outside of school and to complete graphic design work during class time.
Journalism - Full-Time ACC Students ONLY	Literary Magazine	Students work to strengthen their creative writing skills through collaborative workshops in order to publish a magazine of student literary writings. Students will learn how to write original fiction, nonfiction, poetry, and drama throughout the publication cycle. Students in the class will become stronger writers, stronger editors, and better critics by practicing the collaborative writing/critiquing cycle. The class will work with the Chronicle to publish an online literary magazine for an authentic audience. All Grace Hopper students will be able to submit to the literary magazine but the class will serve as the editorial board for the final product.
	Newspaper	This course is an English elective that develops skills in publishing print and digital media. Students practice journalistic writing and interviewing, learn about ethics and laws in media, and plan collaborative projects. Students are responsible for the production of the ACC Chronicle website, on which we publish content each week, and four print editions, published each quarter. Expectations: Students should be ready to pitch article ideas, give and receive feedback, and publish articles online every one to two weeks Leadership opportunities include editor-in-chief, creative manager, lead editor, lead publisher Grades are based use of class time, collaboration, and number of publications per quarter
	Yearbook	Students produce the yearbook. Over the course of the year, students work to fill the book and meet the publishing deadline.
Pathway	Course Name	Business Management and Administration
General Management - Entrepreneurship	Entrepreneurship	This entrepreneurship class is designed for students who want to make a positive impact on their community by starting their own worker cooperatives to provide goods and services needed by our community while also providing a decent and honest living for the co-op members. Students will explore how to determine community needs, devise a business plan around meeting an identified need, and then learn the skills required to start and run a democratically owned and operated business
Pathway	Class Name	Education and Training
Teaching/ Training	Teachers For Tomorrow I - DE ONLY	Do you want to be a teacher? Have you ever wondered how a teacher created a lesson, why they chose their specific reading or topic for class, and what teaching is like in other states? Teachers for Tomorrow 1 is a dual enrollment class through NOVA Community College. You will receive three college credits and the opportunity to be a teacher's aide in a middle or high school classroom. You will learn about the history of education, how to create lesson plans and develop classroom management skills to make you the most effective teacher. This course is a full year and allows juniors and seniors to participate. If you have any other questions, please reach out to cole.forbes2@apsva.us
	Teachers For Tomorrow II - DE ONLY	After completing Teachers for Tomorrow I, do you want to spend more time as a teacher's aide in a classroom? Do you want to dive deeper into children's development habits and progress? In Teacher's for Tomorrow II, you will learn about each stage of human development. You will study what to expect from pre-birth to adulthood and the specific developmental patterns in each stage. Then, you will learn how to use that information in your lesson plans. Since it will be your second year with me, you will spend more time with your host teacher in the classroom. You can build more skills as a teacher, instruct more lessons in a live classroom, and learn how to read and write at the college level. This dual enrollment class is with NOVA Community College, and Teachers for Tomorrow I is a prerequisite. If you have any other questions, please reach out to cole.forbes2@apsva.us.
Pathway	Class Name	Energy Sustainability and Efficiency
Energy Sustainability & Efficiency	Sustainability & Renewable Technology	Sustainability and Renewable Technologies explores issues that affect global citizens in the areas of economics, culture, and the environment. The course introduces students to the historic, economic, political, environmental, and cultural issues that impact the global community and its future. Students will address issues affecting the health of our environment and explore solutions offered by sustainable agriculture, energy efficient building design, and renewable energy sources.
	Energy and Power	In this course, students analyze energy sources and explore the generation, transmission, and distribution of electricity using the Energy Industry Fundamentals modules from the Center for Energy Workforce Development (CEWD). The course provides math, science, and technical writing skills through hands-on application. Students have an opportunity to take the energy Industry Fundamentals Certificate Assessment.
Pathway	Class Name	Government and Public Administration
Planning	Space Force JROTC I, II, III, IV	In Space Force JROTC, the class lessons focus on Aerospace (Col Dierlam) and Leadership (MSgt Victor) lessons. Cadets are required to wear the Space Force JROTC all day once a week and to meet the Space Force grooming standards to include a professional military hair style. Cadets are expected to attend 4 outside of class activities during the school year. To become a cadet leader cadets must attend some of our afterschool activities after school on Tuesday, Wednesday, and Thursday. However, a student can earn an A grade in the class by accomplishing the class lessons and wearing the uniform properly each week. To become the cadet squadron commander, the cadet must be able to attend our afterschool activities on a regular basis.
Pathway	Class Name	Health Science

Diagnostic Services	Introduction to Health & Medical Sciences	Curious about a career in healthcare? This class is your starting point! Explore exciting careers like EMT, pharmacy tech, or physical therapy aide while learning the basics of medical terminology, anatomy, and emergency care. You'll also pick up real-world skills like safety, professionalism, and job-seeking tips to help launch your future in healthcare. Ready to take the first step? This is the class for you!
	Medical Terminology - DE ONLY	Ever wanted to speak the language of doctors, nurses, and medical pros? In this class, you'll unlock the mysteries of terms like "cardiomyopathy" and "otosclerosis" while preparing for your future in healthcare. Earn high school and college credit through NOVA, and take the first big step toward your dream career! From diagnosing pretend patients to mastering medical lingo, this course makes learning fun, fast-paced, and rewarding. Don't just dream about saving lives—start now!
Diagnostic Services	Biotech Foundations in Health and Medical Sciences & Forensic Technology	Totally fun class, preparation for studying forensic science in college, MANY students have gone on to colleges in Forensic Science and/or careers in the field. Best for 11th and 12th graders because of the graphic nature of the class. Lots of labs, lots of writing, some homework, but not every day.
Therapeutic Services	Introduction to Health & Medical Sciences	Curious about a career in healthcare? This class is your starting point! Explore exciting careers like EMT, pharmacy tech, or physical therapy aide while learning the basics of medical terminology, anatomy, and emergency care. You'll also pick up real-world skills like safety, professionalism, and job-seeking tips to help launch your future in healthcare. Ready to take the first step? This is the class for you!
	Physical/Occupational Therapy I - DE <i>Optional</i>	<p>In this introductory course, students will explore the foundational concepts and practices of physical and occupational therapy. This hands-on, engaging program is designed to help students develop essential skills and knowledge for careers in rehabilitative care.</p> <p><u>Key Expectations and Learning Objectives:</u></p> <ul style="list-style-type: none"> * Comfort in Working with Others: Develop the ability to work with both peers and adults in a professional setting. * Manual Therapy Techniques: Learn and practice manual massage techniques used in therapy. * Vital Signs: Master skills in measuring and understanding vital signs, including blood pressure, pulse oximetry, temperature, and heart rate. * Musculoskeletal Taping: Gain hands-on experience in athletic taping and Kinesiology (KT) taping techniques. * Injury Knowledge: Build an understanding of the physiological and anatomical concepts behind musculoskeletal injuries. <p><u>Rehabilitation Modalities: Learn to apply therapies like:</u></p> <ul style="list-style-type: none"> * Moist heat * CryoCuff and cold packs * Cupping therapy * TENS (Transcutaneous Electrical Nerve Stimulation) * Normatec Massage System <p><u>Special Experiences:</u></p> <ul style="list-style-type: none"> * Cadaver Lab Visit: Participate in an educational visit to the NOVA Medical Campus Cadaver Lab to deepen anatomical understanding. * Community Clinic: Gain real-world experience by providing health screenings to students and adults at the Arlington Career Center. * Shadowing Opportunities: Observe professionals in action at Virginia Hospital Center and Ivy Rehab to see therapy techniques in practice. <p><u>Certification Opportunity:</u> Earn a Physical Therapy Technician Certification through the American Medical Certification Association (AMCA) (students must be 17 years old to take exam.)</p>
	Physical/Occupational Therapy II	<p>Building on the foundations of Physical/Occupational Therapy I, this advanced course expands students' skills and understanding to prepare them for further education and careers in rehabilitative therapy.</p> <p><u>Advanced Learning Objectives:</u></p> <ul style="list-style-type: none"> * Everything in Level I, with deeper exploration and practice. * Joint Mobilization: Learn advanced concepts in mobilizing joints to improve function and reduce pain. * Goniometry: Accurately measure joint angles to assess movement and function. * Orthopedic Special Tests: Conduct special tests for joint assessment to identify potential injuries or impairments. * Expanded Shadowing Opportunities: Observe advanced practices at Virginia Hospital Center and Ivy Rehab clinics. <p><u>Certification Opportunity:</u> Earn a Physical Therapy Technician Certification through the American Medical Certification Association (AMCA) (students must be 17 years old to take exam.)</p> <p>This course provides a professional, hands-on learning experience, equipping students with certifications and a strong foundation for pursuing higher education and careers in physical and occupational therapy.</p>
	Pharmacy Technician I	<p>In this course, training to become a pharmacy technician will include instruction and hands-on experience in areas such as prescription processing, medication preparation and dispensing, medical terminology, pharmacology, pharmacy calculations, and related information that's required to assist pharmacists. One could then work in such settings as pharmacies and other healthcare locations such as hospitals or clinics. Students who are about to graduate will be eligible to take a certification exam. Not only can this course prepare one to work in a pharmacy setting, but because of the curriculum, it could be a foundation for pursuing other careers such as nursing, medicine or other related healthcare areas.</p> <p>** certification for this class CAN ONLY be taken no more than 60 days PRIOR to graduation so it's recommended for seniors or juniors who take level II their senior year**</p>
Therapeutic Services	Pharmacy Technician II	The Pharm Tech II class is designed for students to build on and apply knowledge and skills developed in the Pharm Tech I course. This includes the fundamentals of prescription processing and dispensing, medications for specific conditions, medication terminology, law, compounding and calculations, just to name a few. Graduating seniors are eligible to take the pharmacy certification exam (the ExCPT).
	Emergency Medical Technician I & II - DE <i>Optional</i>	<p>This is a college-level one-year course that is geared to prepare the students who are 16 years or older for the national registry test to become an EMT. The first portion of the course will focus on the basics of EMS training, while the second half will take a deeper dive into medical illnesses and traumatic injuries. The pace of the course and the content are similar to a college level course and therefore, prior academic strength is crucial for students to be successful. Instructor expectations of the students are high as the course is demanding.</p> <p>Students will learn hands on EMS skills in lab settings and will receive lectures from various instructors with significant field experience at the BLS and the ALS levels. Qualified students (GPA, attendance and participation) will have the opportunity to engage in clinicals at fire stations and/or emergency rooms to complement their in-class learning experience.</p> <p>In addition to providing the students a possible 8-college credit hours at the NVCC level, the EMT class provides two high school credit hours to students successfully completing it</p>
	Emergency Medical Technician III	This course is for students who have completed EMT I and II, received instructor approval, and may have EMT certification from Virginia. It focuses on enhancing skills for assisting advanced life support (ALS) providers and building on emergency medical services (EMS) education. Students will also learn to coordinate with public health and safety services like fire, law enforcement, and emergency management. The course includes both mentoring and instruction, with a requirement to complete at least 85% of the coursework and lab activities.
Other Sciences/Health Sciences	General Biology - DE ONLY	8 credits from NOVA, need to want to work. Not a lot of homework but A LOT of studying. Goes extremely fast, students should be prepared to do some of this EVERY NIGHT . If you cannot commit to intense study, this is not the class for you.
	Biology II Anatomy & Physiology - DE ONLY	(must pass DE Bio I or placement test or 3 or higher on AP Bio test) 4 credits from NOVA, need to take a test through NOVA to place into this class. Lots of memorization but less fast-paced than Bio 101. Quite a lot of homework.
Other Sciences/Health Sciences	Psychology <i>Full-time ACC students ONLY</i>	We look at the big question. What motivates us, how does our mind work, and what can go wrong.
Pathway	Class Name	Hospitality and Tourism

Restaurants & Food/Beverage Services	Introduction to Culinary Arts <i>Full-time ACC students ONLY</i>	The Arlington Career Center Culinary Arts program is an American Culinary Federation accredited Culinary Arts program that gives high school students a true head start in the foodservice industry. Students train in a professional-grade commercial kitchen, build real culinary skills, and earn nationally recognized industry certifications that employers trust. With hands-on instruction, industry-standard safety and sanitation training, and opportunities for competitions, internships, and college credit, we prepare young culinarians to step confidently into the workforce or continue on to post-secondary education. It's not just a class, it's a launchpad for future chefs, entrepreneurs, and hospitality leaders.
	Culinary Arts & Sciences I	10th & 11th grades * Develop skills in commercial food safety & sanitation procedures * Practice food-preparation techniques and service * Authentic real-word application through participation in Pop-Restaurant, Food Truck, Catering Events, & culinary competitions
	Culinary Arts & Sciences II	11th & 12th grades * Opportunity to earn industry certification and articulation college credits through successful program completion: ServSafe Food Protection Manager & American Culinary Federation Certified Fundamental Cook * Perform a wide range of more advanced food-preparation techniques including Garde Manger and Baking & Pastry * Refine their dining room serving skills, develop menus, perform on-site and off-site catered functions, and strengthen their business and math skills. * Authentic real-word application through participation in Pop-Restaurant, Food Truck, Catering Events, & culinary competitions
	Baking/Pastry Specialization	Must pass Culinary I first * Develop skills and knowledge to pursue careers in the Baking & Pastry Industry. * Perform high level baking and pastry productions techniques: Quick Breads, Artisan Breads, Custom Cake Decorating, Frozen & Specialty Desserts * Opportunity to earn industry certification and articulation college credits through successful program completion: American Culinary Federation Certified Fundamental Pastry Cook
Pathway	Class Name	Human Services
Early Childhood Development & Services	Child Development & Parenting <i>Full-time ACC students ONLY</i>	Child Development prepares students for future family life and careers related to early childhood. Students will study first aid and safety, child development theory, and developmental milestones for all childhood ages and stages, as well explore parenting styles and practices. The study of careers related to early childhood will continue throughout the year, and several guest speakers have been invited to the class to discuss their careers and expand on relevant topics.
	Early Childhood Education I - DE ONLY	Early Childhood Education is a great class for students who like to be around kids. Current students say the best part of our class is Fieldwork on Tuesdays and Thursdays. In Fieldwork, the students assist in our daycare classrooms with infants, toddlers, preschoolers, and school-aged children (at the Montessori school). Examples of what they do in Fieldwork include reading to children, helping them with snacks, participating in morning circle time, or helping kids with a craft or project. Class days are interactive including warm-ups, movement breaks, small group work, and class discussions. We don't have many tests but we do real-life projects. Examples of projects include planning and implementing age-appropriate activities for children, creating a class schedule, and making lesson plans. We aim to be a very engaging class and we believe learning can be fun!
	Early Childhood Education II - DE ONLY	In addition to the format described above, students spend time observing in our Career Center Preschool. The ECE II students Student Teach in our Career Center Preschool as the culminating activity for the year.
Personal Care Services	Master Barbering I	This introductory course is for students aiming to become master barbers. Students will practice their skills in a clinical lab setting using mannequins and live models. The program focuses on personal safety, professionalism, scalp and hair care, hair cutting, styling, coloring, shaving, and barbershop management. Participation in co-curricular activities helps develop leadership and career skills. High-quality work-based learning provides practical experiences aligned with students' career goals through partnerships with local businesses. Prerequisite: None OSHA Compliance Required?: Yes CTSO: SkillsUSA Fees: KIT \$320/ Lab Jacket \$33
	Master Barbering II	This course builds on the knowledge and skills from Master Barbering I. Students will practice in a clinical lab using mannequins and live models. The program focuses on safety, professionalism, hair cutting, styling, shaving, barbershop management, and chemical services. Participation in co-curricular activities enhances leadership and career skills. High-quality work-based learning offers practical experiences aligned with students' career goals through partnerships with local businesses. Prerequisite: Master Barber I OSHA Compliance Required?: Yes CTSO: SkillsUSA
	Master Barbering III	In this advanced course, students enhance their barbering skills, focusing on hair cutting and styling on live models while emphasizing professionalism, client consultation, safety, and infection control. They learn safe chemical processes for texture services and advanced hair coloring techniques, as well as artistic skills with wigs and hair additions. The course includes a business management unit for creating a barbershop business plan and prepares students for the Virginia State Licensing Exam. Participation in co-curricular activities builds leadership and career skills, while high-quality work-based learning offers practical experiences aligned with students' career goals through local business partnerships. Prerequisite: Master Barber II OSHA Compliance Required?: Yes CTSO: SkillsUSA
Personal Care Services	Cosmetology I	In this introductory course, students learn about hair, skin, and nails, focusing on their care. They gain theoretical knowledge and practice skills in a lab setting using manikins. The course emphasizes safety, professionalism, and sanitation. Students develop abilities in shampooing, conditioning, styling, cutting hair, hair coloring, and manicure/pedicure procedures. Participation in co-curricular activities helps build leadership and career skills. High-quality work-based learning offers practical experiences aligned with students' career goals through partnerships with local businesses. Prerequisite: None OSHA Compliance Required?: Yes CTSO: SkillsUSA Fees-KIT \$360/ Lab Jacket \$32
	Cosmetology II	In this continuing course, students enhance their knowledge of cosmetology by improving their hair cutting and styling skills on live models. The focus is on professionalism, client consultation, safety, and infection control. Students learn safe chemical processes for permanent waves, relaxers, lightening, and coloring hair. They also gain experience in skin, hand, and foot care, including facials, manicures, pedicures, and nail enhancements. A business management unit teaches salon management. Participation in co-curricular activities helps develop leadership and career skills, while high-quality work-based learning provides practical experiences aligned with students' career goals through local business partnerships. Prerequisite: Cosmetology I OSHA Compliance Required?: Yes CTSO: SkillsUSA
	Cosmetology III	In this advanced course, students enhance their cosmetology knowledge and skills in hair cutting and styling on live models, focusing on professionalism, client consultation, safety, and infection control. They learn safe chemical processes for texture services and advanced hair coloring techniques, as well as skills in using wigs and hair additions. The course also covers skin, hand, and foot care, providing experience in facials, manicures, pedicures, and nail enhancements. An advanced business management unit teaches salon management and business planning. Completing this course prepares students for the Virginia State Licensing Exam. Participation in co-curricular activities builds leadership and career skills, while high-quality work-based learning offers practical experiences aligned with students' career goals through local business partnerships. Prerequisite: Cosmetology II OSHA Compliance Required?: Yes CTSO: SkillsUSA
		Information Technology

Pathway	Class Name	Information Technology
Information Support & Services - Network Systems	Cybersecurity Fundamentals	In this class, students learn how to stay safe online and protect computers, accounts, and data from hackers and cyber threats. Students use virtual computer labs and take part in Capture-the-Flag (CTF) challenges all year to practice real-world cybersecurity skills in a fun, hands-on way.
	Cybersecurity Operations & Computer Network Software Operations DE ONLY	This course teaches students how computer networks and security systems work in real businesses. Students learn how to set up networks, manage users, monitor activity, and respond to security problems. They use virtual labs and complete Capture-the-Flag challenges to build practical experience in cybersecurity and networking.
	Cybersecurity Operations, Adv & Computer Network Software Operations, Adv DE ONLY	This advanced course lets students work like real cybersecurity professionals. Students secure networks, track down cyberattacks, and use professional security tools to defend systems. They train in advanced virtual environments and compete in Capture-the-Flag challenges throughout the year to gain real-world cybersecurity experience.
Programming & Development	Webpage Design & Multimedia - DE <i>Optional</i>	You'll build a beautiful personal portfolio website. Along the way you'll become a wiz at using your computer, learn some design concepts, how the internet works, and a bit about cybersecurity. At the end of this class, you'll have a good idea of what you want to study next - programming, cybersecurity, and/or graphic design.
	Computer Programming Year 1 - DE ONLY	<u>NOVA Prerequisite - DE Webpage Design</u> You'll use Python to develop an interactive web application. You'll build on your skills from Web Page Design (a strict pre-requisite), learn how interactive web pages work, and earn your Python certification.
	Computer Programming Year 2 - Advanced DE ONLY	Prereq: must pass Computer Programming I or have a 3 or higher on AP CS exam After becoming a Python expert in DE Programming I, you'll expand your programming experience in a new language! You'll earn your C++ certification, a powerful, lower-level programming language. The Spring is more of a math class - you'll explore the world of 'Discrete Math' - which is very useful in the world of computer science.
	Computer Programming Year 3 - Intensified DE ONLY	Prereq - must pass Computer Programming II This class builds on experience from DE Programming II - we'll peel back even more layers to understand how computers work by exploring the Altair 8800- one of the first ever personal computers. Along the way, we'll learn machine code, assembly, and C. In the Spring, you'll return to C++ to explore algorithms and data structures - fundamental concepts that will prepare you for a college computer science major.
Pathway	Class Name	Law, Public Safety, Corrections and Security
Law Enforcement Services	Criminal Justice I	Students will learn the basics of the criminal justice system. This Career and Technical Education (CTE) class covers important topics like: Law enforcement, the court system, corrections (prisons and rehabilitation), forensic science. Students will learn about the different roles in criminal justice and gain practical skills through interactive lessons, real-life situations, and hands-on activities.
	Criminal Justice II	Criminal Justice II builds on what students learned in Criminal Justice I. It focuses more on specific topics like criminal law, investigation methods, and advanced forensics. This course is for students who want to continue their studies in criminal justice and gain more skills through hands-on projects and experiences.
	Biotech Foundations in Health and Medical Sciences & Forensic Technology	Totally fun class, preparation for studying forensic science in college, MANY students have gone on to colleges in Forensic Science and/or careers in the field. Best for 11th and 12th graders because of the graphic nature of the class. Lots of labs, lots of writing, some homework, but not every day.
Pathway	Class Name	Manufacturing
Production	Mechatronics I	Mechatronics I is a rigorous professional certification course designed for students seeking immediate industry credentials. Unlike design-based courses, this class focuses on the precise execution, maintenance, and troubleshooting of existing industrial systems. Students will strictly follow technical schematics to wire motor controls, perform quality control inspections with precision tools, and master the safety protocols of a modern factory. The curriculum is structured to prepare students for the OSHA 10-Hour Construction card and the MSI MT1 Certification exam.
	Mechatronics II (SY 27-28)	tbd for school year 27-28
Pathway	Class Name	Marketing
Marketing Management	Marketing	Students will learn how products are developed, branded, and sold. They will analyze industry trends and gain hands-on experience in the marketing of goods, services, and ideas and be prepared for success in postsecondary education and employment. Topics include: professionalism in the workplace, product planning and positioning, promotion, pricing, selling, economic issues, and changes in the marketplace.
	Marketing Management	Students will be exposed to all aspects of marketing and management, including branding, digital marketing, promotion, communication, and career opportunities in marketing.
	Fashion Marketing	This course will lead students into the exciting and ever-changing world of fashion. Students will gain knowledge of marketing as it relates to the fashion industry and the product development process. From retail establishments to e-commerce and social media marketing, students will explore trends, technology, branding, visual merchandising, the nature and history of fashion and fashion designers, and the global impact of the fashion industry on the economy.
Pathway	Class Name	Science, Technology, Engineering & Mathematics
Engineering & Technology	Technology & Engineering Foundations (TEF) <i>(required AT 9th grade engineering course)</i> Full Time Students <u>ONLY</u>	Technology and Engineering Foundations is the universal "starter kit" for every Arlington Tech student, building core skills for an era shaped by intelligent machines. In this course, you will move from passively watching technology to creating it, using professional software and digital tools to design practical, real-world solutions. Through team-based projects—like launching rockets, engineering catapults, and racing Bluetooth-controlled vehicles—you will learn to tackle complex technical problems while collaborating, managing conflict, and sharing responsibility. The course ultimately focuses on growth: developing self-direction, confidence among teams, and the perseverance to push through difficult challenges.
	Materials & Processing Tech	The science and engineering of solid materials and how to manufacture and produce the materials. It is an extension of chemistry with a focus on how and why materials are selected for its intended purpose. This elective is great for students who love science, especially Chemistry.
	Technology of Robotic Design	Students engage in the study of computers and microprocessors and their applications to manufacturing, transportation, and communication systems. Topics include computer equipment and operating systems, robotics, programming, control systems, and social/cultural impact of these technologies. Problem-solving activities challenge students to design, program, and interface devices with computer systems. Learning activities include robotics, computer-aided design, computer-aided manufacturing and design, and control of electromechanical devices.
	Introduction to Engineering Design (IED)	Introduction to the engineering design process, tailored to spark curiosity and build critical thinking skills among freshmen at Arlington Tech. Through hands-on, project-based learning, students engage in real-world challenges such as creating and launching 3D-printed rockets, developing Bluetooth-controlled vehicles, and building mousetrap cars. They master 3D modeling software and use tools like 3D printers and laser cutters. Additionally, students study data science and analytics to evaluate performance metrics and identify the best designs and outcomes. This class is good for students who are curious problem-solvers who value collaboration, are detail-oriented, and embrace challenges with creativity and persistence. Students may struggle in this class if they prefer traditional, lecture-based instruction over hands-on learning or find it challenging to embrace open-ended problem-solving (where answers are not always immediately clear), and are reluctant to collaborate or adapt to constructive feedback.

	Principles of Engineering (POE)	Prereq - Technology & Engineering Foundations This class covers mechanical and mathematical principles of engineering, simple machines & mechanical devices, some robotic automation and minor coding, and learning about forces in structures like bridges. A lot of hands on design and fabrication challenges. Good for students who enjoy working with Legos, working in TEAMS and putting their hands to use. Students may struggle in this class if Algebra was hard, are frustrated by PBL and innovation is hard.
	Technical Drawing & Design	This is a beginning level mechanical drawing class which introduces the skills required to communicate effectively using graphic language. Students use three methods of graphic representation: freehand sketching, mechanical drafting, and computer-assisted drawing. The course content includes career opportunities in the field of technical drawing, freehand sketching, lettering techniques, line types, geometric constructions, multiview drawings, dimensioning, sectional views, auxiliary views, and computer assisted design. This course is especially recommended for future engineers, architects, or home builders, including students involved in the construction trades
	Engineering Design & Development	In this Project Lead the Way (PLTW) capstone course, students work in teams to research, design, and construct a solution to an open-ended engineering problem. Guided by community mentors, students apply technical skills from previous coursework to manage a project from concept to completion. The course requires significant self-direction and culminates in a formal presentation where students defend their work before a professional review committee.
Pathway	Class Name	Transportation, Distribution and Logistics
Facility & Mobile Equipment Maintenance	Collision Repair Technology I - DE Optional	Have you ever wondered how cars are built or what happens to them after they are crashed? In this course you will learn about the construction of vehicles, how to repair them after an accident and how to paint them. This is a 3 year program with the opportunity to earn I-CAR certifications.
	Collision Repair Technology II	In this course, students will learn painting and refinishing techniques that include surface preparation; spray gun operation; paint mixing, matching, and applying; and final vehicle detailing. Students who successfully complete this program sequence may be eligible to take an industry-recognized certification exam.
	Collision Repair Technology III	This course allows students to apply knowledge and skills learned in Auto Body Technology I and II and may also be used as a capstone course in which students may perfect their collision repair skills to move toward employment in the industry. Students who successfully complete this program will be prepared to take an industry recognized certification examination and will be prepared for post-secondary education opportunities. Students who successfully complete the program sequence will be prepared to take and pass their respective ASE/NATEF exam and will be prepared the post-secondary education opportunities.
Facility & Mobile Equipment Maintenance	Automotive Technology I - DE Optional Automotive Technology II - DE Optional Automotive Technology III - DE Optional	Our program gives them a chance to work on vehicles (personal or family, teachers, and donated vehicles). Highlights of the program are: -All 3 levels are Dual-Enrolled with NOVA, a total of 10 college credits if all 3 years are completed. -A paid summer internship with local Dealerships & shops for AYES Program (optional) -They can take student level ASE Certifications in Maintenance Light Repair (MLR), Brakes and Suspension. -They will become certified in Shop Safety & Pollution Prevention. Levels 2 and 3 have the same highlights but they are more advanced learning as they go up in levels.
Transportation Operations	Unmanned Aircraft Systems (Drones)	This course prepares students to pilot drones under the FAA Part 107 guidelines for small unmanned aircraft systems (sUAS) and to take the FAA Part 107 certification exam. Students gain a comprehensive understanding of the national airspace system, FAA regulations, weather monitoring, drone performance, and flight operation logistics. Through hands-on training and piloting, students develop the technical and administrative skills necessary for safe and effective drone operations, opening pathways to exciting careers in a growing industry. No prior experience is required!
Transportation Operations - Aircraft Pilot Training	Aircraft Pilot Training I	This introductory ground school course focuses on the foundational principles of flight training, including aerodynamics, aircraft systems, flight instruments, and aeronautical decision-making. Students also explore airport operations, airspace, navigation, and basic weather theory. Through engaging lessons and simulator instruction, students build a solid base of knowledge and skills, starting their journey toward becoming a pilot. No prior experience is required—just a passion for aviation and a readiness to learn!
	Aircraft Pilot Training II	This advanced ground school course prepares students to take the FAA Private Pilot Written Examination, a critical step in becoming a pilot. Students focus on topics like meteorology, navigation, physiology, aircraft maneuvers, and aircraft weight and balance. Hands-on simulator instruction and advanced lessons refine their skills and knowledge, equipping them for success in aviation careers!
Pathway	Class Name	Additional DE/Non-DE NonCTE Elective Courses
Fine Arts Elective	Music Appreciation - DE ONLY	Essential elements of music, rhythm, tempo, instruments, music history, music theory, very light lift, projects, silent film fest, how music impacts film. Explores the language of music through an introduction to basic elements, forms, styles across time.
Social Studies Elective	Comparative Politics - DE ONLY	In new DE course, you'll learn concepts and methods of comparative politics. Includes empirical analyses of domestic governmental, political, and societal institutions and norms of countries around the world. The assignments in the course require college-level reading fluency and coherent communication through written reports. *Prerequisite(s): ENG 111
Social Studies Elective	African American Studies	Students will explore primary and secondary sources documenting the African American experience by surveying African American history from precolonial Africa through today. It introduces students to key concepts in African American history, from early beginnings in Africa through the transatlantic slave trade, the Civil War, Emancipation, Reconstruction, the Civil Rights era and to the present.

