

2024-25 COURSE DESCRIPTIONS

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Northwest
Career & Technical
Academy

Learn. Do. Lead



**Take the next step
in your education and
career training while
still in high school!**

NCTA Programs

Aerospace Manufacturing
Applied Medical Sciences
Animation and Graphic Design
Automotive Services
New! Baking and Pastry
Construction
Criminal Justice
Culinary Arts
Dental Assisting
Drone & ROV
New! Early Childhood Education
Fire Science & EMS
Maritime
New! Medical Assisting
Money & Business
New! Peer Counselor
New! Pharmacy Technician
New! Teaching Academy
Veterinary Assisting
Video Game Development
Welding

NCTA is part of the regional skills center network serving high school students from multiple school districts. We provide instruction in preparatory programs that are often too expensive or specialized for school districts to operate.



**Apply Online at
ncta.smapply.io**



The Northwest Career & Technical Academy (NCTA) is an extension of your high school where innovative educational opportunities are available. The programs offered will provide you with the skills, knowledge, and professional leadership training necessary for the workplace or continuing education through an apprenticeship, community college, or university. NCTA is tuition-free for high school students; however, some programs may have industry-related costs or lab fees. Please see the NCTA website at nwtech.k12.wa.us for full course descriptions, course requirements, high school credit equivalencies, college credits, and industry certifications. Apply online at ncta.smapply.io (campus location noted in parentheses).



Aerospace Manufacturing prepares students for immediate employment in the aerospace and manufacturing industries by focusing on job-ready skills based on industry standards. Students will fabricate, assemble, and repair structures using basic and advanced composite techniques and materials. Students will earn the prestigious Core Plus certification which includes skills in blueprint reading, material science, precision measurement, and aluminum riveting. in our lab-centric facility using various hand and stationary power tools. (Anacortes) *(Advanced 2nd year available to qualified students)*

Applied Medical Sciences prepares students to the pre-nursing pathway in addition to the medical field, with an emphasis on knowledge and skills applicable to many medical occupations. Students explore medical careers in areas of interest as well as in targeted, high demand fields for future jobs. Students who complete all course work with excellent attendance and participate in a 50-hour clinical internship may qualify to become a WA State Nursing Assistant Certified (NAC). Additionally, students can test for the HIPAA certification. (Mount Vernon)

Animation & Graphic Design takes students from concept & design through to creation of animations in 2D, 3D, and stop-motion environments. Using a combination of traditional art, photography, digital 2D paint programs and 3D animation software, students will have an opportunity to work in different mediums to storyboard, stage and implement their creative ideas! This course prepares students with the teamwork skills necessary to create animation and visual effects for television, movies, video games, and other media. A strong background in art and drawing is not required. (Mount Vernon) *(Advanced 2nd year available to qualified students)*

Automotive Services provides skills and knowledge required for jobs in the automotive trade at the apprenticeship level, with the opportunity for student automotive certifications or additional training in a career-technical institute. The course consists of shop safety, shop organization and operation, theory and repair of engines, electrical systems, brakes, fuel systems, cooling systems, power trains, suspension and steering alignment. Students will make repairs on the automobile in these areas at the trade accepted standard. (Sedro-Woolley) *(Advanced 2nd year available to qualified students)*



New! Baking and Pastry introduces students to the essentials of the pastry arts. The course is intended to give the student a detailed understanding of the components of various bread, cookie and pastry preparation techniques including quick breads, yeast breads, enriched and laminated doughs, cookie mixing methods, pies, tarts, syrups, icings, sauces, custards, creams, and cakes. It emphasizes professionalism, ingredient and equipment use, basic baking science, and includes practical lab work with fruit desserts, cookies, meringues, pâte à choux, and custards. This course includes the ServSafe examination. (Mount Vernon, 3rd Session)



Construction develops the entry-level skills needed in residential electrical wiring, plumbing, and carpentry. Students will learn about work-site safety, construction-based applied math and terminology, safe use of hand and power tools, blueprint reading, communication skills, employability skills, material handling, framing skills, and the basics of residential electrical and plumbing. The program assists students in exploring a variety of construction-related careers, developing appropriate work readiness skills, and preparing them to enter construction-related apprenticeships, post-secondary education programs, or entry-level jobs. (Anacortes) (Advanced 2nd year available to qualified students)

Criminal Justice provides a comprehensive and hands-on curriculum that challenges and prepares those students who are interested in pursuing possible careers within the Criminal Justice field. This year-long course prepares students through community partnerships, academic study, hands on experiences, and the development of 21st Century Skills. CPR training, hazardous materials awareness, and the National Incident Management System are also included. The program has an emphasis on law enforcement, corrections, and the judicial system. Students will participate in and lead activities both inside and outside the classroom throughout the school year. Students should be prepared to be involved in physical activity. (Mount Vernon) (Advanced 2nd year available to qualified students)

Culinary Arts combines current hospitality industry curriculum with on the job training in a commercial setting open to the public. Students provide customer service, deal with production deadlines, and serve in actual jobs, including cook, baker, server, maintenance, and barista. Content includes food and workplace safety, kitchen and dining room procedures, customer service, food production and baking techniques, event planning and service, technical report writing, applied mathematics, nutrition, marketing, and introduction to management and leadership. (Mount Vernon) (Advanced 2nd year available to qualified students)

Dental Assisting prepares students to become Registered Dental Assistants through the state of Washington. Each student will experience hands-on learning, offering valuable preparation for entry-level chairside skills. The program will give students an understanding of different careers that are available in the expanding field of the dental profession. Students will develop skills in chairside assisting, equipment and instrument identification and maintenance, sterilization, pouring laboratory models, taking dental x-rays, and OSHA practices. Students will be prepared to take the National Entry Level Dental Assisting exam. (Mount Vernon)



Core Plus provides students across Washington State hands-on learning and transferable skills that lead to various career pathways in aerospace, construction, manufacturing and maritime

Drone & ROV provides students with the application of mathematical and scientific principles, development, deployment, operation, and maintenance of autonomous vehicles in the water and air. Students will explore the ethics, safety, and regulations of autonomous vehicles, the unique navigation strategies, assembly, design and structure, and how to plan, prepare and execute a mission. Students engage in authentic problem-solving, including data collection, documentation, analysis, and presentation to a real-world audience through community partnerships. (Anacortes)

New! Early Childhood Education explores the foundations of early learning with a focus on the youngest of learners starting in preschool. Students will examine theories defining the field, issues, trends, best practices, and program models. Classroom learning will focus on understanding the learner, child development, planning instruction, best practices in teaching and assessment strategies along with how to personalize learning, play to learn, social and emotional development, and behavior support. Students will understand how culture, equity, and opportunity are key to building a healthy learning community. (Meridian)



Fire Science & EMS instills the proud tradition of serving communities with selfless dedication. The honor of becoming a firefighter is one sought after by many but bestowed upon only a few. The NCTA Fire Science and EMS program offers professional instruction, amazing facilities, and endless opportunities to not only learn the skills necessary to become a firefighter/EMT, but also the skills to be an integral part of a community emergency response team in your own neighborhood. Students earn their ICS 100 and 200 certificates from FEMA. Additionally, this course lays the groundwork so students can pursue their Firefighter I, Firefighter II, HazMat Operations, and EMT certificates upon turning 18 years of age. (Mount Vernon & Meridian) *(Advanced 2nd year available to qualified students)*



Maritime is an immersive curriculum designed to equip students with the practical skills required for success in the marine industry. Nestled in close proximity to the water, our program offers hands-on training in a variety of essential areas. Participants will understand safe boat handling techniques, navigation principles, vessel maintenance and preservation, as well as manufacturing materials. Additionally, they will gain proficiency in Gelcoat and fiberglass repair, basic marine electrical and electronics, and the fundamentals of marine propulsion and engines. The curriculum also covers boat trailer usage and repair, marina operations, and customer service skills. (Anacortes) *(Advanced 2nd year available to qualified students)*

New! The Medical Assisting program serves as an introductory pathway to launching a career in the non-therapeutic realm of healthcare. Through this program, students acquire fluency in the terminology used by doctors, nurses, and other healthcare professionals. The curriculum encompasses medical terminology, administrative tasks and fundamental clinical skills. Throughout the program, students develop proficiency in a range of practical skills, including taking vital signs such as blood pressure, temperature, pulse, and respiration, as well as conducting height and weight measurements. Additionally, they learn to perform vision screenings, surgical scrubs, CPR, First-Aid, and utilize various medical instruments. Office skills relevant to medical settings are also emphasized. (Mount Vernon, 3rd Session)





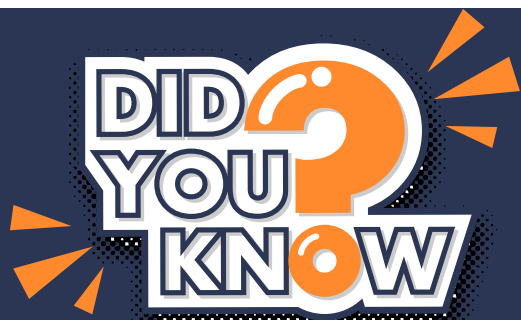
Money & Business offers driven students the chance to embrace the Entrepreneurial Mindset. Through hands-on activities, projects, and competitions, students gain real-world experiences, fostering networking, leadership, and vision. Embracing the evolving business landscape, students tackle challenges with innovative solutions, honing 21st-century skills. Internships and class-led enterprises guide students in business management and crafting career-launching business plans. Additionally, students learn essential personal finance strategies like "paying yourself first" for financial empowerment. (Mount Vernon) *(Advanced 2nd year available to qualified students)*

New! Peer Counseling is a comprehensive training program designed to equip individuals with the skills necessary to offer effective peer support in the field of mental health, medical and social service pathways. Students will learn about forming peer partnerships, working from a trauma-informed perspective, understanding ethics and boundaries, and supporting goal-setting and self-advocacy efforts, among other essential topics. The course emphasizes the importance of lived experience, mutual support, and the promotion of resilience, aiming to prepare individuals to make a positive impact in the lives of those they support. (Mount Vernon, 3rd Session) (Senior Only, Interview Required)

New! The **Pharmacy Technician** program equips students with skills and employment training to work in the industry using application-based learning and field practicums. Students will learn basic principles of pharmacology, how medication affects the human body and how our bodies process medication. The course is organized by body systems, pathologies and the associated medications. A strength in math and reading skills will be needed to complete daily pharmacy calculations and read materials, including medically technical texts. (Mount Vernon, 3rd Session)



New! The **Teaching Academy** program covers both theoretical foundations and practical skills necessary for teaching effectively in a K-8 school setting. Students will learn key areas such as pedagogy, classroom management, curriculum design, and educational psychology with hands-on experience through classroom observation, teaching simulations, and mentorship from seasoned educators. This program prepares students with skills and knowledge to become Washington State Certified Paraeducator. (Mount Vernon)



Eight years after their expected graduation date, students who focused on career and technical education (CTE) courses while in high school had higher median annual earnings than students who did not focus on CTE.

-U.S. Department of Education

Veterinary Assisting is designed for students interested in professions caring for animals through this medically-based program. Through hands-on learning and challenging academic coursework, students will develop the skills and knowledge necessary to obtain entry-level positions in a variety of animal care facilities, including veterinary hospitals, grooming shops, animal shelters, and boarding facilities. (Mount Vernon)



Video Game Development explores the many facets of the video game development life-cycle, from asset creation to game design to coding. Students will learn to code in an industry-standard programming language, create their own 2D and 3D graphics, explore game design as part of a project team, and combine these elements to create games using a professional game engine. With dual-credit options available, this could be the first step on the path to a career in computer science. Innovative students can return for a second year of self-driven studies, earning more credits by applying their skills in advanced software development areas. Students must have successfully completed the first year of study and shown evidence of being an independent worker. (Mount Vernon) *(Advanced 2nd year available to qualified students)*

Welding is an industry-based shop environment designed for the student who would like to develop a deeper understanding of metalworking as a foundation for continuing education or joining the job market. Students are trained in the basic skills of welding, cutting, shielded metal arc welding, gas metal and flux-cored arc welding, gas tungsten arc welding, and many other areas. Furthermore, this training includes blueprint reading, math, layout and fit-up, and fabrication through a wide variety of projects. (Meridian, AM Session & Sedro-Woolley, 3rd Session) *(Advanced 2nd year available to qualified students)*

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The Mount Vernon School District does not discriminate in employment, programs, or activities on the basis of age, race, color, national origin, creed, religion, sex, sexual orientation, gender expression, gender identity, honorably discharged veteran or military status, or the presence of any sensory, mental or physical disability or use of a trained guide dog or service animal by a person with a disability and provides equal access to the Boy Scouts and other designated youth groups. Inquiries regarding compliance and/or grievance procedures may be directed to the District's Title IX/Civil Rights Compliance Coordinator/HIB Coordinator, Jon Ronngren, Director, 124 E. Lawrence Street, Mount Vernon, WA 98273 (360)428-6110; Section 504/ADA Coordinator, Clint Carlton, Executive Director/Student Support Services, 920 S. Second Street, Mount Vernon, WA 98273, (360)428-6141.