

CTE HS Program Descriptions

Program of Study	Career Program Description	Wake Tech Credential Offered in CTE High School	Wake Tech Credentials Beyond High School
Air Conditioning, Heating & Refrigeration	The Air Conditioning, Heating, and Refrigeration Technology certificate provides a critical foundation in HVACR maintenance and installation; this certificate includes basic coursework in heating, cooling, and maintenance. Students who complete a certificate can transfer seamlessly to a diploma or Associate of Applied Science degree program at Wake Tech, which will provide the necessary depth and breadth of the knowledge, skills, and attitudes required to find gainful employment in the discipline.	C35100HS Fundamentals of air Conditioning, Heating, and Refrigeration: Comfort Cooling, Electricity, and Basic Service Technology (18 credit hour certificate) AHR 111 HVACR Electricity -3 cr AHR 112 Heating Technology -4 cr AHR 113 Comfort Cooling – 4 cr AHR 211 Residential System Design - 3 cr AHR 133 HVAC Servicing – 4 cr	<ul style="list-style-type: none"> • AAS degree • Diploma • Additional Certificates
Biopharmaceutical Technology	The field of Biopharmaceutical Technology is a fast-growing one in the Research Triangle area and the certificate in this discipline will serve as a cornerstone for further study in the field, which combines natural sciences, occupational safety and health regulations, and best practices in quality assurances and operations. Students who complete a certificate can transfer seamlessly to a diploma or Associate of Applied science program at Wake Tech, which will provide the necessary depth and breadth of the knowledge, skills, and attitudes required to find gainful employment in the discipline.	C20180HS Fundamentals of Biopharmaceutical Technology: Safety, Best Practices, and Controls (15 credit hour certificate) BPM 110 Bioprocess Practices – 5 cr ISC 112 Industrial Safety – 2 cr PTC 110 Industrial Environ – 3 cr PTC 120 Pharm Qual Control – 4 cr PTC 228 Pharm Issues – 1 cr	<ul style="list-style-type: none"> • AAS degree • Additional Certificate

<p>Collision Repair</p>	<p>The Collision Repair & Refinishing technology certificate provides a critical foundation in the discipline of restoring and rebuilding automobiles; this certificate includes basic coursework in transportation technology, structural damage repair, painting, and rewiring automobile electrical and cooling systems. Students who complete a certificate can transfer seamlessly to a diploma program at Wake Tech, which will provide the necessary depth and breadth of the knowledge, skills, and attitudes required to find gainful employment in the discipline.</p>	<p>C60130HS Collision and Refinishing Technology (17 credit hour certificate)</p> <p>AUB 111 Painting & Refinish I – 4 cr AUB 131 Structural Damage I – 4 cr TRN 110 Intro to Trans Tech – 2 cr TRN 120 Basic Trans Electricity – 5 cr TRN 140 Trans Climate Control – 2 cr</p>	<ul style="list-style-type: none"> • Diploma • Certificate
<p>Cosmetology</p>	<p>The Cosmetology curriculum is designed to provide competency-based knowledge, scientific/artistic principles, and hands-on fundamentals associated with the cosmetology industry. The curriculum provides a simulated salon environment which enables students to develop manipulative skills. Course work includes instruction in all phases of professional imaging, hair design, chemical processes, skin care, nail care, multi-cultural practices, business/computer principles, product knowledge, and other selected topics. Graduates should qualify to sit for the State Board of Cosmetic Arts examination. Upon successfully passing the State Board exam, graduates will be issued a license. Employment is available in beauty salons and related businesses.</p>	<p>Pathway to diploma or degree. Potential to earn 24 credit hours towards Wake Tech diploma or degree:</p> <p>COS 111 Cos Concepts I – 6 cr COS 112 Salon I – 6 cr COS 113 Cos Concepts II – 6 cr COS 114 Salon II – 6 cr</p>	<ul style="list-style-type: none"> • AAS degree • Diploma

Electrical Systems	The Electrical Systems certificate provides a critical foundation in commercial and residential wiring installation; this certificate includes basic coursework in electricity, calculations for determining relationships between electrical units, and core sections of the National Electric code. Students who complete a certificate can transfer seamlessly to a diploma or Associate of Applied Science degree program at Wake Tech, which will provide the necessary depth and breadth of the knowledge, skills, and attitudes required to find gainful employment in the discipline.	<p>C35130HS Residential and Commercial Wiring (12 credit hour certificate)</p> <p>ELC113 Residential Wiring – 4 cr ELC114 Commercial Wiring – 4 cr ELC118 National Elecl Code – 2 cr ELC119 NEC Calculation – 2 cr</p>	<ul style="list-style-type: none"> • AAS Degree • Diploma
Geomatics Technology	Geomatics Technology combines the fundamentals of surveying technology with geographical information systems (GIS) in order to provide students with a core set of skills and aptitudes needed in engineering technology. Coursework includes computer-aided drafting(CAD), career exploration, and an introduction to mapping complicated data for analytical, illustrative, and investigative purposes. Students who complete a certificate can transfer seamlessly to an Associate of Applied Science degree program at Wake Tech, which will provide the necessary depth and breadth of the knowledge, skills, and attitudes required to find gainful employment in the discipline.	<p>C40420HS Geomatics: Fundamentals of Surveying Tools & Technologies (12 credit hour certificate)</p> <p>CEG 115 Intro to Tech & Sustainability – 3 cr GIS 111 Intro to GIS – 3 cr GIS 112 Intro to GPS – 3 cr CEG 151 Cad for Engineering Tech – 3 cr</p>	<ul style="list-style-type: none"> • AAS degree
Nursing Assistant	This curriculum introduces students to basic nursing skills needed in a health care setting and is approved by the NC Division of Health Service Regulation. Topics include communication, safety, patient rights, personal care, vital signs, elimination, nutrition, emergencies, rehabilitation, and mental health. Upon completion, students will be able to demonstrate the skills necessary to perform as a nurse aide.	<p>C45480 Certified Nursing Assistant (14 credit hour certificate)</p> <p>NAS 101 Nursing Assistant I – 6 cr NAS 102 Nursing Assistant II – 6 cr NAS 103 Home Health Care – 2 cr</p>	

<p>Plumbing</p>	<p>The Plumbing curriculum provides students with a sound understanding of the science, technology, and applications essential for successful employment in piping, fixture installation, and plumbing service and maintenance industries. Instruction in this certificate includes coursework in current code requirements for residential and commercial structures, practicum in rough-in, trim-out, and repair techniques, contextualized math coursework in pricing out plumbing jobs by fixture units, and an introduction to new and innovative technologies for reclamation of grey water and reducing water usage. Students who complete a certificate can transfer seamlessly to a diploma program at Wake Tech, which will provide the necessary depth and breadth of the knowledge, skills, and attitudes required to find gainful employment in the discipline.</p>	<p>C35300HS Introduction to Plumbing Techniques: Rough-in and Trim-out Procedures (16 credit hour certificate)</p> <p>PLU 110 Modern Plumbing-9 cr PLU 140 Into to Plumbing Codes-2 cr PLU 160 Plumbing Estimates-2 cr SST 140 Green Bldg & Design Conc-3 cr</p>	<ul style="list-style-type: none"> • Diploma • Certificates
<p>Simulation & Game Development</p>	<p>This Simulation and Game Development curriculum introduces students to fundamentals of game development. Topics include: introduction to the video game industry, career exploration, creating 2D art for games, 3D modeling for creating storyboards, creating textures for 2D & 3D models and environments, and game design. Students who complete a certificate can transfer seamlessly to an Associate of Applied Science degree program at Wake Tech, which will provide the necessary depth and breadth of the knowledge, skills, and attitudes required to find employment or start their own game development company.</p>	<p>C25450HS Introduction to Simulation and Game Development: Art Fundamentals and Design (15 credit hour certificate)</p> <p>SGD 111 Introduction to SGD – 3 cr SGD 112 SGD Design – 3 cr SGD 116 Graphic Design Tools – 3 cr SGD 117 Art for Games – 3 cr SGD 212 SGD Design II – 3 cr</p>	<ul style="list-style-type: none"> • AAS degree • Diploma • Additional Certificates

<p>Welding</p>	<p>The Welding Technology curriculum provides students with a sound understanding of the science, technology, and applications essential for successful employment in the welding and metal industry. Instruction in this certificate includes consumable and non-consumable electrode welding, cutting processes, and learning to interpret the symbols on welding diagrams. Students who complete a certificate can transfer seamlessly to a diploma program at Wake Tech, which will provide the necessary depth and breadth of the knowledge, skills, and attitudes required to find gainful employment in the discipline.</p>	<p>C50420HS Welding Essentials: Symbolology, Cutting Processes, and Metal Arc Welding Basics (14 credit hour certificate)</p> <p>WLD 110 Cutting Processes – 2 cr WLD 115 SMAW (Stick) Plate – 5 cr WLD 121 GMAW (MIG) Plate – 4 cr WLD 141 Symbols & Specs – 3 cr</p>	<ul style="list-style-type: none"> • Diploma • Additional Certificate
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