Learn. Become. **Succeed.**

NTC
Nashua Technology Center

Nashua Technology Center Career Pathway Programs

// Accounting

// Automotive Technology

// Biotechnology & Biomedical Science

// Business Finance

// Careers in Education

// Computer Aided Drafting and Design (CADD)

// Computer Networking

// Construction Technology

// Cosmetology

// Culinary Arts

// Design & Visual Communications

// Electrical Technology

// Engineering Pathway

// Health Sciences

// Heating, Ventilation, Air Conditioning and Refrigeration (HVACR)

// Marketing

// Manufacturing and Machine Technology

// Video Production and Broadcasting

Learn. Become. **Succeed.**

Our mission at the **Nashua Technology Center (NTC)** is to cultivate the potential in every student. We accomplish this by integrating rigorous classroom instruction with relevant, work-based experiences that inspire, empower and prepare our students for college, career and life success.

All NTC programs are academically challenging, aligned with real workforce needs, and designed to promote creativity, leadership and lifelong learning skills. As the state's largest high school Career and Technical Education center—with more than 1,170 students, we have a 40 year tradition of helping all our students to recognize their talents and ambitions, realize their individual potentials, and prepare themselves for life after high school, whether they plan to go on to college, enlist in the military or go directly into the workforce after graduation.

This brochure provides a summary of available opportunities connected to each of the 18 NTC career pathway programs available to students from *Nashua High School North and South*, and from six area high schools, including *Alvirne, Campbell, Hollis Brookline, Merrimack, Milford* and *Souhegan*. If you are interested in joining The NTC, or if you want more information, contact your school counselor, go to our website **(nashuatechcenter.weebly.com),** or call or stop by our office in the career centers at either North and South

So check out our brochure and let us show you the many ways The NTC can help you to **Learn, Become and Succeed.**

How do I get more information?

Read this Brochure

Email us at: ntcinfo@nashua.edu

Go to our NTC website: nashuatechcenter. weebly.com

Find us on Facebook

Talk to your school counselor

Walk into the NTC Office in the North/ South Career Centers and Ask

What our students are saying...

"The best thing about the NTC is that you get to do something you love to do in a way that prepares you for not just a job, but for a career."

// Andrew Dovale, Senior, Automotive Technology, NHSN

"I like that we're learning real skills that apply directly to our future career paths, and that I get to go to class each day with students who are just as excited about learning as I am. It's an opportunity that you can really only find here."

// Dylan Grantham, Junior, Cosmetology, NHSN

"Colleges are very interested in the kids who've shown that they are serious about what they want to do. Here I'm getting actual experience working on all phases of production and I get to work with some amazing and creative people...nobody who takes this class doesn't want to be in this class."

// Emi McDonald, Senior, Video Production, NHSS

"The CADD program allows me to test what I want to be doing for a career while I'm still in high school. When I apply to college, I'm already going to have college credits, certifications and experience doing the work that will place me a step ahead."

// Katherin Tello, Senior, CADD, NHSS

Accounting

As an accounting student, you'll learn how to manage the financial records for a business and communicate that information to a variety of users. By utilizing industry-standard, financial service software and practicing real-world skills, you'll learn how to organize and analyze financial information, and develop reports for private businesses, partnerships, corporations, and for your own use. You'll also gain some valuable experience by applying the principles and practices you learn in the classroom to actual business situations. The Accounting Program has two pathways: College Accounting for honors and extension level students, and Accounting Fundamentals for foundation students. **You can earn your ICT and/or Math experience credit by enrolling in any Accounting course.**

Learn: Journalize and post transactions **//** Prepare financial statements **//** Analyze information to make informed business decisions **//** Develop spreadsheets **//** Work with accounting software programs

Become: Certified Public Accountant **//** Chief Financial Officer **//** FBI Agent **//** Forensic Accountant **//** Certified Internal Auditor **//** IRS Investigator **//** Financial Analyst **//** Payroll Manager **//** Cost Accountant **//** Certified Management Accountant

Succeed: **Earn up to 5 dual enrollment college credits** with Southern New Hampshire University.

Automotive Technology

As an Automotive technology student, you'll learn how to troubleshoot, repair and maintain vehicles using professional-grade equipment and working on school-owned trucks and automobiles. This two-year program gives you both classroom knowledge and hands-on experience working in our modern shop on engine, drivetrain, fuel, electrical, brake, suspension, and steering systems. The program also provides you with work-based learning experiences that connect you with potential employers. The Automotive Technology program follows National Automotive Technician Education Foundation (NATEF) standards, and prepares you to attain your Automotive Service Excellence (ASE) certification.

Learn: Brakes // Computerized diagnostic testing // Electrical systems // Engine performance & repair // Steering & suspension systems // Preventive maintenance

Become: Automotive Technician // Diesel Technician // Shop Owner // Marine & Powersports Technician // Service Manager // Parts Technician/Manager // Mechanical Engineer

Succeed: ASE (Automotive Service Excellence) Certification // Valvoline Oil Technology Certification // Snap-On Meter and Scanner Certification // 8-Week Internship at a local dealership

Biotechnology & Biomedical Science

When you join our Honors Biotechnology program, you'll learn to use research tools from both chemistry and biology to study or solve problems in the medical, agricultural and pharmaceutical industries. You'll also study microbiology, cellular biology, and molecular biology, and you will master the most in-demand lab techniques used in today's biotechnology and life science laboratories. Specific units of study include genetics, cancer biology, stem cells, and proteins. Students in the second year program have the opportunity to do an independent research project of their choice. This invaluable experience helps students to learn critical STEM skills and develop confidence in experimental design, data analysis, and presentation skills. By the conclusion of the two-year program you will have built a college and career-ready portfolio.

Learn: Use of analytical equipment such as micropipettes, microscopes, spectrophotometers, and chromatography // Culture and characterize different types of cells // Prepare laboratory solutions // Design experiment and interpret data // Debate current controversial topics in biotechnology

Become: Microbiologist // Biologist // Chemist // Biomedical Engineer // Chemical Engineer // Forensic Scientist // Research Associate // Quality Control Manager // Clinical Researcher // Bioinformatics Associate // Pharmacist // Marine Biologist // Conservation Scientist // Physician

Succeed: **Earn up to 8 dual enrollment college credits** for both Biotech 1 and 2 (4 credits per class) with Great Bay Community College and Nashua Community College // Internship opportunities available // Competition in the New Hampshire Science and Engineering Expo

Business Finance

As a Business Finance student, you will explore the principles behind, and practices of money management in a corporate or a company setting. You'll examine budgeting, investments and debt as the strategies behind successful financial modeling and planning. You also will learn about business globalization, ethics, morals and legal issues that impact decision making in a competitive business environment. This is a great two-course foundational program for students who already are curious about and want to gain a deeper understanding of the business world.

Learn: Personal financial management // Business finance // Research of financial markets and exchanges // Buying and selling investment products in a competitive online environment // Financial modeling and planning // Budgeting // Investment management

Become: Financial Adviser // Financial/Management Analyst // Small Business Owner // Chief Financial Officer // Insurance and Risk Management // Securities and Stock Broker // Investment Portfolio Manager

Succeed: Earn 3 dual enrollment college credits with Rivier University for Juniors and Seniors

Careers in Education

As a student in our Careers in Education program, you'll learn about and have the opportunity to positively impact the lives of children through helping them to grow in their knowledge and understanding. Whether you want a career as a classroom teacher, school counselor, occupational therapist, or child life specialist, this two-year program has a lot to offer you. Students gain both a foundational understanding of modern teaching theory and techniques, as well as opportunities to apply that knowledge working with professional mentors in both the Purple Panther Preschool—a fully-functional preschool at Nashua High School South, and in K-5 classrooms at Nashua School District elementary schools.

Learn: Child growth and development and its impact on learning // How to create engaging, exciting learning environments and experiences // Health and safety practices // Behavior management // How to support all learners // College and career ready skills

Become: K-12 Teacher // School Counselor // Speech or Language Pathologist // Special Education Teacher // Child Psychologist // Child Care Provider // Paraeducator // Occupational Therapist // Child Life Specialist // Social Worker // Child Care Director // Principal

Succeed: **Earn up to 9 dual enrollment college credits** with Nashua Community College // 200+ hours of field site experience working with children // Leadership & community service through our local chapter of Educators Rising

Computer Aided Drafting and Design (CADD)

As a student in our CADD program, you'll use state-of-the-art drafting and drawing software to design your own industry standard building or product. This course provides you with the knowledge and practice required to produce and analyze multi-view architectural and mechanical drawings, blueprints and design plans. You'll have the opportunity to choose one of two self-paced tracks: Architectural Drafting or Mechanical Drafting. This program is a great way to both explore your interest in Computer Aided Drafting and Design and take that next step toward a career in architectural or mechanical/manufacturing engineering.

Learn: Mechanical and architectural sketching and drawing // State-of-the-art 2D and 3D computer-based drafting and design tools // Basic engineering skills // 3D printing (rapid prototyping) // Professional workplace skills

Become: Mechanical/Manufacturing Engineer // Mechanical Drafter // Civil Engineer // Architect // CAD Systems Operator // Construction Manager

Succeed: **Earn up to 10 dual enrollment college credits** with Nashua Community College // Articulation Agreement with Southern Maine Community College // Solidworks Certification // AIANH (American Institute of Architecture, NH Chapter) Architectural Design Contest // SkillsUSA Architectural and Technical Drafting Competitions at State and National levels // Virtual Job Shadow

Computer Networking & Cybersecurity

As a Computer Networking student, you'll learn about the tools and technologies that enable and enhance electronic communication between billions of devices worldwide. This fast-paced, hands-on program teaches you how to design, develop, support and manage electronic communications and networking systems that impact the way we live, work and play. You'll learn about the strengths and weaknesses of different types of networks, and the protocols that govern network operation. This two-year program is based upon the Cisco Academy, a course of study that is recognized worldwide in preparing students to become Level 2 Network Engineers.

Learn: Internet technologies // Network security and customization // Routing and switching programming // Computer Science theory // Binary and hexadecimal coding // All of this is done within the framework of Cisco Technology programing.

Become: Network Technician // Systems Analyst // Systems Test Engineer // Software Development & Installation Specialist // Computer Repair Technician // Telecommunications Specialist

Succeed: **Earn up to 11 dual enrollment college credits** // Associate and Professional Certifications through Cisco are awarded upon successful program completion

Construction Technology

As a student in our Construction Technology program, you will develop a foundation of skill and knowledge for a wide range of careers in the building industry, whether in the trades, project management, or construction design and planning fields. Construction has been one of the state's fastest-growing industries, according to NH Employment Security. In our Construction Technology program you'll gain expertise in using hand and power tools, and learn how to read blueprints and understand construction math principles. Your new skills in carpentry, siding, and roofing will prepare you for apprenticeship positions and entry level jobs in all phases of the Construction industry. The Construction Technology program is committed to giving students career-ready skills, the opportunity to network within the industry, and the chance to participate in community construction projects.

Learn: Use of hand and power tools // Application of math and science skills // Industry professional techniques and safety measures // Meet with a variety of industry professionals in class and on the jobsite

Become: Carpenter // Civil & Structural Engineer // Mason // Finish Carpenter // Cabinet Maker // Construction Manager // Architect // Real Estate Agent

Succeed: OSHA 10 Safety certification // Idea2Career career planning and development curriculum

Cosmetology

As a Cosmetology student, you will learn how to apply the art and science of Cosmetology in all aspects of the industry, including hair, skin and nail care. Students in this two-year program are trained in the craft of cutting, styling and waving hair, as well as scalp maintenance, manicures and advanced nail techniques. Successful completion of the program means you'll earn up to 360 hours toward your New Hampshire Cosmetology license education and training. Guest speakers, competitions, and field trips provide students with hands-on experiences, as well as great networking opportunities.

Learn: Hair cutting, styling and coloring // Skin care // Makeup application // Principles of hair design

Become: Salon Owner // Hair Designer/ Stylist // Hair Color Technician // Salon Manager // Platform Artist/Demonstrator

Succeed: Up to 360 hours toward NH State cosmetology licensing // Holiday Hair competition // Cosmetology in Action competition // Concord Fantasy competition

Culinary

As a Culinary student, you will be using restaurant-grade equipment while working as part of a high-performance team in our commercial kitchen. You'll also develop a working knowledge of the process and safety concerns of selecting, purchasing, storing and preparing high quality food products. This two-year program uses the same commercial equipment used by today's leading chefs, and helps you to establish the skills, work habits and confidence needed to succeed in respected culinary postsecondary schools and excel in the industry. Our program is certified through the American Culinary Federation Educational Foundation.

Learn: Culinary & food preparation skills **//** Food safety & sanitation **//** Planning, purchasing and preparing food in quantity **//** Professional equipment operation

Become: Chef/Cook **//** Personal Chef **//** Restaurant/Hotel Manager **//** Restaurant Owner **//** Caterer **//** Banquet Manager **//** Food Service Director **//** Food Stylist **//** Food Writer **//** Nutritionist **//** Dietitian **//** Food Scientist

Succeed: **Earn up to 9 dual enrollment college credits** through NCC **//** Opportunity to gain ServSafe certification **//** Join the Professional Chefs of NH **//** Compete in SKILLS USA **//** American Culinary Federation Education Foundation certified instruction

Design & Visual Communications

As a student in our Design & Visual Communications program, you'll develop skills in graphic design and related fields of study. You will explore visual perception and communication in a state-of-the-art Mac lab and will gain expertise using Adobe Creative Cloud, the industry-standard software used by top professional designers worldwide. In year one of the program students learn color theory, critical thinking, problem solving, copyright laws, and a team approach to the final product. Students explore this field through project-based activities that include digital illustration, print design, photo manipulation and layout design. In year two students continue their study of graphic design with instruction focused on web design, animation, package design and print production.

Learn: Digital illustration // Print design // Photo manipulation // Layout design // Web design // Animation // Package design // Print production

Become: Graphic Designer // Art Director // Creative Director // Web Designer // UI/UE Designer // Package Designer // Illustrator // Environmental Designer // VFX Designer // Motion Graphics Designer

Succeed: **Opportunity to earn up to 3 dual enrollment college credits** through Community College System of New Hampshire (CCSNH) // Students who complete the program are eligible for Adobe Certification

Electrical Technology

If you enjoy seeing science in action, then the Electrical Technology program is ideal. In this program, you'll learn how to manage a project from conception to completion while working in the shop workstations. You also take part in simulated worksite experiences, where you'll learn to apply electrical theory and the appropriate Electrical Codes. Students are trained on modern electrical devices and equipment used in residential, commercial, and industrial applications. Upon completion of the Electrical Technology program, you will receive 600 hours of classroom and work credit towards the state of New Hampshire's requirements to become a journeyman electrician.

Learn: Electrical Safety **//** Residential wiring **//** Commercial wiring **//** Electrical theory

Become: Journeyman/Master Electrician **//** Electrical Engineer **//** Electrical Drafting Specialist **//** Wind Turbine Technician **//** Electrical Lineman **//** Photovoltaic Systems Installer

Succeed: State of New Hampshire Electrical Apprentice Card **//** 150 hours towards required classroom training **//** 450 hours towards required work experience **//** OSHA 10 hour card for construction safety **//** Opportunity to earn college credits by testing out of introductory Electrical Technology courses with Lakes Region Community College

Engineering Pathway

The Engineering Pathway program is uniquely designed to allow you to combine your natural curiosity, design talents, and problem-solving ability with in-demand technical skills as you explore the creative world of engineers, architects, manufacturers, and design technicians. In our foundation course, Introduction to Engineering Design (IED) you'll be introduced to the engineering design process, applying math, science, and engineering standards to identify and design solutions to real problems. You'll also have a third-year capstone option, Engineering Design and Development (EDD), where you will identify a real-world challenge, and then research, design, and test a solution, ultimately presenting your unique solution to a panel of engineers. This program utilizes curriculum developed by Project Lead the Way, a nationally-recognized program that applies hands-on learning to connect students to science, technology, math and engineering.

Learn: Problem solving and product design **//** Development and implementation **//** Develop and document design solutions using Engineering Notebooks and industry leading 3D modeling software

Become: Chemical Engineer **//** Electrical Engineer **//** Mechanical Engineer **//** Software Engineer **//** Civil Engineer **//** Manufacturing Engineer **//** Software Engineer **//** Robotics Engineer

Succeed: Opportunity to earn up to 12 dual enrollment college credits with NHTI (IED, CIM and POE courses) **//** BAE systems FOCUS program and Women in Technology internship opportunities **//** Seniors can apply for summer internships at BAE systems

Health Sciences

As a student in our Health Sciences program, you'll build a strong foundation of knowledge and experience that will help you to better target your interest and build your career as a healthcare professional. This two-year program offers hands-on, work-based learning opportunities, both on-site in our updated facilities and in the field through internships and job shadows with our community partners. Second year students can prepare for Nurse Assistant Licensure (LNA). The U.S. Department of Labor has named the healthcare industry as one of the nation's strongest job markets through 2026.

Learn: Anatomy and Physiology // Medical Terminology // Nursing skills associated with becoming a Licensed Nursing Assistant // Dental and physical therapy skills needed to be an intern in the second year of the program

Become: Nurse // Physician // Lab Technician // Medical Assistant // Emergency Medical Responder // Dentist // Physical or Occupational Therapist // Pharmacist // Radiologist

Succeed: Earn up to 6 dual enrollment college credits with MCC // CPR/Basic Life Support Certification through the American Heart Association // Licensed Nursing Assistant (LNA) certification

Heating, Ventilation, Air Conditioning, and Refrigeration (HVACR)

As a student in our HVACR program, you will learn the basics of Heating, Ventilation, Air Conditioning, and Refrigeration systems that provide climate control to our homes, production environments, and work and indoor public spaces. You will engage in project-based learning activities that focus on heating, cooling, and refrigeration systems, pipefitting, ventilation and ductwork. Students are introduced to basic safety practices, hand and power tool identification and usage (including state-of-the-art press technology), piping and plumbing basics, and the fundamentals of electricity.

Learn: Brazing // Plumbing basics // Soldering // Pipefitting // HVACR system design and management // Troubleshooting skills // Facility maintenance // Preventative maintenance // Intro to basic electricity and wiring

Become: HVACR Technician // Design Engineer // Green Technology Specialists // Pipefitter // Sheet Metal Worker // Energy Auditor

Succeed: Earn 3 dual enrollment college credits from MCC // OSHA-10 certification // EPA 608 certification // Swagelok certified // Viega systems press fitting certified

Marketing

As a student in our Marketing program, you'll learn to promote products and services and influence customers by implementing marketing concepts, principles and procedures. You will learn the process of planning and executing design, pricing, promotion and distribution strategies, and explore creative and effective marketing techniques. Students also will get hands-on experience managing each of the school stores, and have the opportunity to participate in DECA, a national organization for students that supports their development of business skills and allows them to compete against their peers—locally and internationally. This two-year program is offered at both Nashua High School North and South.

Learn: Foundations of the marketing industry **//** Leadership skills **//** Concepts in personal and business ethics **//** Management skills **//** Retail operation activities **//** Customer and employee relations

Become: Public Relations Specialist **//** Media Director **//** Brand Manager **//** Editor **//** Entrepreneur **//** Art Director **//** Marketing Manager **//** Graphic Designer **//** Web Designer **//** Event Planner

Succeed: **Earn 3 dual enrollment college credits** from Rivier University **//** Compete in business, management and marketing events at DECA's international competitions

Manufacturing and Machine Technology

Our Manufacturing and Machine Technology program prepares you for a high-skill manufacturing career by giving you the knowledge and skills to machine and transform raw materials into specialized industry parts and tooling. In this two-year program, you'll learn about measurement, layout and inspection, CNC programing, CAD, automation, robotics, 3D printing and CAM (computer-aided manufacturing). You'll also be exposed to welding, manual lathes and milling machines, injection molding, and customer communication. Second year students can more fully explore their career pathway by engaging in an extended, work-based learning opportunity, working with industry professionals to take a deeper dive into the realities of the job and worksite.

Learn: CAD // CAM // CNC design and operation // Manufacturing // Automation // Manual lathes and milling machines

Become: Machine Programmer // CNC Machinist // Automation Engineer // Production Associate // QC Inspector // Manufacturing Engineering Technician

Succeed: Earn up to 11 dual enrollment college credits with NCC // WBL connection opportunities

Video Production & Broadcasting

As a student in our Video Production & Broadcasting program, you'll be learning the skills that will lay a solid foundation for a career in the Corporate, News, and Entertainment Media industries. Working in our High Definition, state-of-the-art video and broadcast facility, you'll learn on the same equipment the pros use. Students learn camera, audio, lighting, editing, and pre-production skills, and apply those skills producing professional-grade projects. You'll also learn how to produce live, and live-to-tape television studio productions. All students will have an opportunity to earn their User Certification for editing for Avid Media Composer editing software.

Learn: How to produce professional quality Video and Television productions using state-of-the-art, industry standard equipment

Become: Video Production Technician // Entertainment Producer // Entertainment Director // Director of Photography // Lighting Director // Video Editor // Videographer // Sound/Audio Technician // New Media Producer // Television Studio Technician

Succeed: Earn 3 dual enrollment college credits // Avid Media Composer User Certification // WBL opportunities // Build a college- and career-ready portfolio

Additional Career and Technical Education Courses

The NTC encourages and supports career exploration and development for all Nashua High School North and South students. The following CTE introductory courses are open to most 9th - 12th grade students.

Tech Ed
Woodworking I
Woodworking and Plastics
Technology II
Power Mechanics I
Power Mechanics II
Electricity/Electronics
Marine Robotics
Graphic Design I
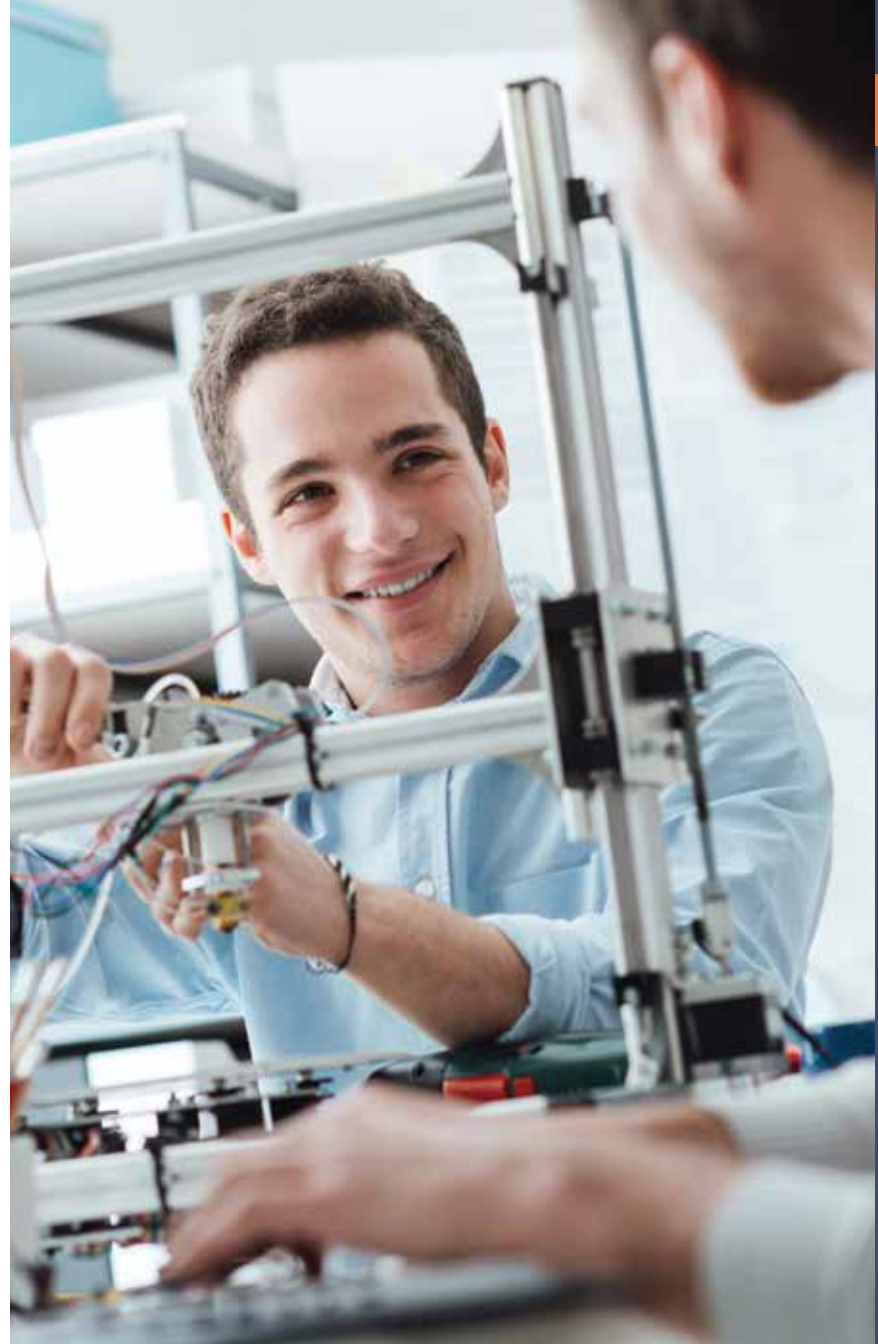Graphic Design II
Robotics using Vex
Drones and Technology

FACS
Parenting
Interior Design
On Your Own
Human Relations
Lifespan Nutrition
Foods Technology
Exploring Contemporary Cooking
Child Growth and Development

Business
Intro to Business
Desktop Publishing
Digital Life
Personal Finance
Accounting Fundamentals
Business Management &
    Entrepreneurship
Sports and Entertainment Marketing
Software Applications
Junior Reserve Officers' Training
    Corps (JROTC)

Note: For a full list of CTE courses offered, please check Nashua High School Course Selection Catalog.

Nashua Technology Center

What You Should Know About Modern Career and Technical Education

It's Not Your Father's Shop Class Anymore ...

Today's high school CTE programs bear little resemblance to the shop classes and "voc ed" programs of the past. These next-generation CTE programs integrate rigorous academic instruction into the teaching of technical and employability skills, helping students to jumpstart their college and career plans.

Modern CTE ...

1 Prepares Students For Success by Connecting Classroom Lessons to Career Ambitions

// Project-based curriculum

// Job shadows, internships, worked-based learning

// Employability skills and development of work-ready ethics and values

// Career pathway guidance and postsecondary education planning

2 Provides Students With The Tools to Succeed

// Modern facilities with industrial-grade equipment

// Accomplished instructors who have proven themselves in their respective fields

// Industry and community reference and networking contacts

// Access to state and national co-curricular organizations (CTSOs)

3 Propels Students Down Career Pathways

// Develop a strategic approach to education, career choice and readiness

// Collect college credits that jumpstart postsecondary pathways

// Earn industry-recognized certifications and licensing hours

// Gain authentic, career-focused education and experience

Nashua Technology Center

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For more information, contact:

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DIRECTOR'S MESSAGE: The Nashua Technology Center integrates rigorous classroom instruction with relevant, work-based experiences that engage, energize, and encourage students to follow their passions, develop their talents, and prepare for success after high school. Our commitment is to ensure that each student has the opportunity and support they need.