

Region 14 Applied Technology Center (ATC)

Career and Technical Education (CTE) programs offer students the opportunity to explore different career pathways, to earn industry certifications that make them career ready, and to be better prepared for life after high school. CTE programs are project based, hands-on learning that allow students to use industry standard technology in exciting ways. Students interact with professionals in the field and problem-solve their way to new solutions.



ATC Career and Technical Education (CTE) Programs require an application, while elective courses offered are open enrollment.

Course	9	10	11	12	Prerequisite
Career and Technical Education Programs					
Automotive Service Technology I		x	x		Application and Interview & Drivers License
Automotive Service Technology II			x	x	Automotive Service Technology I & Drivers License
Business & Personal Law		x	x	x	None
Business Management		x	x	x	None
Entrepreneurship/Small Business Own		x	x	x	None
Principles of Marketing		x	x	x	None
Careers in Education I		x	x		None
Careers in Education II			x	x	Careers in Education I
Computer Networking I		x	x	x	None
Computer Networking II		x	x	x	Computer Networking I
Computer Programming & Software Development I		x	x	x	None
Computer Programming & Software Development II		x	x	x	Computer Programming & Software Development I
Fundamentals of Construction Trades		x	x	x	Health insurance
Construction Trades: Carpentry		x	x	x	Fundamentals of Construction Trades & health insurance
Construction Trades: Electrical		x	x	x	Fundamentals of Construction Trades & health insurance
Construction Trades: Masonry		x	x	x	Fundamentals of Construction Trades & health insurance
Digital Photography & Video Arts I		x	x	x	None

Digital Photography II		x	x	x	Digital Photography & Video Arts I
Video Arts II		x	x	x	Digital Photography & Video Arts I
Engineering Design I		x	x	x	C or better in Algebra 1 and/or Physical Science
Engineering Design II		x	x	x	Engineering Design I
Engineering Design III		x	x	x	Engineering Design II
Engineering Design IV		x	x	x	Engineering Design III and a C or better in Geometry and Algebra II
Introduction to Firefighting		x	x	x	Interview with Program Instructor & Medical Release
Emergency Medical Technician		x	x	x	Interview with Program Instructor
Graphic Design I		x	x		None
Graphic Design II		x	x	x	Graphic Design I
Graphic Design III		x	x	x	Graphic Design II
Manufacturing through Woodworking I		x	x	x	None
Manufacturing through Woodworking II		x	x	x	Manufacturing through Woodworking I
Manufacturing Systems III or Internship		x	x	x	Manufacturing through Woodworking II
Electives					
Human Growth and Development		x	x	x	None
Internship			x	x	None
Introduction to Business	x	x	x	x	None
Introduction to Technology	x	x			None
Licensed Nursing Assistant			x	x	LNA Health Careers Assessment, 16 years old
Personal Finance	x	x	x	x	None
Robotics	x	x	x	x	None
Website Design	x	x	x	x	None
Woodworking I	x	x	x	x	None

*Students need to be 18 within two years of completing the EMTcourse in order to take the certification test.

Automotive Service Technology

Automotive Service Technology I

Course Level: 012

Prerequisite: Application, interview, and successful completion of Algebra I

Credits: 2 Term: Full Year

In the first year of this two-year program, students learn to inspect, diagnose, adjust, and repair the systems of the modern automobile, including environmental and safety practices. Students will develop their skills by working on customer and donated vehicles in a state-of-the-art facility featuring 5 bays, a parts room, lifts and computers for diagnostics, as well as a classroom computer lab for further study and research. An industry standard competency-based curriculum, certified by the National Automotive Technician Educational Foundation (NATEF) will be followed to provide first year students with the training to succeed in steering and suspension, electronics, brakes, state inspection and engine performance. Students need good reading, math, computer, mechanical and analytical skills to study technical manuals and solve automotive problems. This program is held at Mascenic High School. Drivers license is required.

Automotive Service Technology II **Running Start**

Course Level: 010

Prerequisite: Automotive Service Technology I

Credits: 4 Term: Full Year

In year two, students work on more complex repairs and tasks including training in engine repair, drivetrain, air bag systems and charging/starting systems. Students follow an industry-standard competency-based curriculum, certified by the National Automotive Technician Educational Foundation (NATEF), and develop the skills and practices in the essential service technician competencies expected in the automotive service industry. Students need good reading, math, computer, mechanical, and analytical skills to study technical manuals and solve automotive problems. This program is held at Mascenic High School. Drivers license is required. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Business and Commerce, General

Business and Personal Law

Course Level: 012

Prerequisite: None

Credit: 1 Term: Semester

Students learn the rights and responsibilities in everyday business and personal transactions. Includes ethics and law, criminal law, problems in society, torts, the court system, trial procedures, contracts, consumer protection, employment contracts, and renting a place to live. The students will create and participate in a mock trial.

Entrepreneurship/Small Business Ownership

Course Level: 012

Prerequisite: None

Credit: 1 Term: Semester

This course is intended for any student interested in starting his or her own business. Students will be introduced to the fundamental processes of creating a new business. Students will assess the nature of entrepreneurship and each individual's opportunity to become an entrepreneur. Students will then develop a business plan, including a feasibility study, market analysis, business forms, site selection and layout, and examine issues pertinent to business management, including marketing, purchasing/inventory, production/distribution, operations/staffing, financing, and human resources. The students will participate in an industry trade show.

Business Management

Prerequisite: None

Course Level: 012

Credit: 1 Term: Semester

Learn what it takes to manage a business in today's world. This course will focus on an introduction to management; ethics and social responsibility; businesses, workers, and the law; international business; decision-making skills; communication skills; motivation and leadership; managing conflict and stress; and managing change, culture, and diversity. Students in this class are responsible for inventory, sales, financial records, and promotion of the school store. This course is highly recommended for all students entering the field of business after high school.

Principles of Marketing

Prerequisite: None

Course Level: 012

Credit: 1 Term: Semester

This course explores marketing skills, including product/service management, pricing, promotion, distribution, market research, and the interpersonal skills necessary to work successfully in the real world. Students have the opportunity to develop leadership skills, career goals, and occupational skills through a real life opportunity working with Cougar Apparel. Students in this class are responsible for inventory, sales, financial records, and promotion of the school store. This course is highly recommended for any student interested in studying marketing at the college level.

Careers in Education

Careers in Education I **Running Start**

Prerequisite: None

Course Level: 010

Credits: 2 Term: Full Year

Students divide their time between the high school classroom and practicum teaching in an early childhood center and/or elementary school. This course gives students an overview of the history of early childhood education, developmentally appropriate practices, philosophy, and current issues. Students will be introduced to strategies for creating a classroom environment that is child focused and supports learning. Topics include lesson planning, reflection, use of early learning standards, grade level expectations, small and whole group instruction, assessment tools, and observation. The course provides an overview of all developmental stages and explores the impact of the multiple and diverse influences of family, culture, and society on the child and the early childhood professional. Students may join our career and technical student organization, Educators Rising. *Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.*

Careers in Education II **Running Start**

Prerequisite: Careers in Education I

Course Level: 010

Credits: 2 Term: Full Year

Students divide their time between the high school classroom and practicum teaching in an elementary and/or middle school classroom. Students are introduced to classroom structures that support differentiated instruction and other research-based approaches for effective teaching. Tiered Support Systems will be discussed as a general educational initiative to serve the needs of all students. The roles of the family and school as partners will be developed as a critical technique to serve student needs. Philosophical, historical, legal, and social/cultural aspects of education in the United States and New Hampshire will be explored. Students develop a beginning philosophy of education and participate in a service learning experience. Students may join our career and technical student organization, Educators Rising. *Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.*

Computer Systems Networking & Telecommunications

Computer Networking I **Running Start**

Prerequisite: None

Course Level: 010

Credit: 1 Term: Semester

Students will successfully disassemble and reassemble personal computers. Students will also be able to articulate the functions and operation of individual components of the personal computer such as disk drives, video controllers, power supplies, and motherboards. Students will successfully install and configure several operating systems. They will also be introduced to the basics of networking, including network addressing, network configuration, domain name services, and dynamic host configuration protocol. Students will experience the process of analyzing problems/bugs embedded in their computer by following problem solving techniques. This course will help prepare the student to take the A+ certification exam. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Computer Networking II **Running Start**

Prerequisite: Computer Networking I

Course Level: 010

Credit: 1 Term: Semester

Students will be introduced to the skills required to setup and maintain a home or small business network including such topics as connecting to the network; connecting through an Internet Service Provider; network addressing, including subnetting; implementing wireless technologies; network security; and network troubleshooting. Students will also experience network cable construction and testing using cable testers and tracers. Students will construct simple networks in a simulated environment as well as a real environment. Network troubleshooting issues will also be covered. Students continue the process of analyzing problems/bugs embedded in their network by following problem solving techniques learned in the previous class. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Computer Programming, General

Computer Programming & Software Development I **Running Start**

Prerequisite: None

Course Level: 010

Credit: 1 Term: Semester

Using a programming language, students will analyze a problem and will design, code, test, and document a programming solution. Students will experience various opportunities in logic development through the solving of problems. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Computer Programming & Software Development II **Running Start**

Prerequisite: Computer Programming & Software Development I

Course Level: 010

Credit: 1 Term: Semester

This class is the second course in the Computer Programming/Software Development sequence. It continues the idea of using programming and its constructs to solve problems. The student's understanding of variables, arrays, "if, if else, loops," and functions will be reinforced, while introducing the student to object oriented language such as C++ or Java. Additionally, the student will be introduced to pointers and structures and selected preprocessor directives as well as bit manipulations. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Construction Trades

Construction Trades is an exciting new, multi-year program for Region 14 Applied Technology Center. Courses in this program include fundamental instruction in industry safety, skills and professionalism for a career in the construction industry. Instruction will focus on gaining skills in masonry, plumbing, electricity, carpentry, heating, ventilation & air conditioning, reading blueprints, site management, inspection, and other construction-related applications. All students will begin with the Fundamentals of Construction Trades course. Following this, students will focus on specific trades during each half year course. Students may enroll in trades modules in any sequence. Successful completion of Foundations of Construction Trades and four trade modules, as well as an internship/apprenticeship in the final year, will lead to program certification.

Fundamentals of Construction Trades

Course Level: 012

Prerequisite: Proof of health insurance

Credit: 1 Term: Semester

This hands-on course will serve as the foundation of the Construction Trades Certification Program. Participants will also gain expertise in using hand tools and shop machines, applying math, science and literacy skills, practicing industry professional techniques and implementing OSHA safety measures as they gain and apply technical knowledge and professional skills in the building, inspecting, and maintaining of structures. In addition, learners will experience the foundation for a variety of trades. *This program is held at Conant High School.*

Construction Trades: Carpentry

Course Level: 012

Prerequisite: Completion of Fundamentals of Construction Trades and proof of health insurance.

Credit: 1 Term: Semester

This hands-on course will serve as the foundation of the Construction Trades Certification Program. Participants will also gain expertise in using hand tools and shop machines, applying math, science and literacy skills, practicing industry professional techniques and implementing OSHA safety measures as they gain and apply technical knowledge and professional skills in the building, inspecting, and maintaining of structures. In addition, learners will experience the foundation for a variety of trades. *This program is held at Conant High School.*

Construction Trades: Electrical

Course Level: 012

Prerequisite: Completion of Fundamentals of Construction Trades and proof of health insurance.

Credit: 1 Term: Semester

Students will increase their carpentry knowledge and skills as they work with various types of hardwoods, softwoods, fasteners, anchors, and adhesives. Students will be taught proper methods of handling, use, maintenance, and storage of a variety of tools and materials. Lessons will focus on how to interpret structural and architectural drawings and specifications, and how to adhere to building codes. Instruction and hands-on practice will focus on laying out and framing flooring, walls, ceilings, roofs, stairs, and building envelope. Math skills will be used to measure and calculate quantities, volume and cost. Safety is paramount in the carpentry trade and safe habits and practices will be emphasized. Students will be required to wear proper PPE and follow all safety practices and procedures.

Construction Trades: Masonry

Prerequisite: Completion of Fundamentals of Construction Trades and proof of health insurance.

Course Level: 012
Credit: 1 Term: Semester

Students build upon masonry basics introduced in the Fundamentals of Construction Trades course and expand their skills and understanding of the role of a professional mason. Instruction will focus on masonry materials, methods, tools, equipment, installation techniques and safe practices on the jobsite. Students learn how to mix mortar by hand, lay masonry units, install concrete masonry units and reinforcement. Safety when working with masonry materials is essential. Students will be required to wear proper PPE and follow all safety practices and procedures.

Engineering

Engineering Design I **Running Start**

Prerequisite: C or better in Algebra I and/or Physical Science

Course Level: 010
Credit: 1 Term: Semester

Engineering I is the first of four courses to complete the engineering program. This course provides the basic concepts and practices of blueprint reading and technical drawing. Topics covered are: aeronautical, architectural, mechanical, electrical and civil engineering. Applications include SolidWorks, 3D printing, computer numerical control (CNC) machines, electrical trainers, rockets and other materials needed for simulations and models. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Engineering Design II **Running Start**

Prerequisite: Engineering I

Course Level: 010
Credit: 1 Term: Semester

This course is the second of four classes that can be taken in the engineering discipline. Students focus on the design, development and production of useful products. The use of computer software from Engineering Design I will be re-emphasized as well as computer numerical control (CNC), 3D printing, Arduino electronic circuits, laser engraving technology and Festo Mechatronics trainer. Student's work may entail the following; collaboration with local businesses, presentations beyond the classroom, and submitting work for local or national competitions. Engineering content includes aerodynamics, architectural, mechanical, electrical, and civil engineering. Skills and knowledge learned will provide the basic essentials for studies in mechatronics. Course completers will have the knowledge of design basics, be able to implement solutions for problems in an engineering environment, and have experience in engineering teams. Electronic fundamentals and circuit design are emphasized in this course. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Engineering Design III **Running Start**

Prerequisite: Engineering Design II

Course Level: 010
Credit: 1 Term: Semester

This course is the third of four courses in the program and is focused on the application of process to an outcome; Computer Integrated Manufacturing will be used throughout as will be applications in 3D printing; computer numerical control (CNC) machine setup; laser cutting and engraving for the purpose of prototyping; and machine set up. Students will be provided the opportunity to enter the American Institute of Architecture Competition a New Hampshire state design contest. Projects are chosen based on individual preferences that show skill and competency attainment. Projects

are aligned with real-world problems and are produced to examine feasibility. When possible, clients will be integrated into the classroom and will work with students. This course builds on the concepts learned in Engineering Design and Manufacturing I & II. Students will be preparing for a SolidWorks Associate level exam during this course. Heavy emphasis is placed on engineering teams. Students will prepare an interactive web page representing the area of engineering competency based on projects, which will be maintained and updated to represent a visual catalog of competency and skill attainment for the use of college credit or employment opportunities. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Engineering Design IV Running Start

Course Level: 010

Prerequisite: Engineering Design III and a C or better in Geometry and Algebra II Credit: 1 Term: Semester

This problem-based learning course covers the knowledge and skills needed to explore the engineering design process. Individual projects, team projects, and laboratory exercises will be used to continually hone the student's interpersonal skills, creative abilities, and understanding of the design process. Everyday products will be examined from historical, societal, design, safety, and manufacturing perspectives. Topics include ideation, sketching, design constraints, solid modeling, decision making, statistical quality control, manufacturing methods, and engineering analysis. Students will develop an appreciation for good design as well as the ability to communicate design ideas via 3D modeling and written and oral reports. There are lectures, demonstrations, and a series of lab exercises designed to reinforce what the student has learned. An opportunity for students to take the Solidworks exam (CSWA) is built in as well as student participation in the AIANH architectural contest. This course uses the latest version of the Solidworks design software, as well as leading architectural software. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Film/Video and Photographic Arts, Other

Digital Photography & Video Arts I

Course Level: 012

Prerequisite: None

Credit: 1 Term: Semester

During this course, students will investigate the basic technical and artistic aspects of both photography and video art. They will work individually and in collaboration with their peers to develop public speaking skills, learn about famous photographers and critique work. Students will analyze lighting techniques for still photography and formulate scripts and storyboards for films. They will create a blog and website while taking part in both local and national competitions for both photography and film. Through this course, students will learn to shoot manually and be introduced to professional Adobe editing software including Lightroom and Premiere. This course is designed to be hands-on and project based. All equipment is provided for the student, including a camera, tripod, and laptop. The ATC laptop will have Adobe Software installed that includes Lightroom, Photoshop, Premiere, and Illustrator.

Digital Photography II

Course Level: 012

Prerequisite: Digital Photography & Video Arts I

Credit: 1 Term: Semester

For this course, students will utilize what they have learned in Digital Photography & Video Arts I to comprehensively investigate the field of photography. Students will be responsible for generating and critiquing images each week, as well as learning about photography techniques such as photojournalism, commercial photography, fine art photography, and food photography. Students

will participate in a photography based service learning project. In addition to planning photo shoots and learning to direct models, students will connect their own work with that of professionals in the photography field through a research based presentation project. This course will give students a clear understanding of the professional field of photography. All equipment is provided for the student, including a camera, tripod, and laptop. The ATC laptop will have Adobe Software installed that includes Lightroom, Photoshop, Premiere, and Illustrator.

Video Arts II

Course Level: 012

Prerequisite: Digital Photography & Video Arts I

Credit: 1 Term: Semester

For this course, students will apply concepts learned in Digital Photography & Video Arts I to comprehensively investigate the field of Video Arts. Students will analyze films, explore aesthetic trends in cinema, write screenplays, understand the nature and process of film production, and work collaboratively with their peers to produce a variety of short films. Ultimately, each student in Video Arts II will be responsible for creating a film to submit to the New Hampshire High School Short Film Festival, a state-wide film competition for students. The purpose of this course is to provide a project-based visual arts program which will provide students the technical instruction, artistic background, and practical experience necessary for aspiring filmmakers. All equipment is provided for the student, including a camera, tripod, and laptop. The ATC laptop will have Adobe Software installed that includes Lightroom, Photoshop, Premiere, and Illustrator.

Fire Science/Fire Fighting

Introduction to Firefighting **Articulation Agreement**

Course Level: 010

Prerequisite: Interview with program instructor and medical release required Credits: 2 Term: Semester

This course is offered in collaboration with the NH Fire Academy and is taught by representatives from local fire departments. The course provides students with experience and knowledge in basic firefighting skills and responsibilities. Educational objectives include knowledge of personal protective equipment, use of hose and nozzles, carrying and throwing ground ladders, and many other skills required to be a volunteer or full-time firefighter. Students who have completed the course and reached their eighteenth birthday may take the Firefighter 1: Hazardous Materials and Wildland exam. This is a blended class with online work as well as in class work and runs from 1:00 pm - 4:00 pm at ConVal High School and other off-campus locations. Mount Wachusett Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Note:

Participation in this course requires the student to be engaged in coursework beyond the traditional school day. Students enrolled in this course should plan to take the late bus or arrange other transportation home. Additionally, participation requires that students have the stamina and physical ability to work in difficult conditions for several consecutive 30-minute durations while wearing up to 75 pounds of protective gear.

Emergency Medical Technician (EMT) **Articulation Agreement**

Course Level: 010

Prerequisite: Interview with program instructor

Credits: 2 Term: Semester

This course is offered in collaboration with the New Hampshire Bureau of EMS and follows a national curriculum that provides students with the experience and knowledge of the skills and responsibilities of an EMT. The primary focus of an EMT is to provide basic emergency medical

care and transportation for critical and emergent patients who access the emergency medical system. Technicians perform interventions with the basic equipment typically found on an ambulance. Upon completion of the course, students who are 18 years of age are eligible to take the EMT exam through the National Registry of EMTs. This class runs from 1:00p.m.- 4:00 p.m. at ConVal High School and other off-campus locations. Mount Wachusett Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Note:

Participation in this course requires the student to be engaged in coursework beyond the traditional school day. Ride-a-long time is required on an actual working ambulance service. Students enrolled in this course should plan to take the late bus or arrange other transportation home. A student Medical Release is required by the New Hampshire Department of Safety, Division of Fire Standards and Training and Emergency Medical Services. Students should be prepared to wear Personal Protective Equipment (PPE) for extended periods of time.

Graphic Design

Graphic Design I

Prerequisite: None

Course Level: 012

Credit: 1 Term: Semester

You will learn Adobe Photoshop, Illustrator and InDesign. Projects include website design, logos, phone apps, and more. You'll progress from basic drawing techniques to completed designs.. Presentations of final projects take the place of a final exam. *This course meets the graduation requirement in Information and Computer Technology or in Art.*

Graphic Design II **Running Start**

Prerequisite: Graphic Design I

Course Level: 010

Credit: 1 Term: Semester

We will expand on what you learned in Graphic Design I to create more comprehensive designs. Projects include magazine design, posters, websites and a bit of animation. Community based projects allow the students to work in real world situations. A student-developed portfolio is used as an end of course assessment in place of a final exam. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee. *This course meets the graduation requirement in Information and Computer Technology or in Art.*

Graphic Design III

Prerequisite: Graphic Design II

Course Level: 012

Credit: 1 Term: Semester

This course serves as the capstone experience for the graphic design program. We'll focus on the completion of a graphic design portfolio, which will be showcased from a website you design. You'll also be involved with community-based projects and take time to explore special areas of interest within the graphic design industry. A student-developed portfolio is used as an end of course assessment in place of a final exam. *This course meets the graduation requirement in Information and Computer Technology or in Art.*

Manufacturing Technology/Technician

Manufacturing Through Wood I

Prerequisite: None

Course Level: 012

Credit: 1 Term: Semester

This hands-on, project-based course is designed for students who are interested in exploring the many opportunities knowledge of basic manufacturing principles will make available to them. While students will primarily be practicing manufacturing techniques through using wood as a medium, they will also have the opportunity to 3D print using a variety of plastics. In addition, students will be given the option of taking the OSHA 10 exam; students who earn this industry certification will find it helpful in getting both part and full time employment.

Manufacturing Through Wood II

Prerequisite: Manufacturing Systems I or Advanced Manufacturing Systems I

Course Level: 012

Credit: 1 Term: Semester

Students in this course will continue to explore the manufacturing principles they learned in Manufacturing Through Wood I while also learning how to use a variety of milling and computer numerical control (CNC) machines. Focus will be placed on LEAN manufacturing, which emphasizes streamlining processes and reducing waste. Students will work with local industry leads in coming up with solutions to real-world problems.

Advanced Manufacturing Systems III or Internship **Running Start**

Prerequisite: Manufacturing Through Wood II
or Advanced Manufacturing Systems II

Course Level: 010

Credit: 1 Term: Semester

Students in the third course of this sequence can choose between an internship or welding instruction. Students will further enhance their skills through a work-based learning internship with a local manufacturer. Under supervision of ConVal's teacher, students may combine classroom learning with work experience. Students may extend the internship for additional credit. Students who elect the welding option will study at Phaze Welding Technology Center to learn the basics of stick, tig, and mig welding with the opportunity to test and earn welding certification. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

ATC Electives

Introduction to Business

Prerequisite: None

Course Level: 012

Credit: 1 Term: Semester

Introduction to Business will introduce you to the world of business and help prepare you for the roles of consumer, worker, and citizen. This course will also serve as a background for other business courses you may take in high school, prepare you for future employment, and help you effectively perform your responsibilities as a citizen. The students will participate in a simulation where each student owns/operates his or her own business and handles all the management tasks for the business.

Introduction to Technology

Prerequisite: None

Course Level: 012
Credit: 1 Term: Semester

Students will explore engineering concepts through VEX robotics and platforms sponsored by VEX. Skills will be reinforced through hands-on applications as well as computer based practice. Emphasis will be placed on soft skill attainment and practice; applications in software and computer management systems; and use of the Google Suite. Areas of content will include units offered in the engineering, software development and programming, and computer networking programs as well as robotics.

Human Growth and Development Running Start

Prerequisite: None

Course Level: 010
Credit: 1 Term: Semester

This course provides a study of human growth and development from prenatal development through adolescence. The characteristics, patterns, and theories of development in the areas of physical/motor, emotional, social, language, and cognitive development are covered. The complex and diverse influences of culture, environment, and individual needs are considered as the young child is studied in relationship to family, school, and community. This course is appropriate for anyone who is considering any occupation dealing with children and adolescents but is particularly recommended for students considering Careers in Education I and Careers in Education II. Running Start Course: Dual credit option for this course is available for Sophomores, Juniors, and Seniors for an additional fee.

Personal Finance

Prerequisite: None

Course Level: 012
Credit: 1 Term: Semester

This course will provide students with knowledge that is necessary for them to make decisions that affect their daily lives at present or in the very near future. Topics will include decision-making in terms of purchasing, developing a budget, understanding how to compare different types of loans, understanding the responsibility of how to use credit cards without incurring deep debt, managing an apartment or other living arrangements, maintaining a healthy lifestyle on a limited budget, and an introduction to making wise investment decisions.

Licensed Nursing Assistant

Prerequisite: LNA Health Careers screening assessment; see Mrs. Noonan for admission information. Students must be 16 years of age or older.

Course Level: 012
Credit: 1 Term: Quarter

Students learn about caring for patients of all ages, how to check vital signs, maintain a clean and safe working environment, correctly use medical terminology and demonstrate good health care skills. The LNA program involves both classroom instruction and live work in local clinical settings. Students will have the opportunity to take the state-licensing exam that if passed qualifies the individual or employment as a Licensed Nursing Assistant. This 9-week training program is taught by personnel from LNA Health Careers and includes off-campus clinical experience. The first six weeks of the class run from 1:00 pm- 5:00 pm. at ConVal High School. During the last three weeks of the class students will be engaged in clinical experiences at off-site locations. Students are required to provide their own transportation to and from class and to and from the clinical sites. During the clinical rotations, students must plan on working from 3:00 pm-8:30 pm. There is a 60-hour clinical requirement to satisfactorily complete the Licensed Nursing Assistant class. The LNA certificate is awarded after completion of the NH State Certification Exam.

Robotics **Running Start**

Prerequisite: None

Course Level: 010
Credit: 1 Term: Semester

This class will introduce the students to the basics of designing, building and testing their own robot to accomplish specific challenges. Students will learn about and implement various types of sensors during this process. Students will also develop specific software to control each robot they construct. This class will provide the student with the experience of integrating hardware and software to accomplish specific tasks. Running Start Course: Dual credit option for this course is available for Juniors and Seniors for an additional fee.

Website Design

Prerequisite: None

Course Level: 012
Credit: 1 Term: Semester

Website Design will introduce you to planning and designing effective web pages; implementing web pages by writing HTML and CSS code; enhancing web pages with the use of page layout techniques, text formatting, graphics, images, and multimedia; and creating responsive (resizes for screen size) websites. *This course meets the graduation requirement in Information and Computer Technology or in Art.*

Woodworking I

Prerequisite: None

Course Level: 123
Credit: 1 Term: Semester

In this beginning woodworking class students will be introduced to the proper and safe use of hand tools, portable and stationary power equipment. Safety, material processing, project layout, design and fabrication will be emphasized. Individual projects will be produced and finished after required projects are completed. This course serves as an excellent introduction to the Building and Construction Trades or Manufacturing programs.

Internship

Prerequisite: Junior or Senior status

Course Level: 012
Credit: .5 quarter or 1 Term: Semester

Students may also wish to experience the world of work first-hand by becoming an intern at a local business. While internships can be used in a variety of ways, they work best when they are the capstone or culminating event in a student's high school course of study. For example, a student who is interested in pursuing a career as a dental hygienist should take all appropriate science and health occupations classes before becoming an intern at a local dental office. This way, the student is able to have the best possible experience as an intern while the local business gains the benefit of working with a student truly interested in the profession. Internship is graded Pass/Fail.



Post-Secondary Credits

available through the Region 14 Applied Technology Center (ATC)

ATC Course	College Class	Post-Secondary Affiliation	College Credits	Type of Credit
Engineering Design I	ADMT115 - Engineering Print Reading	MCC (<i>Mechatronics Pathway</i>)	3	Running Start
Engineering Design II	ADMT118 - Electrical Fundamentals for Manufacturing	MCC (<i>Mechatronics Pathway</i>)	4	Running Start
Engineering Design III	ADMT110 - Manufacturing Processes	MCC (<i>Mechatronics Pathway</i>)	4	Running Start
Engineering Design IV	ADMT112M - Intro to Engineering Design & Solid Modeling	MCC (<i>Mechatronics Pathway</i>)	4	Running Start
Robotics - 5th Block	ROBO211M - Robotic Design	MCC (<i>Robotics Pathway</i>)	4	Running Start
Human Growth & Development	ECE102N - Growth & Development of the Young Child	NCC	3	Running Start
Careers in Education I	ECE101N - Foundations of Early Childhood Education	NCC	3	Running Start
Careers in Education II	EDU130N - Foundations of Education	NCC	3	Running Start
Computer Networking I	CSCN101N - Computer Architecture & Operating Systems	NCC	3	Running Start
Computer Networking II	CSCN116N - Networking Basics	NCC	3	Running Start
Computer Programming & Software Development I	CSCI161N - Introduction to Programming	NCC	3	Running Start
Computer Programming & Software Development II	CSCI175N - Programming using C++	NCC	3	Running Start
Graphic Design II	ARTS120N - Graphic Design Theory	NCC	3	Running Start
Automotive Technology II	AUTO121N - Automotive Service and Maintenance	NCC	4	Running Start
Firefighter Academy I & EMT	FST115 - Principles of Emergency Service	MWCC	3	Articulation Agreement
	FST159 - Fire Behavior & Combustion	MWCC	3	Articulation Agreement

	HHC 111 - Emergency Medical Tech I	MWCC	4	Articulation Agreement
	HHC 112 - Emergency Medical Tech II	MWCC	4	Articulation Agreement
Adv Manufacturing Systems Internship	MTTN101N - Manufacturing Processes	NCC	3	Running Start
College Composition	ENGL101N - College Composition	NCC	4	Running Start
AP Chemistry	CHEM130N - General Chemistry	NCC	4	Running Start
AP Calculus	MATH210N - Calculus I MATH211N - Calculus II	NCC	8	Running Start
<p style="text-align: center;">MCC = Manchester Community College NCC = Nashua Community College MWCC = Mount Wachusett Community College</p> <p>**Running Start - Agreements with the NH Community College System. Students take college-level courses in high school that generate a college transcript. **Articulation - Qualifying high school classes fulfill requirements through individual agreements between high school and college. No transcript generated.</p> <p>CTE students are also eligible for 8 articulated credits at Keene State College if they complete any CTE program.</p>				



REGION 14 APPLIED TECHNOLOGY CENTER
182 Hancock Road
Peterborough, NH 03458

SY2021-2022 STUDENT APPLICATION

*Applications are due by Friday, March 12, 2021 to Jennifer Kiley, CTE director,
jkiley@conval.edu.*

Region 14 Applied Technology Center programs are open to students in grades 10-12.

Name (Last, First, MI) _____

Street Address _____

Town, State, Zip _____

Student Cell Phone _____ Date of Birth _____ Gender _____

Email _____ Year of Graduation _____

Parent/Guardian (Last, First) _____

Relationship _____ Telephone _____

Race/Ethnic Origin # _____

1=African American 2=Asian American 3=Black 4=Hispanic 5=White 6=Hawaiian/Pacific Islander

Have you ever taken an ATC course before? YES / NO If YES, which course? _____

Please mark your first choice program with a "1" and your second choice with a "2."

- ___ Automotive Technician (offered at Mascenic High School; please see [separate application](#))
- ___ Construction Trades (offered at Conant High School)
- ___ Business
- ___ Careers in Education
- ___ Computer Networking and Telecommunication
- ___ Computer Programming
- ___ Digital Photography and Video
- ___ Engineering
- ___ Emergency Medical Technician
- ___ Introduction to Firefighting
- ___ Graphic Design



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Please briefly explain what your career plans are, how your chosen program will help you with your career plans, and why you think you would be a good candidate for the program. (Attach an additional sheet if more space is needed.)

SAFETY AGREEMENT

My son/daughter will have the opportunity to use various tools and equipment during his/her program. Appropriate instruction in the operation of these tools and equipment is given, and close supervision is maintained at all times. Although every precaution is taken to prevent accidents, I understand that a certain risk is involved due to the nature of the experience, the age of the student, and the learning environment.

My son/daughter has permission to apply to the Region 14 Applied Technology Center. I understand that:

- This application must be completed in its entirety, including all relevant signatures. Incomplete applications will not be considered.
- Region 14 Applied Technology Center staff will request/review all school records, including discipline and attendance.

Signature of Parent/Guardian

Date



**REGION 14 APPLIED TECHNOLOGY CENTER
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Signature of Student _____

Date _____

PARTICIPANT PHYSICAL EXAMINATION

Date of Exam _____

Name (Last, First, MI) _____

Address _____

Town, State, Zip _____

Telephone _____ Date of Birth _____ Male ___ Female ___

Height _____ Weight _____ Blood Pressure _____ / _____ Pulse _____

Vision R 20 / ___ Vision L 20 / ___ Corrected Y ___ N ___ Last TD/Tdap _____ (circle one)

	Normal	Abnormal Findings					Initials
Cardiopulmonary							
Pulses							
Heart							
Lungs							
Tanner stage		1	2	3	4	5	
Skin							
Abnormal							
Genitalia							
Musculoskeletal							
Neck							
Shoulder							
Elbow							
Wrist							
Hand							
Back							
Knee							
Ankle							
Foot							
Other							

The student is considered physically fit and has the stamina and physical ability to work in untenable conditions for several consecutive, 30-minute durations, and has been evaluated regarding height phobia and claustrophobia.

Name of Physician _____



REGION 14 APPLIED TECHNOLOGY CENTER
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New Hampshire Department of Safety
Division of Fire Standards and Training & Emergency Medical Services

Mailing: 33 Hazen Drive, Concord, NH 03305 Physical: 98 Smokey Bear Boulevard, Concord, NH
 Phones: (Toll free) 800-371-4503 (Local) 603-223-4200 (Fax) 603-271-1091

General Admission Application

Section 1: PERSONAL INFORMATION (Please complete Section 1B if taking a DHS, FEMA, or NFA course.)

First name	M.I.	Last name	M	F	Social Security# : (last 4 digits)	Date of Birth:
HOME mailing address: (Use the next two lines below.)					US Citizen? <input type="radio"/> Y <input type="radio"/> N	If NO, country of birth:
PO Box/Street:			Home phone:		Work phone:	
Town/City:		State:	Zip:		Cell phone:	Cell phone provider **: <input type="text"/>

Section 1A: DEPARTMENT INFORMATION:

Dept./Agency name:					** Please provide cell provider information if you want to receive text message course confirmations. (Standard text messaging rates may apply.)	
Address:					Email address:	
Dept./Agency phone:	Dept./Agency fax:				Preferred method of contact:	
Applicant Rank/Title in Dept./Agency:	Career <input type="checkbox"/>	Volunteer <input type="checkbox"/>	Call <input type="checkbox"/>	N/A <input type="checkbox"/>	Email/Text : <input type="checkbox"/>	Mail: <input type="checkbox"/>

Section 1B: SID NUMBER: (Required for ALL DHS, FEMA, AND NFA classes!)

Click on or copy and paste the link for information: <https://cdp.dhs.gov/femasid/> **SID NUMBER:**

Section 2: COURSE INFORMATION (See Section 1B if you are taking a DHS, FEMA, or NFA course!)

Course requested:	Course date: (mm/dd/yyyy)
Course Reference # (CREF) or Course Number:	Course location:

Section 3: AGENCY / DEPARTMENT PAYMENT

The signature below, provided by a dept./agency representative, verifies that the dept./agency agrees to be billed for this applicant from the division and is also aware of the division's refund policy on the website:
<http://www.nh.gov/safety/divisions/fstems/documents/fstemsrefundpolicy.pdf>

Signature of Agency Representative: _____ **Date:** (mm/ dd/ yyyy)

⇒ NOTE: For personal payment, please fill out the "General Payment Form".

Section 4: STUDENT SIGN-OFF

I certify that the information on this application is correct and understand that falsification of information may result in denial of a course certificate. I understand and agree to abide by the rules, policies, and refund policy of the NH Division of Fire Standards and Training & Emergency Medical Services (NHFSTEMS). I hereby authorize release of any and all information concerning my enrollment in this course to the chief officer in charge or designee of my organization. Unless I am employed by the State of NH, I understand and accept the fact that I am not covered by any insurance provided by the State of NH, the Fire Standards and Training Commission, or any other instructor nor will insurance from any of these agencies be available in the event of my injury or death.

Signature of Applicant: _____ **Date:** (mm/ dd/ yyyy)

⇒ NOTE: Submitting an application without signing in Section 4 or having met prerequisites will prohibit enrollment.