

CAREER TECHNICAL EDUCATION

SOMERSWORTH

ROCHESTER

NH

DOVER

SKILLS THAT LAST A LIFETIME

Tri-City Programs

The Tri-City Career & Technical Education partnership includes:

Dover Regional Career Technical Center

Rochester R.W. Creteau Regional Technology Center

Somersworth Career Technical Center

This partnership allows students from each school to be able to take programs at their partnering schools, allowing for more diversity of programs and overall opportunities for students.

Advanced Manufacturing (Millwork)

AFJROTC - Aviation STEM

Animal Science

Animation & Web Design

Architectural/Mechanical Engineering

Automotive Collision Technology

Automotive Service Technology *

Automotive Technology *

Automotive Technology *

Banking & Financial Support Services

Biomedical Science

Broadcast Technology

Building Construction Technology *

Building Trades *

Business (Management, Marketing &

Entrepreneurship Paths) *

Computer Networking & Telecommunication*

Computer Programming *

Computer Systems Networking *

Cosmetology

Criminal Justice & Homeland Security

Culinary Arts *

Culinary Arts *

Design of Theater Technology

Electrical Technology & Renewable Resources

Environmental Science & Sustainable Studies

Fire Science & EMT

Graphic Design

Health Science Technology *

Health Science Technology *

Heating, Ventilation, Air Conditioning &

Refrigeration (HVAC)

iBEAM (Innovations in Business,

Entrepreneurship & Marketing) *

Medical Assisting

NJROTC—Leadership Education & Training

Pre- Engineering *

Pre- Engineering *

Precision Machining

Restaurant Management

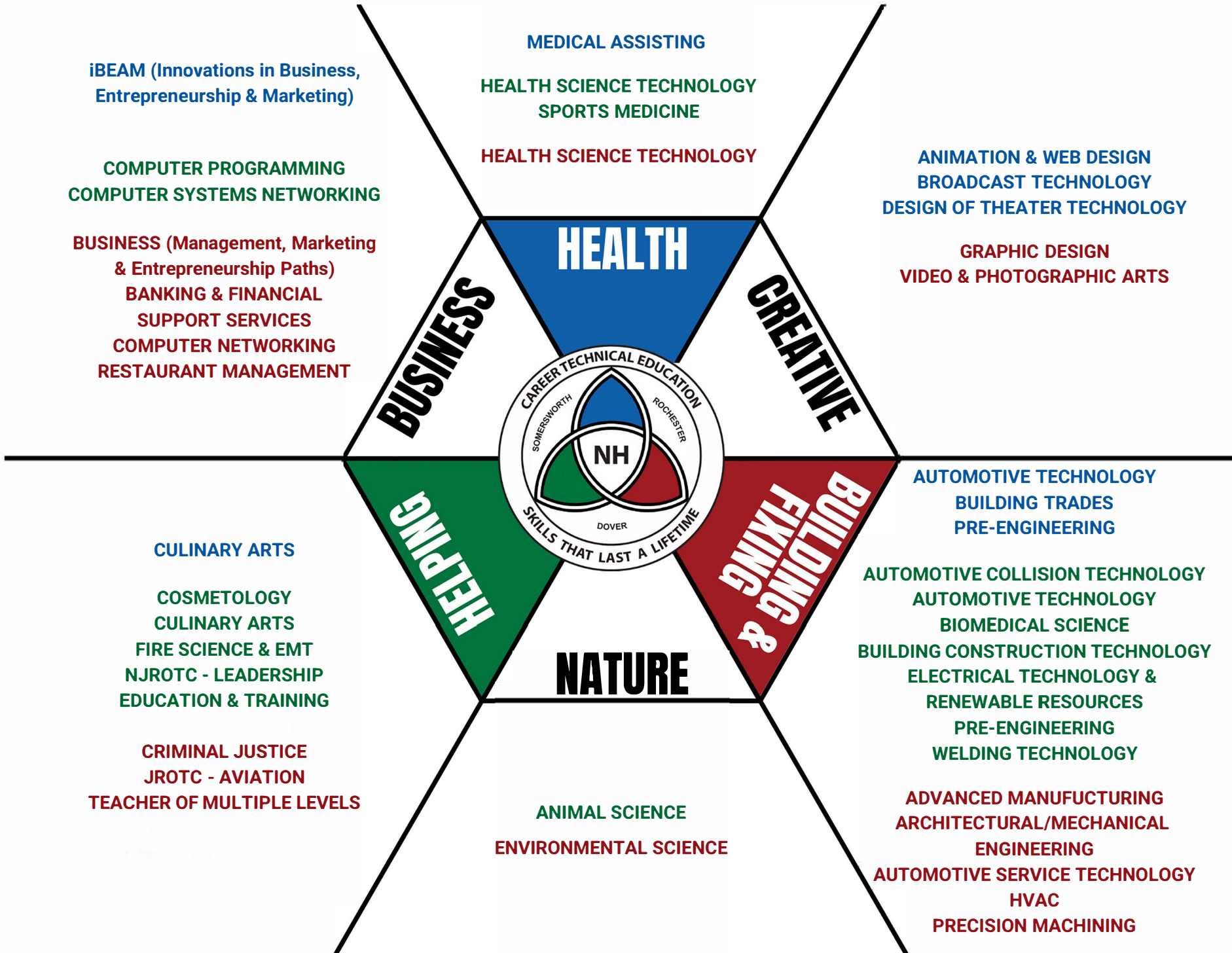
Sports Medicine

Teacher of Multiple Levels

Video & Photographic Arts

Welding Technology

*** Available at more than one location**



MEDICAL ASSISTING

HEALTH SCIENCE TECHNOLOGY
SPORTS MEDICINE

HEALTH SCIENCE TECHNOLOGY

HEALTH

ANIMATION & WEB DESIGN
BROADCAST TECHNOLOGY
DESIGN OF THEATER TECHNOLOGY

GRAPHIC DESIGN
VIDEO & PHOTOGRAPHIC ARTS

CREATIVE

AUTOMOTIVE TECHNOLOGY
BUILDING TRADES
PRE-ENGINEERING

AUTOMOTIVE COLLISION TECHNOLOGY
AUTOMOTIVE TECHNOLOGY
BIOMEDICAL SCIENCE
BUILDING CONSTRUCTION TECHNOLOGY
ELECTRICAL TECHNOLOGY & RENEWABLE RESOURCES
PRE-ENGINEERING
WELDING TECHNOLOGY

BUILDING & FIXING

NATURE

ANIMAL SCIENCE
ENVIRONMENTAL SCIENCE

ADVANCED MANUFACTURING
ARCHITECTURAL/MECHANICAL ENGINEERING
AUTOMOTIVE SERVICE TECHNOLOGY
HVAC
PRECISION MACHINING

BUSINESS

iBEAM (Innovations in Business, Entrepreneurship & Marketing)

COMPUTER PROGRAMMING
COMPUTER SYSTEMS NETWORKING

BUSINESS (Management, Marketing & Entrepreneurship Paths)
BANKING & FINANCIAL SUPPORT SERVICES
COMPUTER NETWORKING
RESTAURANT MANAGEMENT

HELPING

CULINARY ARTS

COSMETOLOGY
CULINARY ARTS
FIRE SCIENCE & EMT
NJROTC - LEADERSHIP EDUCATION & TRAINING

CRIMINAL JUSTICE
JROTC - AVIATION
TEACHER OF MULTIPLE LEVELS

Somersworth Career Technical Center Programs

Animation & Web Design

Automotive Technology

Broadcast Technology

Building Trades

Culinary Arts

Design of Theater Technology

Innovations in Business, Entrepreneurship & Marketing

Medical Assisting

Pre-Engineering (Architecture & Manufacturing)

**SOMERSWORTH CAREER TECHNICAL CENTER
POST-SECONDARY CREDITS**

CTC Course	Post-Secondary Course	Post-Secondary Partner	College Credits	Type of Credit
Animation & Web Design	DGMT125G Introduction to Animation	Great Bay Community College	3	EC
	CIS124G Web Development I		3	
	DGMT115 Intro to Graphic Design		3	
	DGMT265 3D Design & Animation		3	
	CIS134 Web Style & Design		3	
Automotive Technology	AUT110 Brakes 1	Central Maine Community College	2	A
	AUT120 Suspension		2	
	100 Basic Engine Management Systems (EMS I)	WyoTech	3	A
	1100 Collision Repair I		3	
	700 Engines		3	
	AU 126 Suspension and Steering	University of Northwestern Ohio	6	A
	AU127 Hydraulic Brake Systems		6	
Students may elect to test-out of up to 4 courses upon entry, or deduct \$1000 from tuition from the Universal Technical Institute				
Broadcast Technology	EJA1020 Communications Technology	Northern Vermont University	3	A
	Elective Course Credit (Required for BS in Electronic Journalism)		3	
Building Trades	CR114 Technical Fundamentals of Building Construction	New England Institute of Technology	5	A
	CR116 Tool and Site Work Lab		2	
	CR121 House Framing I Lab		2	
	CR124 Construction Safety Practices and OSHA		1	
Culinary Arts	CUA121 Food Preparation & Sanitation	Central Maine Community College	3	A
	CUA171 Nutrition & Food Quality		3	
	CULA1510L Culinary Fundamentals	Lakes Region Community College	3	DE
	CULA1520L0 Sanitation and Safety		3	
	CULA1460L Bakery Production		3	
	UNH Thompson School Articulation Agreement pending			
Design of Theater Technology pending approval with the University of New Hampshire /Husson University				
IBEAM	BUS100 Understanding Business	Central Maine Community College	3	DE
	BUS125 Intro to Marketing		3	
Medical Assisting	AHLT 110G Medical Terminology	Great Bay Community College	3	DE
Pre- Engineering	MCET105C Engineering Design	NHTI	4	DE
	MCET110C Engineering Principles		4	
	ELET215C or MET elective		3	
	MFET241C Computer Integrated Manufacturing		4 w/lab	
	39 participating PLTW colleges with various credit offerings. See the CTC counselor or Engineering teacher for more information.			
Completion of any 2-year CTC Program (Dover, Rochester, or Somersworth) Varies depending on the completed CTC Program.		Keene State College	Up to 8	A

**SOMERSWORTH CAREER TECHNICAL CENTER
LICENSING, CERTIFICATIONS, AND OTHER CREDENTIALS**

Animation & Web Design	Adobe Certified Associate in Adobe Dreamweaver
	Adobe Certified Associate in Adobe Animate
Automotive Technology	Automotive Service Excellence (ASE)
	OSHA 10
	SP2 Mechanical Safety & Mechanical Pollution
	NC3 Snap On Tools NC3 Meter Certification
Broadcast Technology	Adobe Certified Associate Certification
	Apple Final Cut Pro X, Motion and Compressor
Building Trades	Completion of the program fulfills the first year of the Carpenters Union Apprenticeship Program
	SP2 Construction
	OSHA 10
Culinary Arts	ServSafe Certification
	COA—ProStart Certificate of Achievement
	National Restaurant Association
Design of Theater Technology	OSHA 10
	SP2—Construction
iBEAM	HubSpot ANSI Food Handler
Medical Assisting	Phlebotomy (CPT) through the National Healthcareer Association (NHA)
	Medical Assistant (CCMA)
	CPR

INTERDISCIPLINARY CREDITS

Students may satisfy some graduation requirements by earning credit(s) in the following programs. In addition to grade level, these courses may require additional prerequisites. Please see course descriptions for more information.

Program	Requirement
Animation & Web Design	Arts Education OR Computer Education Senior Year—Math Experience
Automotive Technology	Senior Year—Math Experience
Broadcast Technology	Senior Year—Math Experience
Building Trades	Senior Year—Math Experience
Culinary Arts	Senior Year—Math Experience
Design of Theater Technology	Arts Education
Innovations in Business, Entrepreneurship & Marketing (IBEAM)	Economics Senior Year—Math Experience
Medical Assisting	Senior Year—Math Experience
Pre-Engineering (Architecture & Manufacturing)	Computer Education Senior Year—Math Experience

Animation & Web Design

Click here to view the [Program Website](#) or the [Program Video](#)

Animation & Web Design Program

Year 1 – Animation & Web Design I and Animation & Web Design II

Year 2 – Animation & Web Design III and Animation & Web Design IV

ANIMATION AND WEB DESIGN I

GRADES 10, 11, 12

1 Credit (Semester course)

During this semester-long course, students will learn how to apply the principles of animation and gain a full understanding of the animation process from concept to completion. Through the creation of 2D and 3D animation and motion graphics, students will work on a number of short animations to develop their skills in creating art as a story. Topics to be covered include storyboarding, creating production artwork, setting keyframes, tweening and interpolation, creating and animating characters, materials manipulation, and lighting. Applications used will include Adobe Animate and Adobe AfterEffects. This is a dual enrollment course.

PREREQUISITE: Acceptance into the Animation and Web Design Program.

ANIMATION AND WEB DESIGN II

GRADES 10, 11, 12

1 Credit (Semester course)

During this semester-long course, students will gain knowledge of the web site development process and begin to familiarize themselves with the various languages of web design. Through the use of a text editor, HTML5 and CSS3, along with validation programs, students will learn proper syntax and develop well-formed and valid web pages. Students will use HTML5 to incorporate text, graphics, and form components into web pages, and will use CSS for page layout and site design. Site planning, such as wireframing and mapping will also be covered. Students will also gain some experience with using Adobe Dreamweaver as a design interface. JavaScript will also be introduced as a way of adding interactivity to site pages, such as animations, pop ups, forms and sophisticated navigation. For their final project, students will create a website about a topic of their choice. This is a dual enrollment course.

PREREQUISITE: Completion of Animation and Web Design I.

APPLICABLE SKILLS:

- 2D/3D Animation
- HTML, CSS, JavaScript
- User Experience (UX) and User Interface (UI) Design
- Graphic Design
- Computer Illustration

COLLEGE ALIGNMENT:

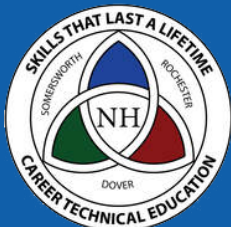
- Great Bay Community College:
 - DGMT 125G Introduction to Animation
 - CIS 124G Web Development I

LICENSING, CERTIFICATION, CREDENTIALS:

- Adobe Certified Associate in Adobe Dreamweaver
- Adobe Certified Associate in Adobe Animate

CAREER PATHWAYS:

- Animator
- Illustrator
- Web Developer
- Web Designer
- UX or UI Designer
- Game Designer
- Graphic Designer
- Mobile App Developer



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Somersworth Career Technical Center

18 Cemetery Road, Somersworth NH 03878

For more information: 603-692-2242 or CareerTech@sau56.org



Animation & Web Design Cont.

Click here to view the [Program Website](#) or the [Program Video](#)

Animation & Web Design Program

Year 1 – Animation & Web Design I and Animation & Web Design II

Year 2 – Animation & Web Design III and Animation & Web Design IV

ANIMATION AND WEB DESIGN 3 III

GRADES 10, 11, 12

1 Credit (Semester course)

During this semester long course, students will learn the fundamental principles of effective 3D animation development through the process of making a 3D animated short film. Using industry-standard Autodesk Maya, students will further develop skills related to pre-production techniques, such as scriptwriting, concept art, storyboarding and creating animatics. Course topics will include scene and character development and animation, modeling, rigging, inverse kinematics, texturing, lighting, and rendering. Students will also gain some familiarity with sound, color correction, and editing. In addition, students will learn the fundamental components of promoting their animated film through the creation of various marketing materials such as posters, trailers, and press kits.

PREREQUISITE: Completion of Animation and Web Design I and II.

ANIMATION AND WEB DESIGN IIII

Grades: 11, 12

1 Credit (Semester course)

During this semester-long course, students will build upon what they have learned about HTML5, CSS3, and JavaScript to further develop their web design and development skills, while learning the basic layout and imaging strategies used to create functional, informative, and entertaining Web pages. Course topics include information and page design, type, color, image formats and optimization, copyright law, and compatibility issues with multiple browsers. Topics related to User Experience Theory (UX), such as accessibility, usability, and credibility will also be covered. During this course students will design, create, and build their final portfolio site.

PREREQUISITE: Completion of Animation and Web Design I, II, III.

APPLICABLE SKILLS:

- 2D/3D Animation
- HTML, CSS, JavaScript
- User Experience (UX) and User Interface (UI) Design
- Graphic Design
- Computer Illustration

COLLEGE ALIGNMENT:

- Great Bay Community College:
 - DGMT 125G Introduction to Animation
 - CIS 124G Web Development I

LICENSING, CERTIFICATION, CREDENTIALS:

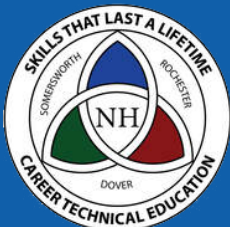
- Adobe Certified Associate in Adobe Dreamweaver
- Adobe Certified Associate in Adobe Animate

CAREER PATHWAYS:

- Animator
- Illustrator
- Web Developer
- Web Designer
- UX or UI Designer
- Game Designer
- Graphic Designer
- Mobile App Developer

[View the Program Website](#)

[View the Program Video](#)



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Automotive Technology

Click here to view the [Program Website](#) or the [Program Video](#)

Automotive Technology

Year 1 – Automotive Technology I

Year 2 – Automotive Technology II

935 AUTOMOTIVE TECHNOLOGY I

GRADE 10, 11, 12

2 CREDITS (Full-year course)

This course will give students hands-on training in the repair and diagnosis of automotive systems. Time will be spent in the classroom learning the procedures and in the shop practicing the skills learned. Major areas of study include brakes, steering and suspension systems, and engine performance. Students will be introduced to the computer systems in automobiles and how to diagnose and repair problems with the computer systems. Students will learn how to do a wheel alignment, repair brakes, and diagnose problems.

PREREQUISITE: Acceptance into the Automotive Technology program; Must be 16 years old prior to September 30th.

936 AUTOMOTIVE TECHNOLOGY II

GRADES 11, 12

2 CREDITS (Full-year course)

In the second year students will receive advanced training in the repair and diagnosis of modern automobiles. More emphasis will be placed on engine performance and computer systems. Students will learn the complex workings of the electrical systems. Areas covered are wiring, lights, battery, starters, and alternators, along with the use of multi-meters. Students will also learn the state inspection laws and will be able to perform a state safety inspection on a car. Students will be exposed to the business side of the automotive trades and will gain experience as service writers and in ordering repair parts. At the conclusion of the second year, students should be able to pass the ASE test in brakes, electrical, and front ends.

PREREQUISITE: Successful completion of Automotive Technology I.

APPLICABLE SKILLS:

- Diagnose, maintain and repair domestic and foreign automobiles.
- Diagnose and repair a variety of electronic/electrical systems.
- Diagnose and repair a variety of mechanical systems.
- Read and use multi meters and computer diagnostic equipment.
- Service order writing and processing.

COLLEGE ALIGNMENT:

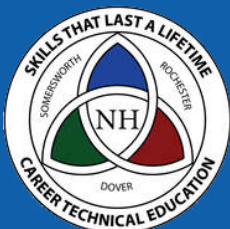
- Southern Maine Community College
- Central Maine Community College
- WyoTech
- University of Northwestern Ohio
- Universal Technical Institute

LICENSING, CERTIFICATION, CREDENTIALS:

- Automotive Service Excellence (ASE)
- OSHA 10
- SP2 Mechanical Safety and Mechanical Pollution
- NC3 Snap on Tools NC3 Meter Certification

CAREER PATHWAYS:

- Elevator Installer and Repairer
- Transportation Inspector
- Aircraft Mechanic and Service Technician
- Service Station/repair shop owner
- Manufacturing Equipment Technician
- Wind Turbine Technician



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Broadcast Technology

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Broadcast Technology Program

Year 1 – Broadcast Technology I

Year 2 – Broadcast Technology II

BROADCAST TECHNOLOGY I

GRADES 10, 11, 12

2 CREDITS (Full-year course)

In this introductory course, students will explore photography, television, video production, and graphic communication. Students will work on projects and learn to use digital cameras and video broadcasting equipment with photo and video editing software to create slideshows, short movies and even broadcast live events from the school and within the community. Students will work with Final Cut Pro X to edit and add effects to projects. Emphasis will be placed on post-production skills, planning and organizational skills. Students will also learn the importance of planning ahead and meeting deadlines. This course will require self-motivation, creativity and the ability to work collaboratively with others as well as independently.

PREREQUISITE: Acceptance into the Broadcast Technology program.

BROADCAST TECHNOLOGY II

GRADE 11, 12

2 CREDITS (Full-year course)

In this more advanced course, students will delve more deeply into the capabilities of video broadcasting equipment and video editing software. Students will go in depth in learning Final Cut Pro X and DaVinci software to create more sophisticated graphics to include in video projects and live broadcasts. Students will often fill the roles of producer and/or director, discovering what it takes to create independent films and run a successful live broadcast. Students in this course will be expected to take creative initiative with content for local cable television. This will include brainstorming ways to involve a wide variety of content including student work, sporting events, club information, upcoming events, etc. Students in this course will also be working with students in Broadcast Technology I on projects and taking the lead on school and community projects.

PREREQUISITE: Successful completion of Broadcast Technology I.

APPLICABLE SKILLS:

- Camera work
- Audio recording
- Lighting for production and events
- Computer management for effective communication and organization
- Working with a team in a creative environment

COLLEGE ALIGNMENT:

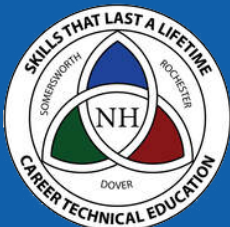
- Northern Vermont University
 - EJA 1020 Communications Technology

LICENSING, CERTIFICATION, CREDENTIALS:

- Adobe Certified Associate Certification
- Apple Final Cut Pro X, Motion and Compressor

CAREER PATHWAYS:

- Director
- Newscaster
- Sports Media
- Commercial Production
- Audio Recording Industry
- Marketing Industry
- Drone Pilot; Aerial Photography and Camera Work



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Building Trades

Click here to view the [Program Website](#) or the [Program Video](#)

Building Construction Trades Program

Year 1 - Building Trades I

Year 2 - Building Trades II

BUILDING TRADES I

GRADES 10, 11, 12

2 CREDITS (Full-year course)

Students will be introduced to basic skills in construction necessary to identify materials, tools, safety, building codes, blue print reading, and how to safely construct a building. Students will also learn how to obtain a job and be successful at it. Time is divided between lab and classroom.

PREREQUISITE: Acceptance into Building Construction Trades program.

BUILDING TRADES II

GRADE 11, 12

2 CREDITS (Full-year course)

Students will seek to master their basic skills learned in Building Trades I. They will assume the role of leaders and manage a crew and the job site as well as the responsibility for the work done at all phases of the construction process. They will sit for their OSHA 10 hr. safety course, and if passed, receive an OSHA 10 card that is good for life.

PREREQUISITE: Successful completion of Building Trades I.

APPLICABLE SKILLS:

- Building Codes
- Construction Safety
- Drywall Insulator
- Estimating
- Exterior/Interior Finish Work
- Hand and Power Tool Use
- Green Framing and Roofing
- CNC Programming & Op

COLLEGE ALIGNMENT:

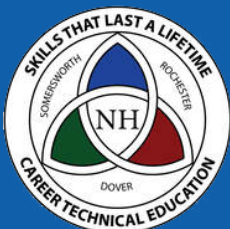
- New England Institute of Technology
 - CR114 Technical Fundamentals of Building Construction
 - CR116 Tool and Site Work Lab
 - CR121 House Framing I Lab
 - CR124 Construction Safety Practices and OSHA

LICENSING, CERTIFICATION, CREDENTIALS:

- Completion of the curriculum fulfills the first year of the Carpenters Union Apprenticeship Program
- OSHA 10
- SP2 Construction

CAREER PATHWAYS:

- Laborer
- Cabinet Makers
- Drywall Installer
- Painter
- Roofer
- Finish Carpenter
- House Inspector
- Code Enforcement



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Culinary Arts

Click here to view the [Program Website](#) or the [Program Video](#)

Culinary Arts Program

Year 1 – Culinary Arts I

Year 2 – Culinary Arts II

CULINARY ARTS I

GRADE 10, 11, 12

2 CREDITS (Full-year course)

This course is designed to educate students to meet the ever-increasing demands of the food service industry. Culinary Arts provides realistic, hands-on experience in the principles of working in and operating a kitchen/dining room through the operation of our own Mulligan's Grill Restaurant, Restaurant, various competitions and field trips. The course covers safety, sanitation, equipment basics and quantity preparation techniques for both the hot food and baking areas of the kitchen. All students are required to pass the ServSafe Food Handler Exam prior to entering the kitchen. This is an entry-level 2-hour online course followed up by a test at the end. Once a student passes the exam, they have an industry recognized certification valid for 3 years. If student does not successfully complete this exam within 3 attempts, there will be a cost of \$15.00 to retake the exam. The ProStart Curriculum, sponsored by the National Restaurant Association is used in this program.

PREREQUISITE: Acceptance into the Culinary Arts program.

CULINARY ARTS II

GRADE 11, 12

2 CREDITS (Full-year course)

This course is designed to educate students to meet the ever-increasing demands of the food service industry. Culinary Arts provides realistic, hands-on experience in the principles of working in and operating a kitchen/dining room through the operation of our own Mulligan's Grill Restaurant, various competitions and field trips. The course covers safety, sanitation, equipment basics and quantity preparation techniques for both the hot food and baking areas of the kitchen. All students are required to pass the ServSafe Food Handler Exam prior to entering the kitchen. This is an entry-level 2-hour online course followed up by a test at the end. Once a student passes the exam, they have an industry recognized certification valid for 3 years. If student does not successfully complete this exam within 3 attempts, there will be a cost of \$15.00 to retake the exam. The ProStart Curriculum, sponsored by the National Restaurant Association is used in this program.

PREREQUISITE: Acceptance into the Culinary Arts program.

APPLICABLE SKILLS:

- Catering & Banquet Services
- Cooking/Baking
- Dining Room Guest Services
- Food Safety & Sanitation
- Professional Equipment Operation

COLLEGE ALIGNMENT

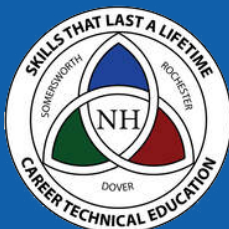
- Central Maine Community College
 - CUA 121 Food Preparation & Sanitation
 - CUA 171 Nutrition & Food Quality
- Lakes Region Community College
 - CULA 1510: Culinary Fundamentals
 - CULA 1520L0 Sanitation & Safety
 - CULA 1460L Bakery Production
- The Culinary Institute of America

LICENSING, CERTIFICATION, CREDENTIALS:

- ServSafe Certification
- COA—ProStart Certificate of Achievement
- National Restaurant Association

CAREER PATHWAYS:

- Chef
- Entrepreneur
- Pastry Chef
- Restaurant Manager
- Food Service Salesmen
- Baker
- Hospitality Manager



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Design of Theater Technology

Click here to view the [Program Website](#) or the [Program Video](#)

Design of Theater Technology Program

Year 1 – Design & Technology for Theater I

Year 2 – Design & Technology for Theater II

DESIGN OF THEATER TECHNOLOGY I

GRADES 10, 11, 12

2 CREDITS (Full-year course) , fulfills Art requirement

The Theater Design and Technology program prepares students to participate in the technical and management areas of the performing arts industry. Industry professionals in the field of technical theater will instruct students in two week modules that include theoretical as well as hands-on work. During this two-year program students will learn about set design and construction, lighting design and implementation, sound design and reinforcement, theatrical make-up, set painting and scenic art, costume design and construction, properties management, front of the house management as well as back of the house management which covers marketing, publicity as well as creating programs and advertising of the upcoming productions. In addition, students will possess the foundation skills needed for postsecondary studies in technical theatre. The students who are accepted into the TD&T program are encouraged to be active members of local and school theatre productions. Students accepted into the program will be required to attend performance events and practices outside the normal school day, as Work Based Learning experiences.

PREREQUISITE: Acceptance into the Theater Design and Technology program.

DESIGN OF THEATER TECHNOLOGY II

GRADES 11, 12

2 CREDITS (Full-year course)

In the second year, students will continue working in each area at a more advanced level including design and implementation as well as internships in area theater programs. The students who are accepted into the TD&T program are encouraged to be active members of local and school theatre productions. Students accepted into the program will be required to attend performance events and practices outside the normal school day, as Work Based Learning experiences.

PREREQUISITE: Successful completion of Theater Design and Technology I

APPLICABLE SKILLS:

- Set design, construction, painting and scenic art
- Lighting design and implementation,
- Sound design and reinforcement
- Theatrical makeup
- Costume design and construction
- Properties management
- Front of the house management
- Back of the house management which covers marketing, publicity as well as creating programs and advertising of the upcoming productions.

COLLEGE ALIGNMENT

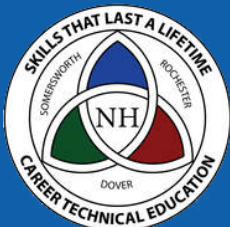
- Pending with the University of New Hampshire

LICENSING, CERTIFICATION, CREDENTIALS:

- OSHA 10
- SP2 Construction

CAREER PATHWAYS:

- Production Manager:
- Digital, Video and
- Stage
- Scenic Designer
- Scenic Painter
- Sound Designer
- Director and Coach
- Film/Video Editor



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Innovations in Business, Entrepreneurship & Marketing

Click here to view the [Program Website](#) or the [Program Video](#)

iBEAM Program

Year 1 – iBEAM I

Year 2 – iBEAM II

iBEAM I (Innovations in Business, Entrepreneurship and Marketing)

GRADES 10, 11, 12

2 CREDITS (Full-year course,)

#Topper Shoppe, #Social Media, #Marketing, #Economics, #Management & #Retail Skills

This full-year course is part of a 2-year program of instruction in *Innovations in Business, Entrepreneurship and Marketing*.

iBEAM 1 is a course designed for sophomores, juniors, and seniors who are interested in the many business and marketing opportunities in our local, national and global economies. Topics covered include fundamental business/marketing and economic concepts. Students will understand the free enterprise system, legal and ethical issues concerning business organizations, selling, advertising and promotion. Students will participate in the iBEAM Lab (the Topper Shoppe) for practical internship experience and complete industry recognized online courses and certifications.

Note: This course meets the economic graduation requirement.

PREREQUISITE: Acceptance into the iBEAM program.

iBEAM II (Innovations in Business, Entrepreneurship and Marketing)

GRADES 11, 12

2 CREDITS (Full-year course)

#Entrepreneurship, #Promotions, #Social Media, #Personal Finance, #Accounting & #Employability Skills

This full-year course is part of a 2-year program of instruction in *Innovations in Business, Entrepreneurship and Marketing*.

Second year iBEAM students will build on iBEAM 1 concepts and discover the exciting world of Entrepreneurship. The course of study will include highly developed business/marketing principles and strategies and emphasis on market research; e-commerce; business management and career development. Students will explore the latest industry trends, from changes in consumer behavior, organizational sustainability, and e-commerce. Learning activities will include market research projects, event planning, promotion campaigns, the Topper Shoppe finances, entrepreneurship and international studies. This course will require self-motivation, innovation, critical thinking, and problem-solving skills.

Note: This course counts as a senior math experience.

PREREQUISITE: Successful completion of iBEAM I.

APPLICABLE SKILLS:

- Fundamentals business/marketing
- Economic Concepts
- Free enterprise system
- Legal and ethical issues concerning business
- Selling, advertising and promotions
- Market Research
- E-Commerce
- Business Management
- Career Development

COLLEGE ALIGNMENT

- Central Maine Community College
 - BUS 100 Understanding Business
 - BUS 125 Intro to Marketing

LICENSING, CERTIFICATION, CREDENTIALS:

- HubSpot ANSI Food Handler

CAREER PATHWAYS:

- Entrepreneur
- Public Relations
- Advertising
- Sales Executive
- Copywriting
- Fashion Marketing
- Retail Salesperson
- Manager
- Marketing Researcher
- Promotions Manager
- Trade Show/Event Manager
- Direct Marketing



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Somersworth Career Technical Center

18 Cemetery Road, Somersworth NH 03878

For more information: 603-692-2242 or CareerTech@sau56.org



Medical Assisting

Click here to view the [Program Website](#) or the [Program Video](#)

Medical Assisting Program

Year 1 – Medical Assisting I

Year 2 – Medical Assisting II

MEDICAL ASSISTING I

GRADES 11, 12

2 CREDITS (Full-year course)

This course is designed to train medical assistants to work in doctor's offices, hospitals, and other ambulatory care settings. MA I focuses on tasks such as compliance with Joint Commission Standards, HIPAA, managing the medical practitioner's appointment schedules, submitting insurance claims or prior authorizations, operating electronic health records and telehealth visits, completing patient health and medication history, managing clinical inventory, obtaining a patient's vital signs, and performing point of care laboratory tests.

PREREQUISITE: Acceptance into the Medical Assisting program.

Potential Costs Associated with Program: \$118 (Drug Screen & Background Check mandatory for any Clinical work). Students will have the opportunity to work towards their Phlebotomy Certification. This will require the following: Completing 40 Clinical venipunctures at a Work Based Learning Site and passing of Phlebotomy Certification Test. Student Cost \$125. Must occur within 12 months of graduation date.

MEDICAL ASSISTING II

GRADES 11, 12

2 CREDITS (Full-year course)

This course is designed to train Medical Assistants work in doctor's offices, hospitals, and other ambulatory care settings. Medical Assisting II focuses on clinical tasks such as documenting patient's health, medication histories and recording vital signs. Providing the physician with assistance for procedures and examinations, preparing patients for examination, sterilizing medical instrument and phlebotomy.

PREREQUISITE: Successful completion of Medical Assisting I.

Potential Costs Associated with Program: \$118 (Drug Screen & Background Check mandatory for any Clinical work). Students will have the opportunity to sit for the CCMA Medical Assisting Certification. This will require the following: Meeting School Attendance Requirements in order to meet clinical proficiencies and may require time at a Work Based Learning site. Passing of the CCMA Certification Test offered within the CTE Program through the National Healthcareer Association (NHA). Student Cost \$165. Must occur within 12 months of graduation date.

APPLICABLE SKILLS:

- Managing the medical practitioner's appointments
- Scheduling patient appointments
- Bookkeeping
- Billing
- Updating medical and patient records
- Taking patient history
- Managing medical supplies
- Checking patient's vital signs and running laboratory tests

COLLEGE ALIGNMENT

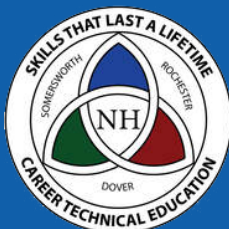
- Great Bay Community College
 - AHLT 110G Medical Terminology

LICENSING, CERTIFICATION, CREDENTIALS:

- Phlebotomy (CPT) through the National Healthcareer Association (NHA)
- Medical Assistant (CCMA)
- CPR

CAREER PATHWAYS:

- Nurse
- Admitting Clerk
- Community Services Specialist
- Data Analyst
- Data Information Manager
- Health Information Coder
- Medical Assistant
- Medical Biller
- Specialist Transcriptionist



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Pre-Engineering

Click here to view the [Program Website](#) or the [Program Video](#)

Pre-Engineering Program

Year 1 – Engineering I—Foundations

Year 2 – Track 1 for Computer Integrated Manufacturing—Engineering 2M

Track 2 for Civil/Architecture—Engineering 2A

ENGINEERING 1—FOUNDATIONS

GRADES 9, 10, 11, 12

2 CREDIT (Full-year course)

Engineering 1 is an introductory course which develops students' problem-solving skills, with emphasis placed on the concept of developing a 3D model or solid rendering of an object. Students focus on the application of visualization processes and tools provided by modern state of the art computer hardware and software titled, "Key Creator". This modern computer-based process replaces the traditional hand drawing methods. The course will emphasize the design and development process of a product and how a model of that product is produced, analyzed, and evaluated using a computer-aided design system. Various design applications will be explored with discussion of possible career opportunities. Students will explore various engineering systems and manufacturing processes. They will also learn how engineers address concerns about social and political consequences of technological change. The main purpose of this course is to answer the question Is a career in engineering or engineering technology for me?

Note: This course meets the computer education graduation requirement and fulfills the senior math experience.

PREREQUISITE: Acceptance into the Engineering Program; concurrent enrollment in college prep mathematics.

APPLICABLE SKILLS:

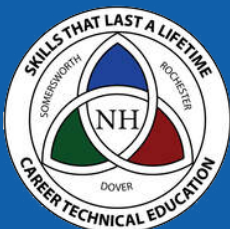
- Foundations in Engineering & Design
- Creative Thinking Skills
- Professionalism
- Computer Aided Design Skills
- Critical & Analytical Thinking

COLLEGE ALIGNMENT:

- New Hampshire Institute of Technology
 - MCET105C Engineering Design
 - MCET110C Engineering Principles
 - ELET215C or MET Elective
 - MFET241C Computer Integrated Manufacturing
- Project Lead The Way
 - 39 participating PLTW colleges with various credit offerings. See the CTC counselor or Engineering teacher for more information.

CAREER PATHWAYS:

- Mechanical Engineer
- Architect
- Civil Engineer
- Computer Integrated Manufacturer
- Numerous Other Engineering Fields



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Pre-Engineering Cont.

[Click here to view the Program Website or the Program Video](#)

Pre-Engineering Program

*Year 2 – Track 1 for Computer Integrated Manufacturing—Engineering
Track 2 for Civil/Architecture—Engineering 2B*

ENGINEERING 2M—MANUFACTURING

GRADES 10, 11, 12

2 CREDIT (Full-year course)

Engineering 2A—Manufacturing is patterned after the first semester course in digital electronics taught in two- or four-year colleges. Students will study the application of electronic logic circuits and devices and apply Boolean logic to the solution of problems. Such circuits are found in watches, calculators, video games, computers, and thousands of other devices. The use of smart circuits is present in virtually all aspects of our lives and its use is increasing, rapidly making digital electronics an important course of study for a student exploring a career in engineering or engineering technology. Using Electronic Workbench, the industry standard, students will test and analyze simple and complex digital circuitry. Students will design circuits using electronics workbench, export their designs to a printed circuit auto routing program that generates printed circuit boards, and construct the design using chips and other components. This course builds upon the computer solid modeling design skills developed in Engineering 1. Students will be presented with design problems that require the use of “Key Creator” to develop solutions to the problems. They will evaluate the solutions using mass property analysis (study of the relationship among the design, function and material used), and make appropriate modifications and use prototyping equipment to produce three-dimensional models of the solution. Students will be expected to communicate the process and results of their work through oral and written reports.

Note: This course counts as a senior math experience.

PREREQUISITE: Successful completion of Engineering 1—Foundations and acceptance into the Engineering Program.

ENGINEERING 2A—CIVIL/ ARCHITECTURE

GRADES 10, 11, 12

2 CREDIT (Full-year course)

The Engineering Design: Architecture course will investigate the use of Cadsoft Envisioneer, a 3D Architectural/Interior/Landscape design software application in residential design. Students will create a 2D Floor Plan and 3D Model along with elevations, foundation and plot plan. Students will also generate virtual tours of their enhanced interior design. Engineering applications, problem solving, and passive solar and active solar along with building green will be examined. This capstone course involves engineering research in which students work in teams to research, design, and construct a solution to an open-ended engineering problem. Students apply principles developed in the four preceding courses and are guided by a mentor. They must present progress reports, submit a final written report and defend their solutions to a panel at the end of the school year.

Note: This course counts as a senior math experience.

PREREQUISITE: Successful completion of Engineering 1 and acceptance into the Engineering Program.

APPLICABLE SKILLS:

- Foundations in Engineering & Design
- Creative Thinking Skills
- Professionalism
- Computer Aided Design Skills
- Critical & Analytical Thinking

COLLEGE ALIGNMENT:

- New Hampshire Institute of Technology
- MCET 105C
- MCET 110C
- ELET 215C or MET Elective
- Project Lead The Way

CAREER PATHWAYS:

- Mechanical Engineer
- Architect
- Civil Engineer
- Computer Integrated Manufacturer
- Numerous Other Engineering Fields

Rochester R.W. Creteau Regional Technical Center Programs

Advanced Manufacturing (Millwork)

AFJROTC - Aviation STEM

Architectural/Mechanical Engineering

Automotive Service Technology

Banking & Financial Support Services

Business (Management, Marketing Entrepreneurship)

Computer Networking & Telecommunications

Criminal Justice & Homeland Security

Environmental Science & Sustainable Studies

Graphic Design

Health Science Technology

Heating, Ventilation, Air Conditioning

& Refrigeration (HVAC)

Precision Machining

Restaurant Management

Teaching Multiple Levels (Foundations of Education)

Video & Photographic Arts

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ROCHESTER R.W. CRETEAU REGIONAL TECHNICAL CENTER
POST-SECONDARY CREDITS

Program	Post-Secondary Course	Post-Secondary Partner	College Credits	Type of Credit
AFJROTC – any three courses	OL 105 Foundations of Management	Southern New Hampshire University	3	A
	OL 215 Principles of Management		3	
Architecture/Mechanical Engineering	AEDD 105 CAD Graphics	Southern Maine Community College	3	A
Automotive Service Technology	AUTO 1011 Automotive Maintenance & Light Repair	Manchester Community College	4	EC
Banking & Financial Support Services	ECON 225 Personal Finance	Great Bay Community College	3	EC
Business	BUS 110 Introduction to Business	Great Bay Community College *Also offered at Southern New Hampshire University	3	RS
	BUS 114 Management*		3	
	BUS 205 Small Business Management		3	
	ACCT 113 Accounting & Financial Reporting I*		3	
	MKTG 125 Principles of Marketing		3	
	BUS210 Organizational Communication			
	BUS 209 Principles of Global Business*		3	
Computer Networking & Telecommunications	IST 113 IT Essentials	Great Bay Community College	3	EC
	IST161 Network Assurance		3	
Criminal Justice	CRJM 121G Criminal Procedure	Great Bay Community College	3	EC
	CRJM 150 Criminology		3	
	CRJM 101 Intro to Criminal Justice		3	
	CRJM 210G Juvenile Justice		3	
Foundations of Education	TCHP 101G Foundations of Education	Great Bay Community College	3	EC
	TCHP 201G The Teaching & Learning Process		3	
Graphic Design	GRC 176 Photoshop I	Central Maine Community College	3	EC
Health Science Technology	AHLT 110 Medical Terminology	Great Bay Community College	3	EC
	NURS100L Nursing Assistant	Lakes Region Community College	3	A
Heating, Ventilation, Air Conditioning & Refrigeration	HVAC 101 Intro to HVAC Systems	Manchester Community College	3	A
	HVAC 114 Heating Theory I		3	
Precision Machining	MTTN 111 Machine Tool Process & Theory	Nashua Community College	7	EC
Restaurant Management	HOS230G Restaurant Development & Strategic Planning	Great Bay Community College	3	EC
	HOS235G Food & Beverage Operations		3	A
Teacher of Multiple Levels	TCHP 101G Foundations of Education	Great Bay Community College	3	EC
	TCHP 201G The Teaching & Learning Process		3	
Video & Photographic Arts	ARTS 2120 Intro to Digital Photography	Lakes Region Community College	3	EC
	ARTS 2130 Advanced Digital Photography		3	
Completion of any 2-year CTC Program (Dover, Rochester, or Somersworth) Varies depending on the completed CTC Program		Keene State College	Up to 8	A

EC= Early College DE= Dual Enrollment A= Articulation

**ROCHESTER R.W. CRETEAU REGIONAL TECHNICAL CENTER
LICENSING, CERTIFICATIONS, AND OTHER CREDENTIALS**

AFJROTC - Aviation S.T.E. M.	Commercial Drone Pilot Certificate
	Private Pilot Knowledge Test Certificate from the Federal Aviation Administration
Automotive Service Technology	EPA 609 MVAC
	ASE Entry Level Technician
	ALI Lift Safety
	Valvoline Motor Oil
Banking	Teller I BVS Certificate
	Teller II BVS Certificate
Business Commerce	Hubspot: Sales Enablement
Computer Networking & Telecommunications	Cisco IT Essentials Certificate of Completion
	CompTIA IT Fundamentals Plus Certification
	CompTIA A+ Certification
Graphic Design	Adobe Photoshop Certificate
Health Science Technology	AHA CPR/AED Certification
	NH State Board of Nursing Licensed Nursing Assistant
HVAC	OSHA 10
	EPA 608
Restaurant Management	ServSafe
	ProStart Certification of Achievement

INTERDISCIPLINARY CREDITS

Students may satisfy some graduation requirements by earning credit(s) in the following programs. In addition to grade level, these courses may require additional prerequisites. Please see course descriptions for more information.

Program	Requirement
Advanced Manufacturing	4th Math Experience
AFJROTC Aviation S.T.E.M.	4th Math Experience
Architectural/Mechanical Engineering	4th Math Experience
Automotive Service Technology	4th Math Experience
Banking & Financial Support Services	4th Math Experience
Business	4th Math Experience
Computer Networking & Telecommunications	4th Math Experience
Criminal Justice	
Environmental Science & Sustainable Studies	4th Math Experience
Graphic Design	4th Math Experience
Health Science Technology	4th Math Experience
Heating, Ventilation, Air Conditioning & Refrigeration (HVAC)	4th Math Experience
Precision Machining	4th Math Experience
Restaurant Management	4th Math Experience
Teacher of Multiple Levels	
Video & Photographic Arts	4th Math Experience

Advanced Manufacturing

Click here to view the [Program Website](#) or the [Program Video](#)

Advanced Manufacturing Program

Year 1 - Advanced Manufacturing I

Year 2 - Advanced Manufacturing II

ADVANCED MANUFACTURING/MILLWORK I

Grades 10, 11

2 CREDITS (Full-year course)

During the first year students learn basic manufacturing skills as they apply to industry through project-based learning. Students will be able to utilize technology and machinery, From hand tools to computer numerical control (CNC) machines. Students will work with a variety of materials, such as wood, metal, plastics, composites, etc. Students will collaborate with the engineering program as well as the Machine tool program to have access to more technology. This is a hands on, Lab-based, course where safety and career preparation is one of the most important skills.

PREREQUISITE: Acceptance into the Advanced manufacturing and Millwork program.

ADVANCED MANUFACTURING/MILLWORK II

Grades 11, 12

2 CREDITS (Full-year course)

During the second year students will expand upon their projects using more in-depth computer-aided design (CAD) as well as computer numerical control (CNC) programming. Students will develop a deeper understanding of the manufacturing process. They will have the opportunity to problem-solve in the creation and modification of projects across design, wood-working and machining areas to simulate industry. Career preparation to enter into the manufacturing field is a major focus and is highly desired within our Rochester area.

PREREQUISITE: Successful completion of Advanced Manufacturing/Millwork I.

TOPICS OF STUDY:

- General Shop Safety
- Tool and Machine Safety
- Woodworking/Millwork/Carpentry
- Project Design, Creation, and Completion from Start to Finish
- Introduction to CNC
- Manufacturing Techniques and Principles

CAREER PATHWAYS:

- Millwrights
- Production Worker
- Assemblers
- CNC operator
- Carpenter
- Fabricator
- Automated Manufacturing
- Production Planning and Management
- Computer Controlled Machining
- Quality Management
- Project Management



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AFJROTC—Aviation S.T.E.M.

Click here to view the [Program Website](#) or the [Program Video](#)

AFJROTC—Aviation S.T.E.M. Program

Year 1 - The Science of Flight UAS/Drone (Semester Class)

Year 2 - Aviation Ground School

THE SCIENCE OF FLIGHT UAS/DRONE

Grades 10, 11, 12

1 CREDIT (Semester course)

This course follows the Physics of Flight course and prepares the student for the FAA Drone/UAS pilot written test and certification as a drone pilot. Content includes the flying environment and UAS/Drone operations with hands-on activities with state of the art equipment. The course is designed to complement materials taught in math, physics, and other science-related courses and is aligned with the National Science Education Standards, the Math Standards and Expectations, and ISTE National Educational Technology Standards for Students. Leadership education, drill, and health and wellness are integral parts of the course. ENR or HNRS credit available with contract.

AVIATION GROUND SCHOOL

Grades 11, 12

2 CREDITS (Full-year course)

This course is the foundation for students interested in careers in aviation and fulfills all of the Federal Aviation Administration (FAA) ground training requirements to take the private pilot knowledge test, satisfying the ground portion required to certify as a private pilot. The material covered is an advanced, more in-depth study of aerospace topics. Students will study aircraft systems, aerodynamics, meteorology, flight physiology, and aerial charts and navigation. Additionally, students will explore careers in the aviation industry. Students have the opportunity to take control of a Cessna 172 during an orientation flight originating out of Skyhaven Airport. Leadership education, drill, and health and wellness are integral parts of the course. Enriched or Honors credit is available with a contract.

PREREQUISITE: Approval by AFJROTC Senior Aerospace Science Instructor.

TOPICS OF STUDY:

- Physics of Flight
- Human Physiology in Flight
- Basic Weather
- Airspace
- UAS/Drone Operations
- Federal Aviation Flight Rules
- Airplane Systems and Aerodynamics
- Flight Operations/Aviation Weather
- Performance and Navigation
- Integrating Pilot Knowledge and Skills
- Careers in Aviation
- Cessna 172 Flying Practical (Skyhaven Airport)

COLLEGE ALIGNMENT

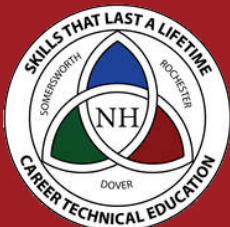
- Southern New Hampshire University
 - OL 105 Foundations of Management
 - OL 215 Principles of Management

LICENSING, CERTIFICATION, CREDENTIALS:

- Commercial Drone Pilot Certificate
- Private Pilot Knowledge Test Certificate from the Federal Aviation Administration

CAREER PATHWAYS:

- Commercial Drone Pilot
- Commercial Airplane Pilot
- Certified Flight Instructor
- Government/Military UAS Operations
- Airline Transport Pilot
- Air Traffic Controller



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Architectural/Mechanical Engineering

Click here to view the [Program Website](#) or the [Program Video](#)

Architectural/Mechanical Engineering Program

Year 1 - Architectural/Mechanical Engineering I

Year 2 - Architectural/Mechanical Engineering II

ARCHITECTURAL/MECHANICAL ENGINEERING I

Grades 11

2 CREDITS (Full-year course)

During the first year students learn basic drafting techniques as they apply to industry. Hands on approach to computer aided drafting (CAD) are emphasized. Students will be able to utilize technology such as the 3-D Printer, Laser engraver, and CNC machinery to take ideas into real life objects. Students will explore all aspects of engineering including Mechanical, Architectural, Environmental, and others to understand how engineers can solve real world problems and better our society. Topics include: Safety, computer programming, STEM, drafting, physics, manufacturing skills. Students choosing to enroll in this course at the honors level will be required to complete more rigorous work and sign an honors contract.

Note: This course will fulfill the fine arts requirement for graduation.

PREREQUISITE: Acceptance into the Architectural/Mechanical Engineering program.

ARCHITECTURAL/MECHANICAL ENGINEERING II

Grades 12

2 CREDITS (Full-year course)

During the second year students expand upon their experience in CAD and specialize in a field of engineering (Mechanical, Architectural, Environmental, Aerospace, etc.) This course is designed to be very individualized to meet the student's interests within engineering. Students will continue to utilize technology such as the 3-D Printer, Laser engraver, and CNC machinery to take ideas into real life objects. Students will develop a website portfolio to showcase all of their engineering success and market themselves to compete in today's exciting, rewarding engineering field. Topics include: Safety, computer programming, STEM, drafting, physics, manufacturing skills. Students choosing to enroll in this course at the honors level will be required to complete more rigorous work and sign an honors contract.

Note: This course will fulfill the fine arts requirement for graduation

PREREQUISITE: Successful completion of Architectural/Mechanical Engineering.

TOPICS OF STUDY:

- Explore various fields of engineering such as architectural, civil, mechanical, aerospace, and robotic engineering
- Learn how to create blueprint plans using AutoCAD and Solidworks software
- Make 3-D prototypes using the 3-D printer, laser cutter, and CNC machines
- Problem solving techniques
- Create more detailed and unique blueprint plans
- More in depth use of 3-D printer, laser cutter, and CNC machines, and how they relate to real world applications
- Solving real life problems for real life clients outside of the classroom
- Develop a digital portfolio for students to aid them in their future career path of engineering

COLLEGE ALIGNMENT

- Southern Maine Community College
 - AEDD 105 CAD Graphics

CAREER PATHWAYS:

- CADD Technician
- Mechanical Technician
- Architectural Technician
- Mechanical Engineer
- Architectural Engineer
- Robotics Engineer
- Project Engineer



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Automotive Service Technology

Click here to view the [Program Website](#) or the [Program Video](#)

Automotive Service Technology Program

Year 1 - Automotive Service Technology I

Year 2 - Automotive Service Technology II

AUTOMOTIVE SERVICE TECHNOLOGY I

Grades: 10, 11

2 CREDITS (Full-year course)

The purpose of this course is to train future technicians in the fundamentals of automotive theory, maintenance, diagnosis and repair. During this course students will learn about tools, fasteners, engine design and theory, steering and suspension, brakes, electrical/electronics and engine performance. Students will have the opportunity to reinforce theory with hands-on experiences and by participating in live repairs. Students are permitted to work on personal vehicles on a limited basis and are eligible to join SkillsUSA and compete in several competitions.

Note: Clothes that can get dirty, long pants, and boots are required to be worn when in the lab setting.

PREREQUISITE: Acceptance into the Automotive Service Technology program.

AUTOMOTIVE SERVICE TECHNOLOGY II

Grades: 11, 12

2 CREDITS (Full-year course)

The purpose of this course is to train future technicians in the fundamentals of automotive theory, maintenance, diagnosis and repair. During this course students will learn more in-depth topics relating to the ASE areas of brakes, steering and suspension, electrical and electronics, and engine performance. Students will have the opportunity to reinforce theory with hands-on experiences and by participating in live repairs. Students are permitted to work on personal vehicles on a limited basis and are eligible to join SkillsUSA and compete in several competitions.

Note: Clothes that can get dirty, long pants, and boots are required to be worn when in the lab setting.

Note: Students taking this course will have the option of earning four college credits. There may be a fee associated with this option.

PREREQUISITE: Successful completion of Automotive Technology I, maintain a clean driving record.

TOPICS OF STUDY:

- Hand and Power Tool Use and Safety
- General Shop and Automobile Lift Safety
- Basic Vehicle Service Tasks
- Oil Change Service
- Engine Operation
- Brakes
- Automotive Electrical and Electronics

COLLEGE ALIGNMENT

- Manchester Community College
 - AUTO 1011 Automotive Maintenance & Light Repair

LICENSING, CERTIFICATION, CREDENTIALS:

- EPA 609 MVAC
- ASE Entry Level Technician
- ALI Lift Safety
- Valvoline Motor Oil

CAREER PATHWAYS:

- Diesel Service Technicians
- Heavy Truck Technicians
- Service Technician or Consultant
- Automotive Sales Representative
- Motorcycle Powersports Technician
- Vehicle Inspector
- Auto Body and Glass Repairers
- Heavy Vehicle and Mobile Equipment Service Technicians



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For more information: 603-332-0757



Banking & Financial Support Services

Click here to view the [Program Website](#) or the [Program Video](#)

Banking & Financial Support Services Program

Year 1 - Banking & Financial Support Services

BANKING AND FINANCIAL SUPPORT SERVICES

Grades: 11, 12

2 CREDITS (Full-year course)

In partnership with Holy Rosary Credit Union, students will be trained as professional tellers and receive hands-on learning at the Spaulding HRCU branch. The branch is open to students, faculty and the public, providing students exposure to all aspects of banking. As a teller they will learn how to handle a variety of transactions, maintain and balance cash drawers and utilize professionalism and customer service skills in a work environment. They will be introduced to many aspects of the banking and finance industry including personal finance, federal regulations and compliance, accounting, investments, insurances, lending and marketing. There will be opportunities to be job shadow a variety of roles at the HRCU Brock Street Branch, and additional opportunities for community service and financial education outreach may also occur. Upon completion of the program students will have the potential to earn a paid HRCU internship, college credit and a \$750.00 college scholarship. Professional attire will be required at branch locations.

Note: Students will be held to professional standards and required to adhere to HRCU's policies and procedures. Students taking this course will have the option of earning three college credits. There may be a fee associated with this option.

PREREQUISITE: Acceptance into the Banking and Financial Services program. Students are required to apply and complete an interview with the instructor. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework and sign an honors contract. Minimum GPA 2.25 is required.

TOPICS OF STUDY:

- Financial Institution Types & Structures
- Money Management
- Credit Union Policies & Procedures
- Teller Training
- Compliance and Fraud Prevention
- Lending, Investments and Insurances
- Career Readiness Skills

COLLEGE ALIGNMENT

- Great Bay Community College
 - ECON 225 Personal Finance

LICENSING, CERTIFICATION, CREDENTIALS:

- Teller I BVS Certificate
- Teller II BVS Certificate

CAREER PATHWAYS:

- Credit Union/Bank Teller
- Credit Union/Bank Manager
- Loan Officer
- Financial Service Associate
- Insurance Agent
- Bank Auditor
- Financial Adviser



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For more information: 603-332-0757



Business

(Management, Marketing & Entrepreneurship Paths)

Click here to view the [Program Website](#) or the [Program Video](#)

Business Commerce Program

Year 1 – Introduction to Business & Business Management

Year 2 Paths:

- Business Communications & International Business
- Entrepreneurship & Accounting
- Marketing & Advertising

INTRODUCTION TO BUSINESS

Grades: 10, 11 (Grade 12 on space available basis)

1 CREDIT (Semester course)

This is an introductory course designed to provide students with a basic understanding of the structures and operations of business and an awareness of social and ethical responsibility as it relates to the environment, consumers, employees and investors. An appreciation of the global economy will also be explored.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There could be a fee associated with this option.

PREREQUISITE: Acceptance into the Business program.

BUSINESS MANAGEMENT

Grades: 10, 11 (Grade 12 on space available basis)

1 CREDIT (Semester course)

Every business needs a manager. It doesn't matter if you are in an office or a construction site, someone is in charge. This course is designed to prepare students for the business world. In this course, students will develop and improve management techniques. They will also enhance their computer skills through practical business applications. They will work cooperatively on activities and team-building activities. Presentation and reviews will be a major part of the class. Students will complete simulations and learn how to succeed in a business environment. Students will also have the opportunity to join the Future Business Leaders of America (FBLA), where they can participate in community service and compete in business events. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There could be a fee associated with this option.

PREREQUISITE: Introduction to Business.

TOPICS OF STUDY:

- Retail
- Advertising
- Management
- Business Strategies
- Starting a Business

COLLEGE ALIGNMENT

- Great Bay Community College
 - BUS 110 Introduction to Business
 - BUS 114 Management
 - MKTG 125 Principles of Marketing
 - BUS 210 Organizational Communication
 - BUS 209 Principles of Global Business
 - BUS 205 Small Business Management
 - ACC113 Accounting & Financial Reporting
- Southern New Hampshire University
 - ACC 201 Financial Accounting
 - BUS 210 Managing & Leading in Business
 - INT220 Global Dimensions in Business

LICENSING, CERTIFICATION, CREDENTIALS:

- Hubspot Sales Enablement

CAREER PATHWAYS:

- Business Consultant
- Business Owner
- Financial Analyst
- HR Director
- Assistant Manager
- Sales Agent/Manager
- CEO



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Business

(Management, Marketing & Entrepreneurship Paths)

Click here to view the [Program Website](#) or the [Program Video](#)

Business Commerce Program

Year 1 – Business Management and Marketing

Year 2 – International Business and Entrepreneurship

BUSINESS COMMUNICATIONS

Grades: 11, 12

1 CREDIT (Semester Course)

In the business world excellent professional communication will be key to your success. Upgrade your abilities in speaking, listening, writing, using and reading body language, and communicating in teams and groups. Discover how to plan, create, and deliver business presentations and communicate through graphics. Learn to communicate and present with confidence.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There could be a fee associated with this option.

PREREQUISITE: Introduction to Business & Business Management

INTERNATIONAL BUSINESS

Grades: 11, 12

1 CREDIT (Semester course)

Have you ever wondered about International Business and the role that it plays in your life? No matter where you look, social media, television, print, or on the radio, it is there. International Business is everywhere! The increasing globalization of the market place affects all who are involved with business or who must make business decisions. Understanding the impact of globalization that exists in today's ever-changing business landscape has become an essential part of doing business. Whether you work for a large company, or own your own small business, you will inevitably be impacted by global issues. This course provides an overview of the global environment, the national business environments, international trade and investment, the international financial system and international business management. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There could be a fee associated with this option.

PREREQUISITE: Introduction to Business and Business Management.

TOPICS OF STUDY:

- Retail
- Advertising
- Management
- Business Strategies
- Starting a Business

COLLEGE ALIGNMENT

- Great Bay Community College
 - BUS 110 Introduction to Business
 - BUS 114 Management
 - MKTG 125 Principles of Marketing
 - BUS 210 Organizational Communication
 - BUS 209 Principles of Global Business
 - BUS 205 Small Business Management
 - ACC113 Accounting & Financial Reporting
- Southern New Hampshire University
 - ACC 201 Financial Accounting
 - BUS 210 Managing & Leading in Business
 - INT220 Global Dimensions in Business

LICENSING, CERTIFICATION, CREDENTIALS:

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Business Commerce Program

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Year 2 – International Business and Entrepreneurship

MARKETING

Grades: 11, 12

1 CREDIT (Semester course)

Introduce yourself to the exciting work of marketing! This course includes fun activities such as: Buying/ordering merchandise, selling, promoting and displaying merchandise, and operating our schools store, OuR House. This course is valuable for anyone considering a business career and/or business major in college or technical school. Students will learn by doing in this course! The final product will be the development of a business and marketing plan for your own business venture. This satisfies the economics requirement for graduation. Students have the opportunity to become involved in the student organization, Future Business Leaders of America (FBLA), which offers many experiences for community service, leadership, travel and conferences. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework with this option. Option of earning three college credits. There may be a fee associated with this option.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There could be a fee associated with this option.

PREREQUISITE: Introduction to Business and Business Management.

ADVERTISING

Grades: 11, 12

1 CREDIT (Semester Course)

Great marketing strategies can be powerful. Every year companies spend approximately \$200 billion promoting their products and services – and that's just in the United States alone! Explore how marketing campaigns, ads, and commercials are brought to life and meet some of the creative folks who produce them. Learn about different marketing career opportunities and discover ways to be part of this exciting, fast-paced industry.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There could be a fee associated with this option.

PREREQUISITE: Introduction to Business and Business Management and Marketing

TOPICS OF STUDY:

- Retail
- Advertising
- Management
- Business Strategies
- Starting a Business

COLLEGE ALIGNMENT

- Great Bay Community College
 - BUS 110 Introduction to Business
 - BUS 114 Management
 - MKTG 125 Principles of Marketing
 - BUS 210 Organizational Communication
 - BUS 209 Principles of Global Business
 - BUS 205 Small Business Management
 - ACC113 Accounting & Financial Reporting
- Southern New Hampshire University
 - ACC 201 Financial Accounting
 - BUS 210 Managing & Leading in Business
 - INT220 Global Dimensions in Business

LICENSING, CERTIFICATION, CREDENTIALS:

- Hubspot Sales Enablement

CAREER PATHWAYS:

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(Management, Marketing & Entrepreneurship Paths)

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Business Commerce Program

Year 1 – Business Management and Marketing

Year 2 – International Business and Entrepreneurship

ENTREPRENEURSHIP: SMALL BUSINESS MANAGEMENT

Grades: 11, 12

1 CREDIT (Semester course)

Most of the jobs created in recent years have been in the small business sector. Forecasts indicate that this trend will continue. This course will offer a unique opportunity to develop and promote your own product or business in a Shark Tank-like format. Students will benefit from developing an appreciation for and understanding of small business development in our economy. Students have the opportunity to become involved in the student organization, FBLA, which offers many opportunities for community service, leadership, travel and conferences. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There could be a fee associated with this option.

PREREQUISITE: To be eligible for college credits, you must have taken Business Management HNR for college credits prior to taking this course.

ACCOUNTING

Grades: 11, 12

1 CREDIT (Semester Course)

This course is an introduction to accounting as the language of business and the purpose of accounting in business. Students will develop an understanding of the concepts and use of the classification of assets, liabilities, equity, revenue and expense accounts. The student will be introduced to accounting procedures necessary to prepare financial statements utilizing current concepts and accounting principles. This includes journalizing transactions, preparation of trial balance, accounting adjustments, closing journal entries, inventory, accounts receivable, accounts payable, special journals, payroll, cash receipts, disbursements, and banking procedures.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There could be a fee associated with this option.

PREREQUISITE: Introduction to Business and Business Management.

TOPICS OF STUDY:

- Retail
- Advertising
- Management
- Business Strategies
- Starting a Business

COLLEGE ALIGNMENT

- Great Bay Community College
 - BUS 110 Introduction to Business
 - BUS 114 Management
 - MKTG 125 Principles of Marketing
 - BUS 210 Organizational Communication
 - BUS 209 Principles of Global Business
 - BUS 205 Small Business Management
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 - ACC 201 Financial Accounting
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 - INT220 Global Dimensions in Business

LICENSING, CERTIFICATION, CREDENTIALS:

- Hubspot Sales Enablement

CAREER PATHWAYS:

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- Business Owner
- Financial Analyst
- HR Director
- Assistant Manager
- Sales Agent/Manager
- CEO



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Computer Networking & Telecommunications

Click here to view the [Program Website](#) or the [Program Video](#)

Computer Networking & Telecommunications Program

Year 1 – Computer Technology I

Year 2 – Computer Technology II

COMPUTER TECHNOLOGY I

Grades: 10, 11, 12

2 CREDITS (Full-year course)

Through hands-on activities, tests and laboratory exercises students will learn in depth about PC operating systems, PC maintenance, hardware configuration and installation. The material covered in this course will form a foundation of technical knowledge in troubleshooting hardware and software. In addition we will be exploring an introduction to networking. Students will also aid CIC in maintaining district computers and network. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework and sign an honors contract. Note: Students taking this course will have the option of earning three college credits. There may be a fee associated with this option.

PREREQUISITE: Acceptance into the Computer Networking & Telecommunications program.

COMPUTER TECHNOLOGY II

Grades: 11 (Grade 12 on space available basis)

2 CREDITS (Full-year course)

Through hands-on activities, tests and laboratory exercises students will acquire a solid foundation in networking, network security, and basic network design. Students will maintain a peer-to-peer local area network within the lab. The LAN will provide students with experience in monitoring overall network operation, troubleshooting basic problems, and implementing administrative functions. Students will design and install a server based network in a virtual environment. Students will also aid CIC in maintaining district computers and network. Running Start credits are available to all students. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework and sign an honors contract.

Note: Students taking this course will have the option of earning three college credits. There may be a fee associated with this option.

PREREQUISITE: Successful completion of Computer Technology I.

TOPICS OF STUDY:

- Basic PC Hardware and Software
- Computer Repair Basics
- Networking Basics
- Peer-to-Peer Networking
- Cyber Security Basics
- Applied PC Repair
- Networking Basics
- Enterprise Networking
- Network Security Basics

COLLEGE ALIGNMENT

- Great Bay Community College
 - IST 113 Cisco IT Essentials
 - IST 161 Network Assurance

LICENSING, CERTIFICATION, CREDENTIALS:

- Cisco IT Essentials Certificate of Completion
- CompTIA IT Fundamentals Plus Certification
- CompTIA A+ Certification

CAREER PATHWAYS:

- Computer User Support Specialist
- Tech Support Specialist
- Network Specialist
- Network and Computer Systems Administrator
- Computer and Information Systems Manager
- Computer Network Architect
- Computer Systems Analyst



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Criminal Justice

Click here to view the [Program Website](#) or the [Program Video](#)

Criminal Justice Program

Year 1 – Intro to Criminal Justice & Criminology

Year 2 - Criminal Law & Juvenile Justice

INTRO TO CRIMINAL JUSTICE

Grades: 11 (Grade 12 on space available basis)

1 CREDIT (Fall Semester Course)

This course covers the components of the justice system in American society. Although civil law will be discussed, the emphasis will be on the criminal justice system. The influence and pressures of changing social, political, technological, and economic factors on the agencies of justice will be studied. Much of the focus will compare ideals with realities of the system. Law enforcement, the courts, and correctional aspects will be examined. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There may be a fee associated with this option.

CRIMINOLOGY

Grades: 11 (Grade 12 on space available basis)

1 CREDIT (Spring Semester Course)

This course explores the question of crime causation from a number of theoretical perspectives in the social sciences. The nature and extent of crime in American society, theories of factors and influences that are related to criminal behavior, and the impact of crime on society. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There may be a fee associated with this option.

PREREQUISITE: Intro to Criminal Justice.

TOPICS OF STUDY:

- Criminal Courts
- Corrections
- Theories of Crime Causation
- Crime Typologies
- Crime Mapping
- Blood Spatter Analysis

COLLEGE ALIGNMENT

- Great Bay Community College
 - CRJM 101G Intro to Criminal Justice
 - CRJM 150G Criminology
 - CRJM 121G Criminal Procedure
 - CRJM 210G Juvenile Justice

CAREER PATHWAYS:

- Correction/Detention Officer
- Loss Prevention Specialist
- Police Dispatcher
- Police Officer
- Police Patrol Officer
- Criminal Investigator
- U.S. Marshal
- Behavior Specialist
- Forensic Scientist
- Criminal Psychologist
- Paralegal



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Criminal Justice Cont.

Click here to view the [Program Website](#) or the [Program Video](#)

Criminal Justice Program

Year 1 – Intro to Criminal Justice & Criminology

Year 2 - Criminal Law & Juvenile Justice

CRIMINAL LAW & PROCEDURE

Grades: 11, 12

1 CREDIT (Fall Semester Course)

This course provides an in-depth review of substantive criminal law in the federal and state systems including analysis of the essential elements of all major crimes, the concepts of constitutional review and judicial scrutiny and the principles governing legal challenges to the constitutionality of laws. This course will also analyze the constitutional issues in the United States which have direct bearing on the role and policies of criminal justice agencies. Application of these issues as they relate to investigation, arrest, pre-trial and appeal will be emphasized. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There may be a fee associated with this option.

PREREQUISITE: Intro to Criminal Justice.

JUVENILE JUSTICE

Grades: 11, 12

1 CREDITS (Spring Semester course)

An examination of causative factors in the development of youthful offenders and the development and philosophy behind treatment and rehabilitative practices are covered. The course also covers legal, procedural, and substantive issues pertaining to the juvenile justice system. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There may be a fee associated with this option.

PREREQUISITE: Intro to Criminal Justice.

TOPICS OF STUDY:

- Criminal Courts
- Corrections
- Theories of Crime Causation
- Crime Typologies
- Crime Mapping
- Blood Spatter Analysis

COLLEGE ALIGNMENT

- Great Bay Community College
 - CRJM 101G Intro to Criminal Justice
 - CRJM 150G Criminology
 - CRJM 121G Criminal Procedure
 - CRJM 210G Juvenile Justice

CAREER PATHWAYS:

- Correction/Detention Officer
- Loss Prevention Specialist
- Police Dispatcher
- Police Officer
- Police Patrol Officer
- Criminal Investigator
- U.S. Marshal
- Behavior Specialist
- Forensic Scientist
- Criminal Psychologist
- Paralegal



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Environmental Science & Sustainable Studies

Click here to view the [Program Website](#) or the [Program Video](#)

Environmental Science & Sustainable Studies Program

Year 1 - Environmental Science I

YEAR 2- Environmental Science II

ENVIRONMENTAL SCIENCE & SUSTAINABLE STUDIES I

Grades: 11, 12

2 CREDITS (Year course)

This year-long course will focus on environmental history and policy, biogeochemical cycles, climate change, environmental health and pollution, waste management, sustainable food production, winter ecology, air and water quality, human population, urban development, marine ecosystems, biodiversity, alternative energy sources and watershed ecology. Class projects will include carbon storage of the local forest and water quality of the local watersheds. Student choosing to enroll in this course at the honors level will be required to complete more rigorous coursework.

Note: Students taking this course at the HONORS LEVEL ONLY may have the option of earning three college credits. There could be a fee associated with this option.

ENVIRONMENTAL SCIENCE & SUSTAINABLE STUDIES II

Grades: 11, 12

2 CREDITS (Year course)

This year-long course is intended for students who want to build upon their experience in Environmental Science 1 and who have demonstrated a high degree of motivation as well as the ability to work independently and in small groups. Students will apply the concepts from Year 1 by researching, designing and conducting their own extended project based learning experience. These projects will, at least in part, address a local/regional environmental issue. Academically, students will go deeper into several topics from Year 1 and will also learn how to collect, map and analyze spatial information using GPS and GIS computer software. A large portion of Year 2 will also be focused on learning how to use hydroponic and aquaculture systems to produce food sustainably. This course will help students explore environmental careers by allowing time for volunteer work, job shadowing and internships with local organizations as well as field trips and guest speakers. Certifications in Wilderness First Aid and Occupational Safety and Health will also be available. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework.

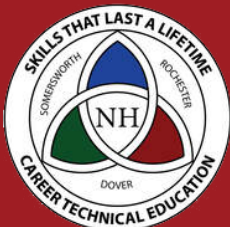
Note: Students taking this course at the HONORS LEVEL ONLY may have the option of earning three college credits. There could be a fee associated with this option.

TOPICS OF STUDY:

- Watersheds
- Rivers and streams
- Forestry and carbon cycle
- Climate change
- Waste management
- Energy
- Mining
- Biodiversity
- Environmental health
- Aquaculture
- Hydroponics

CAREER PATHWAYS:

- Field Technician
- Hazardous Waste Technician
- Water Treatment Technician
- Environmental Scientist/Specialist
- Environmental Engineer
- Conservation Manager
- GIS Specialist
- Geologist
- Environmental Lawyer
- Wildlife Biologist
- Marine Scientist
- Ecologist
- Zoologist



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Graphic Design

Click here to view the [Program Website](#) or the [Program Video](#)

Graphic Design Program

Year 1 – Graphic Design I

Year 2 – Graphic Design II

GRAPHIC DESIGN I

Grades: 10, 11

2 CREDITS (Full-year course)

Everywhere you look, you will see design in items that have been thoughtfully created to solve a problem. From the Snapchat logo to the style of your shoes, from the shape of your phone to the ads on social media, a conscious plan was made and executed to bring you these items. Learn to be an influencer by creatively putting your mark on the world. In this course, you will learn about the design process and how we build strong visual solutions. You will learn core tools of the trade including Adobe Photoshop, Illustrator and InDesign software, as well as sketching, using an x-acto blade and spray mounting. Favorite projects include designing logos, stickers, packaging, coloring books and posters. Design career path options are many, a few of note are graphic designer, product designer, illustrator, game designer, fashion designer, web designer, interior designer, and UX/UI designers. Students choosing to enroll in this course at the honors level will be required to complete more rigorous work and sign an honors contract.

Note: This course will fulfill the fine arts requirement for graduation.

PREREQUISITE: Acceptance into the Graphic Design program.

GRAPHIC DESIGN II

Grades: 11, 12

2 CREDITS (Full-year course)

As you enter your second year in the Graphic Design Program, you will be exploring and completing more advanced projects. Design skills are built across your entire lifetime, but in this second stage, we will refine your understanding of standard work for designers. This course encourages more independent project management and advanced problem solving. You will work on advanced packaging, print projects and innovation to name a few. Some projects will be able to be individually focused on your special areas of interest, for example character animation, fashion design or interior design. You will have the opportunity to learn additional software such as Adobe Character Designer or Fusion 360. Students choosing to enroll in this course at the honors level will be required to complete more rigorous work and sign an honors contract.

Note: Students taking this course will have the option of earning three college credits. There may be a fee associated with this option. Students may also complete additional work to complete an Adobe Certification in Photoshop.

PREREQUISITE: Successful completion of Graphic Design I.

TOPICS OF STUDY:

- Composition
- Logos
- Infographic Posters
- Packaging
- Comic Book Design
- Stickers
- Digital Illustration
- Innovation

COLLEGE ALIGNMENT

- Central Maine Community College
 - GRC 176 Photoshop

LICENSING, CERTIFICATION, CREDENTIALS:

- Photoshop Certificate

CAREER PATHWAYS:

- Junior Graphic Designer
- Web Designer
- Social Media Specialist
- Creative Services
- Design & Production Coordinator
- Industrial Designer
- Illustrator
- UX/UI Designer
- Graphic Designer



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Health Science Technology

Click here to view the [Program Website](#) or the [Program Video](#)

Health Science Technology Program

Year 1 - Health Science Technology I

Year 2 - Health Science Technology II

HEALTH SCIENCE TECHNOLOGY I

Grades: 11 (Grades 10 or 12 if space available basis)

2 CREDITS (Full-year course)

During the first year of this course, students are introduced to all aspects of the healthcare field. Students have the opportunity to earn their CPR & AED certification. Students study history & trends in healthcare, healthcare systems, medical terminology, ethical and legal aspects, safety and infection control, vital signs, anatomy and physiology, healthcare professions, professionalism, basic first aid. Students will learn skills in our lab during each unit. Students visit Frisbie Hospital to learn about healthcare professions and will have an opportunity to complete a job shadow. As part of professionalism and health careers competency students are required to shadow health care professionals in the field. Upon successful completion of HST I, students will have the opportunity to apply for the HST II program to continue with their studies.

Note: Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework.

PREREQUISITE: Interview with HST instructor, passing grades in science and English classes. Recommend: Biology.

HEALTH SCIENCE TECHNOLOGY II

Grades: 12 (Grade 11 if qualifications are met)

2 CREDITS (Full-year course)

Year 2 focuses on teamwork and professionalism. Students learn and practice caregiving skills for real life application during quarter 3 and 4. Students will be required to recall and apply all information taught in HST 1. Students have the option to complete an ELO in the healthcare field (organized through our ELO coordinator) OR complete the Licensed Nursing Assistant Program (LNA). LNA consists of in class theory, hands-on skills in the lab and 70+ hours of hands on care at clinical through a local nursing home. LNA begins in quarter 2 and students can earn 5 running start credits through Lakes Region Community College. Students taking this course will have the option of earning three college credits for Medical Terminology through Great Bay Community College in our classroom during Semester One.

Note: There is a limited number of students accepted into HST 2 due to strict clinical guidelines. Clinical is held during C BLOCK and D BLOCK every other day during quarter 4 and students must have quarter 4 D BLOCK free or make prior arrangements with the instructor.

PREREQUISITE: Successful completion of Health Science Technology I. Recommendation from program instructor and guidance.

TOPICS OF STUDY:

- Medical Math
- Medical Terminology
- Anatomy & Physiology
- Human Growth & Development
- Geriatric Care
- Nutrition & Diets
- Vital Signs
- Infection Control
- Safety
- Legal & Ethics
- Healthcare systems
- Health careers

COLLEGE ALIGNMENT

- Great Bay Community College
 - AHT 110 Medical Terminology
- Lakes Region Community College
 - Nurs 100L Nursing Assistant

LICENSING, CERTIFICATION, CREDENTIALS:

- AHA CPR/AED Certification
- NH State Board of Nursing Licensed Nursing Assistant

CAREER PATHWAYS:

- LNA, EMT, DPT, PT, OT, PTA, OTA, ST, MSW
- Phlebotomist
- Medical assistant
- Nursing/ NP programs
- PA programs
- Biomedical Engineering



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Heating, Ventilation, Air Conditioning & Refrigeration

Click here to view the [Program Website](#) or the [Program Video](#)

HVACR Technology Program

Year 1 – HVACR Technology I

Year 2 – HVACR Technology II

HVACR TECHNOLOGY I

Grades: 11 (Grade 12 on space available basis)

2 CREDITS (Full-year course)

The students will receive instruction in safety requirements and demonstrate sound safety practices. Students will demonstrate electrical fundamentals including electrical circuits, Ohm's law and meter use. Students will identify heating fuels (natural gas, propane and heating oil), and explain how they burn and how to safely control the burn. Laboratory skills practiced include servicing and testing heating equipment and basic electrical circuits including identifying electrical motors and system schematics. Students will demonstrate their ability to use code books and apply code requirements at apprentice entry level. Technology related reading, writing, vocabulary, mathematics, blueprint reading, and science are integrated throughout the curriculum.

PREREQUISITE: Acceptance into the HVACR Technology program.

HVACR TECHNOLOGY II

Grades: 12

2 CREDITS (Full-year course)

Students continue to receive instruction in safety requirements and demonstrate sound safety practices. Students will demonstrate theoretical competency in HVAC/R electrical controls, refrigeration systems, such as air conditioning, and refrigeration, both domestic and commercial. The students will have an understanding of Environmental Protection Agency (EPA) certification requirements with refrigeration systems and the proper handling of refrigerants, including recovery, recycling and reclaiming are studied and practiced. . Laboratory skills practiced include servicing and testing refrigeration equipment and basic electrical circuits including reading and writing electrical schematics. Students will demonstrate the skills needed for installation of HVAC systems. Students will demonstrate the ability to complete a job application, resume, interview, and to perform entry level job readiness and trade skills. Technology related reading, writing, vocabulary, mathematics, blueprint reading and science are integrated throughout the curriculum.

PREREQUISITE: Successful completion of HVACR Technology I.

TOPICS OF STUDY:

- Workplace Safety
- Career Readiness and Professionalism
- Basic Electricity and Schematics
- Oil burners and heating Equipment
- Gas Heating Equipment
- Hydronics
- Piping
- Ductwork

COLLEGE ALIGNMENT

- Manchester Community College
 - HVAC 101 Intro to HVAC Systems
 - HVAC 114 Heating Theory I

LICENSING, CERTIFICATION, CREDENTIALS:

- OSHA 10
- EPA 608

CAREER PATHWAYS:

- HVAC Sales Representative
- AC Systems Designer
- Sheet Metal Apprenticeship
- HVAC Apprenticeship in Installation & Service
- Gas System Technician
- Oil Burner Technician
- Appliance Technician
- Refrigeration Technician



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Precision Machining

Click here to view the [Program Website](#) or the [Program Video](#)

Precision Machining Program

Year 1 – Precision Machining I

Year 2 – Precision Machining II

PRECISION MACHINING I

Grades: 11 (Grade 12 on space available basis)

2 CREDITS (Full-year course)

Students enrolled in the first year of this two-year program will demonstrate technical ability on machine tool equipment and hand tools related to the machine tool. Attention to detail, precise measurement and focus are highly recommended skills that will be developed and expanded through this course. Students will gain an understanding of the CNC machine tool's operation, metal working industry and requirements expected from a production machinist. Students will develop knowledge and understanding of CNC machine tool operation and G-Code and M-Code terminology. Students will learn advanced machining competencies requiring lab hands on participation to meet and complete lab assigned projects. Student safety is held at the highest level of priority.

PREREQUISITE: Acceptance into the Precision Machining Program.

PRECISION MACHINING II

Grades: 12

2 CREDITS (Full-year course)

Students continuing their enrollment in this two year program will gain an understanding of industry standard CNC machine tool's operation, and an understanding of G-Code and M-Code terminology and application. Students will understand the metal working industry and requirements expected from a production machinist. Students will meet advanced machining competencies requiring 97% shop hands on participation consisting of real time machining on a production level for both manual and CNC machining. Following all safety procedures will be continually enforced. Students will demonstrate personal growth / student professionalism through applied knowledge and skills in resume writing, job application writing, and job interviewing.

Note: Students taking this course will have the option of earning college credits. There could be a fee associated with this option.

PREREQUISITE: Successful completion of Precision Machining I.

TOPICS OF STUDY:

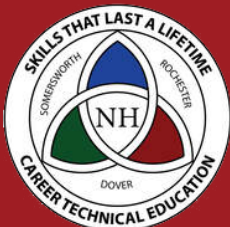
- Safety
- Hand Tools
- Measuring Tools
- Blueprint Reading
- Basics in Conventional mMachining (project based)
- Intro to CNC Machining
- Safety
- Precision Machining Techniques in Milling and CNC Programming Operation
- Piece Part Inspection
- Use of CNC Plasma Cutter

COLLEGE ALIGNMENT

- Nasua Community College
 - MTTN 111 Machine Tool Process & Theory

CAREER PATHWAYS:

- CNC Operator
- CNC Machinist
- Apprentice Tool Maker
- Precision Machining Inspector
- Production Supervisor
- Advanced Machining & Inspection



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For more information: 603-332-0757



Restaurant Management

Click here to view the [Program Website](#) or the [Program Video](#)

Restaurant Management Program

Year 1 – Restaurant Management I

Year 2 – Restaurant Management II

RESTAURANT MANAGEMENT I

Grades: 11 (Grade 10 on space available basis)

2 CREDITS (Full-year course)

This course offers students the chance to work in a restaurant atmosphere while learning the different tasks of various professionals in the food and restaurant industry. Students will learn about safety and sanitation, professional cooking, the duties and responsibilities of the chef, prep cook, baker, host, server, and manager, as well as industry job seeking and keeping skills. Students will be responsible for the successful management of the Our House Cafe. Careers related to food service will be presented from a management perspective.

PREREQUISITE: Acceptance into the Restaurant Management program.

RESTAURANT MANGEMENT II

Grades: 12 (Grade 11 on space available basis)

2 CREDITS (Full-year course)

This course continues students' experience to work in a restaurant atmosphere while learning the different tasks of various professionals in the food and restaurant industry. Students will learn about safety and sanitation, professional cooking, the duties and responsibilities of the chef, prep cook, baker, host, server, and manager, as well as industry job seeking and keeping skills. Students will be responsible for the successful management of the Our House Cafe. Careers related to food service will be presented from a management perspective. This program has articulation agreements with Lakes Region Community College, and White Mountain Community College.

Note: Students taking this course will have the option of earning six college credits. There may be a fee associated with this option.

PREREQUISITE: Successful completion of Restaurant Management I.

TOPICS OF STUDY:

- Safety and Sanitation
- Commercial Equipment Use
- Cooking Methods
- Menu Design
- Employability Skills
- Intro to Management
- ServSafe
- Purchasing/Receiving
- Nutrition

COLLEGE ALIGNMENT

- Great Bay Community College
 - HOS 230G Restaurant Development & Strategic Development
 - HOS 235G Food & Beverage Operations

LICENSING, CERTIFICATION, CREDENTIALS:

- ServSafe
- ProStart Certificate of Achievement

CAREER PATHWAYS:

- Hostess
- Server
- Prep Cook
- Dishwasher
- Assistant General Manager



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Teacher of Multiple Levels

Click here to view the [Program Website](#) or the [Program Video](#)

Teacher of Multiple Levels Program

Year 1 – Teacher of Multiple Levels I

Year 2 – Teacher of Multiple Levels II

TEACHER OF MULTIPLE LEVELS I

Grades: 10, 11 (Grade 12 on space available basis)

2 CREDITS (Full-year course)

This course is designed for students interested in pursuing a career in education or other field associated with working with children. Students divide their time between classroom instruction and student-teaching in the laboratory school, Small Wonders Preschool or other Field site placement. You will be part of a leadership organization, Educators Rising, which offers many opportunities for community service, leadership, trips and conferences. There is a course fee to take this program; this fee covers membership dues and course shirt (scholarship available upon request). For those furthering their education, articulation credits are available with some of the two-year colleges in NH. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework and sign an honors contract.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There may be a fee associated with this option.

PREREQUISITE: Acceptance into the Teacher of Multiple Levels program.

TEACHER OF MULTIPLE LEVELS II

Grades: 11, 12

2 CREDITS (Full-year course)

Students entering Foundation of Education 2 are expected to have mastered or be proficient in the basic teaching skills learned in Foundation of Education 1. Students divide their time between classroom instructions, student teaching in the laboratory preschool, Small Wonders Preschool and participation in internships. Students will create a professional portfolio to demonstrate the competencies they have achieved. There is a course fee to take this program; this fee covers membership dues and course shirt (scholarship available upon request). For those furthering their education, articulation credits are available with some of the two-year colleges in NH. Students choosing to enroll in this course at the honors level will be required to complete more rigorous coursework and sign an honors contract.

Note: Students taking this course at the HONORS LEVEL ONLY will have the option of earning three college credits. There may be a fee associated with this option.

PREREQUISITE: Successful completion of Foundations of Education I and recommendation from program instructor.

TOPICS OF STUDY:

- Careers that involve working with children and young adults
- History and theory structure of the modern education system
- Successful ways to work with all types of learners
- Resources communities offer to support local schools and tools for positive collaboration
- Instructional strategies and types of assessments
- Academics and curricular planning
- Health and safety of students and staff in schools

COLLEGE ALIGNMENT

- Great Bay Community College
 - TCHP 104G Foundations of Education
 - TCHP 201G The Teaching & Learning Process

CAREER PATHWAYS:

- Teaching Assistant
- Substitute Teacher
- Childcare Worker
- Teacher
- Education Administration
- School Counseling
- Instructional Coordinator



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Video & Photographic Arts

Click here to view the [Program Website](#) or the [Program Video](#)

Video & Photographic Arts Program

Year 1 – Digital Photography & Video Production Technology I

Year 2 – Digital Photography & Video Production Technology II

DIGITAL PHOTOGRAPHY & VIDEO PRODUCTION TECHNOLOGY I

Grades: 10, 11

2 CREDITS (Full-year course)

During the first year students will be introduced to the Photography and Video field. It is a hands on/project based class. Students will complete a series of activities, utilizing the basic techniques necessary for the production of photographs and videos. Topics to be covered are treatment development, storyboarding, scripting, proper camera technique, composition, lighting and editing. Class time will focus on working with a variety of photographic and video equipment. Classes will run very independently and the goal is to provide each student with the opportunity to learn at his/her own pace and in his/her own style. Students, who choose this course, will be responsible for creating digital print artwork, slide presentations and motion graphics. Students will develop their own style in photography and video while building a portfolio of images and short videos demonstrating what they are learning and how their style is evolving. Students are required to obtain and keep an SD memory card of 2GB capacity or larger. Students choosing to enroll in this course at the honors level will be required to complete more rigorous work and sign an honors contract.

PREREQUISITE: Acceptance into the Video & Photographic Arts program.

DIGITAL PHOTOGRAPHY & VIDEO PRODUCTION TECHNOLOGY II

Grades: 11, 12

2 CREDITS (Full-year course)

Students in the second year will be immersing themselves into various fields of photography and video. Students will be involved in more complex projects using advance lighting, editing technique, macro, time lapse, multi camera shoots are just some of the areas to explore. Focus on visual workflow, exploring what they see and how best to record it. Emphasis will be on composition and telling a story with their images. Students will be working on individual self-designed projects and gallery exhibits while building a complete portfolio of their work. Students choosing to enroll in this course at the honors level will be required to complete more rigorous work and sign an honors contract.

Note: This is a Running Start course and students are eligible to receive college credit. There is a fee associated with this option.

PREREQUISITE: Successful completion of Digital Photography & Video Production 1.

TOPICS OF STUDY:

- Digital Photography
- Lighting
- Sound Production
- Composition
- Digital Editing
- Video Production & Editing
- Adobe Creative Cloud

CAREER PATHWAYS:

- Photographer (portrait, scenic, aerial, industrial, forensic, military)
- Videographer
- Art Director
- Video Editor
- Camera Editor/Operator
- Production Assistant
- Video, TV or Film Producer
- Digital Imaging Editor



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Dover Regional Career Technical Center Programs

Animal Science
Automotive Collision Technology
Automotive Technology
Biomedical Science
Building Construction Technology
Computer Programming
Computer Systems Networking
Cosmetology
Culinary Arts
Electrical Technology & Renewable Resources
EMT
Fire Science
Health Science Technology
Naval Junior Reserve Officer Training Corps
Pre-Engineering
Sports Medicine
Welding Technology

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DOVER CAREER TECHNICAL CENTER

POST SECONDARY CREDITS

CTC Course	Post-Secondary Course	Post-Secondary Partner	College Credits	Type of Credit
Animal Science	VETN110G Intro to Veterinary Tech	Great Bay Community College	2	EC
Automotive Collision Technology	CRNT101 Basic Collision Repair	Nashua Community College	4	EC
	Basic Collision Repair	Universal Technical Institute	4	A
Automotive Technology	LAUT 1200 Intro. to Automotive Services	Lakes Region Community College	3	EC
	LAUT 1211 Automotive Systems I		3	A
	AU126 Suspension and Steering	University of Northwestern Ohio	6	A
	AU127 Hydraulic Brake Systems		6	A
Biomedical Science	BTEC105G Introduction to Biotechnology	Great Bay Community College	4	EC
	BIOL 106G Human Body		4	EC
Computer Programming	CIS124G Web Development	Great Bay Community College	3	EC
	CIS112 Intro. To Object Oriented Programming		3	
	CIS148 Introduction to Java Programming		3	
	CIS177 Introduction to Python		3	
Computer Systems Networking	IST113 IT Essentials	Great Bay Community College	3	EC
	IST122 Intro. To Networking		3	
	CIS146 Linux I		3	
	IST123 Routing and Switching Essentials		3	
	IST256 Cybersecurity Operations		3	
	CIS246 Linux II		3	
	CIS177 Intro. to Python		3	
Culinary Arts	CUL146L Bakery & Production	Lakes Region Community College	3	A
	CUL150L Culinary Fundamentals		3	
	CUL152L Sanitation & Safety		3	
Electrical Technology & Renewable Resources	LELC1260 Residential Wiring & Electrical Blueprint Reading	Lakes Region Community College	3	A
Health Science Technology	AH110 Medical Terminology	Great Bay Community College	3	EC
Pre-Engineering	MCET105 Engineering Design	NHTI	4	EC
	MCET110 Principles of Engineering		4	
	MFET241 Computer Integrated Manufacturing		4	
	ELET121N Digital Circuits 1	Nashua Community College	3	EC
Sports Medicine	HFIT105M Essentials of Exercise Science	Manchester Community College	3	EC
Welding Technology	WELD100G Basic Welding Technologies	Great Bay Community College	3	EC
	WELD150G Intermediate Welding Technologies		3	
Completion of any 2-year CTC Program (Dover, Rochester, or Somersworth). Varies depending on the completed CTC Program.		Keene State College	Up to 8	A

**DOVER CAREER TECHNICAL CENTER
LICENSING, CERTIFICATIONS, AND OTHER CREDENTIALS**

Animal Science	Pet Tech Animal CPR and 1 st Aid Certification
	Continental Kennel Club CCTP Level 1: Basic Canine Care & Handling
	Youth for the Quality Care of Animals (YQCA) certification
Automotive Collision Technology	Automotive Service Excellence (ASE)
	S/P2 Safety
Automotive Technology	Automotive Service Excellence (ASE)
	S/P2 Safety
	Automotive Lift Institute
	Snap-On Tools Multimeter
	Hunter Alignment
	Ford, Honda, Subaru, and Toyota Manufacture Training
Biomedical Science	CPR & AED
	Standard First Aid
Building Construction	OSHA-10 Certification
	S/P2 Safety
Computer Systems Networking	A+ certification, NET+ certification, CISCO IT Fundamentals, MCP, and IC3 Internet Computing Core
Cosmetology	NH Cosmetology License upon completion of 1500 hours over the three years of the program
	S/P2 Safety
Culinary Arts	ServSafe Manager Certification, National Restaurant Association Education Foundation
Electrical Technology & Renewable Resources	2-yr program fulfills the first year of the NH State Electrical Apprenticeship Night School program
	500-hours work experience toward Journeyman's license
	OSHA-10 Certification
	S/P2 Safety
Fire Science & EMT	Professional Rescuer CPR & AED and Standard First Aid
	Level 1 Firefighting Certification
	National Registry of Emergency Medical Technicians—Basic EMT Certification
Health Science Technology	NH Board of Nursing, Nursing Assistant License (LNA)
	American Heart Association Health Care Provider & Automatic External Defibrillator (AED) certification
	Advanced Skills for Health Care providers & Restorative Certificate
	Electrocardiography (EKG) Technician
NJROTC— Leadership Education & Training	Cadets accepted for enlistment, who provide evidence of successful completion of at least 3 years of NJROTC are entitled to advanced promotion to pay grade E-3 upon initial enlistment in an active or reserve component of the Navy, or Air Force, and pay grade E-2 in the Army or Marine Corps; or completion of 2 years are entitled to E-2 in the Navy.
Pre-Engineering	OSHA-10 Certification
	Certified SolidWorks Associate (CSWA)
Sports Medicine	National Academy of Sports Medicine (NASM) Certified Personal Trainer (CPT) & American Heart Assoc. CPR/AED/First Aid
Welding Technology	S/P2 Safety
	OSHA-10 Certification

INTERDISCIPLINARY CREDITS

Students may satisfy some graduation requirements by earning credit(s) in the following programs. In addition to grade level, these courses may require additional prerequisites. Please see course descriptions for more information.

Program	Requirement
Animal Science I & II	Fulfills 1 science elective credit
Biomedical Science I & II	Fulfills 1 science elective credit
Building Construction Technology	Building Construction Technology II fulfills .50 math credit
Computer Programming I & II	This course fulfills the computer credit requirement
Computer Systems Networking I & II	This course fulfills the computer credit requirement
Cosmetology I, II, & III	Cosmetology I fulfills art credit Cosmetology II fulfills .50 physical science credit Cosmetology III fulfills .50 math credit
Culinary I & II	Fulfills art credit and .5 Math credit
Fire Science & EMT	EMT Fulfills 1 science elective credit
Health Science	Fulfills 1 science elective credit
NJROTC—Leadership Education & Training	Fulfills American Government requirement and .50 math elective credit
Pre-Engineering I, II, & III	Fulfills .50 computer credit and .50 visual art credit requirements upon successful completion of the Pre-Engineering program.
Sports Medicine I & II	Fulfills 1 science elective credit
Welding I & II	Fulfills .5 Math elective credit and fulfills .5 Art credit

Animal Science

Click here to view the [Program Website](#) or the [Program Video](#)

Animal Science Program

Year 1 – Animal Science I

Year 2 – Animal Science II: Companion Animal Science OR Large Animal Science

Year 3 – Animal Science III: Companion Animal Science OR Large Animal Science OR Honors Veterinary OR Work Based Learning

ANIMAL SCIENCE I

Grades: 10-11

2 CREDITS (Full-year course)

This is the first year of the Animal Science career path. This every day, full year course will take an in-depth look in to various domestic animal species including dogs, cats, small pets, reptiles, birds and farm animals. Students will explore the areas of domestication, small and large animal care, pet first aid and basic health care, grooming, animal welfare, and animal uses/products. Classroom pets and the onsite barn animals will be used for hands-on experiences in animal handling, restraint, feeding and maintaining for optimal health. Students will learn to operate a dog grooming business one day a week, where they develop first level skills of dog grooming while learning important customer service skills.

REQUIRED: Students must submit a CTC program application.

ANIMAL SCIENCE II—COMPANION ANIMAL SCIENCE

Grades: 11-12

2 CREDITS (Full-year course)

This every day, full year course is for students interested in dog behaviors and their training. Students will learn to investigate dog breeds, ethical ownership, life cycle, common vaccines, diseases, production and nutrition. Students acquire skills necessary to dog grooming while helping to operate the on-site dog grooming business.

Note: Fulfills 1 science elective credit.

REQUIRED: Successful completion of Animal Science I and submission of a CTC program application.

TOPICS OF STUDY:

- Animal Care & Handling
- Animal Nutrition
- Animal Behavior
- Anatomy & Physiology of Domestic Animals
- Impact of Animals on Society
- Animal Welfare & Ethics
- Dog Grooming
- Animal Business Management

COLLEGE ALIGNMENT:

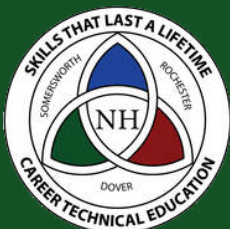
- Great Bay Community College
 - VETN110G Intro. to Veterinary Tech

LICENSING, CERTIFICATION, CREDENTIALS:

- Pet Tech Pet CPR and First Aid Certification
- Continental Kennel Club CCTP Level 1: Basic Canine Care & Handling
- Youth for the Quality Care of Animals (YQCA) certification

CAREER PATHWAYS:

- Animal Behaviorist
- Groomer
- Veterinarian
- Vet Tech
- Kennel/Daycare Manager
- Geneticist
- Animal Handler



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Animal Science Cont.

Click here to view the [Program Website](#) or the [Program Video](#)

Animal Science Program

Year 1 – Animal Science I

Year 2 – Animal Science II: Companion Animal Science OR Large Animal Science

Year 3 – Animal Science III: Companion Animal Science OR Large Animal Science OR Honors Veterinary OR Work Based Learning

ANIMAL SCIENCE II—LARGE ANIMAL SCIENCE

Grades: 11-12

2 CREDITS (Full-year course)

This class is designed for students interested in pursuing a career with large animals. It is a class that will cover the husbandry of common livestock breeds as well as horses. Part of the class will be to learn about the business aspects of farm management and budgeting. Other content areas that will be studied are selection, nutrition, formulating feed rations, reproduction, maintenance, veterinary care, and sustainable practices of large animals. The class will utilize on site animals as well as go to several large working farms for tours and more information.

REQUIRED: Successful completion of Animal Science I and submission of a CTC program application.

ANIMAL SCIENCE III—HONORS VETERINARY SCIENCE

Grades: 11-12

2 CREDITS (Full-year course)

This every day, full year honors course is for students interested in pursuing a career with animals in the health and veterinary technology field. Students will take an in-depth look into animal anatomy and the common practices and management involved in veterinary medicine. Investigations in to clinical exams, preventative care practices, veterinary terminology and math, medical records, and client-patient relationships will take place. Students will explore ethical and legal issues in veterinary medicine as well and analyze animal nutrition and reproductive performance. Students will design and maintain the medical/husbandry records for our program animals. Real world skills are practiced through lab exercises as well as managing and operating an on-site barn, small animal collection, and dog-grooming lab.

Note: Fulfills 1 science elective credit.

REQUIRED: Successful completion of Animal Science I and submission of a CTC program application.

TOPICS OF STUDY:

- Animal Care & Handling
- Animal Nutrition
- Animal Behavior
- Anatomy & Physiology of Domestic Animals
- Impact of Animals on Society
- Animal Welfare & Ethics
- Dog Grooming
- Animal Business Management

COLLEGE ALIGNMENT:

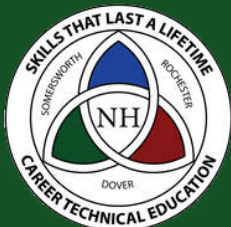
- Great Bay Community College
 - VETN110G Intro. to Veterinary Tech

LICENSING, CERTIFICATION, CREDENTIALS:

- Pet Tech Pet CPR and First Aid Certification
- Continental Kennel Club CCTP Level 1: Basic Canine Care & Handling
- Youth for the Quality Care of Animals (YQCA) certification

CAREER PATHWAYS:

- Animal Behaviorist
- Groomer
- Veterinarian
- Vet Tech
- Kennel/Daycare Manager
- Geneticist
- Animal Handler



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Automotive Collision Technology

Click here to view the [Program Website](#) or the [Program Video](#)

Automotive Collision Technology Program

Year 1 – Automotive Collision Technology I

Year 2 – Automotive Collision Technology II

AUTOMOTIVE COLLISION TECHNOLOGY I

Grades: 10-11

2 CREDITS (Full-year course)

This course concentrates on vehicles from frame to finish. Students will learn how to properly operate hand and power tools while restoring the exterior of cars in the state-of-the-art lab. Experience what it's like working with sheet metal, body fillers and plastics, various materials and fasteners. Explore panel repair and replacement, vehicle surface preparation and masking. Students will gain exposure to the skill of estimations as they relate to body repair and restoration. The National Institute for Automotive Service Excellence (ASE) recognizes the Dover Automotive Technology program as a certified training program and it has achieved accreditation by the National Automotive Technicians Educational Foundation (NATEF) and supported by the New Hampshire Auto Dealers Association.

Note: Lab fee of \$40.00.

REQUIRED: Students must submit a CTC program application.

AUTOMOTIVE COLLISION TECHNOLOGY II

Grades: 11-12

4 CREDITS (Full-year double block course)

Advanced skills in the art of vehicle restoration and custom fabrication will be the focus of this course. Students will examine frame damage measurement, replacement and realignment. Work on electrical systems, restraints and chassis. Enhance skills in the art of airbrushing, pin striping, detailing, color matching and custom painting. Come and gain skills that will last a lifetime. The National Institute for Automotive Service Excellence (ASE) recognizes the Dover Automotive Technology program as a certified training program and it has achieved accreditation by the National Automotive Technicians Educational Foundation (NATEF) and supported by the New Hampshire Auto Dealers Association.

Note: Lab fee of \$40.00.

REQUIRED: Successful completion of Automotive Collision I and submission of a CTC program application.

TOPICS OF STUDY:

- Basic Collision Repair
- Refinishing
- Custom Painting/Airbrushing
- Fabrication
- Detailing
- Estimating
- Rust/Dent Repair
- MIG Welding

COLLEGE ALIGNMENT:

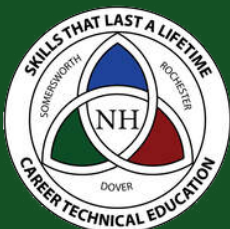
- Nashua Community College
 - CRNT101 Basic Collision Repair
- Universal Technical Institute
 - CRTN101 Basic Collision Repair

LICENSING, CERTIFICATION, CREDENTIALS:

- Automotive Service Excellence (ASE)
- S/P2 Safety

CAREER PATHWAYS:

- Collision Technician
- Refinishing Technician
- Custom Fabrication
- Custom Paint
- Detailer
- Estimator
- Shop Foreman
- Insurance Appraiser
- Classic Care Restoration



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Automotive Technology

Click here to view the [Program Website](#) or the [Program Video](#)

Automotive Technology Program

Year 1 – Automotive Technology I

Year 2 – Automotive Technology II

AUTOMOTIVE TECHNOLOGY I

Grades: 10-11

2 CREDITS (Full-year course)

Students will study many of the major automotive systems while learning how a quality automotive shop operates. Major topics of instruction include: shop safety, vehicle safety, shop operations, lubrication systems, engine components and repair, tire steering and suspension, brake systems and vehicle safety. Students will develop an understanding of writing a repair order, customer service and parts management. Valuable hands-on experience will take place in the Dover Automotive Shop. The National Institute for Automotive Service Excellence (ASE) recognizes the Dover Automotive Technology program as a certified training program and it has achieved accreditation by the ASE Educational Foundation, and supported by the New Hampshire Auto Dealers Association

REQUIRED: Students must submit a CTC program application.

AUTOMOTIVE TECHNOLOGY II

Grades: 11-12

2 CREDITS (Full-year course)

In Automotive Technology II, students will use the skills and competencies mastered in Automotive Technology I, while embarking on new competencies in front-end alignment, steering and suspension, emissions, engine principles, cooling and heating systems, electrical diagnosis and repair as well as scan tool use. There will be a continued emphasis on safety, shop management and proper workplace attitude and skills. Students are required to provide proper footwear and clothing for use in the lab. College automotive programs will visit the program each fall to inform students of continuing education option in this career field. Students will have the opportunity to complete in a state-wide/national skills competition (Skills USA), and the NHADA skills competition. The National Institute for Automotive Service Excellence (ASE) recognizes the Dover Automotive Technology program as a certified training program and it has achieved accreditation by the ASE Educational Foundation, and supported by the New Hampshire Auto Dealers Association

REQUIRED: Successful completion of Automotive Technology I and a CTC program application.

TOPICS OF STUDY:

- Shop & vehicle safety
- Shop operations
- Lubrication systems
- Engine components and repair
- Tire service
- Brake, steering and suspension systems.

COLLEGE ALIGNMENT:

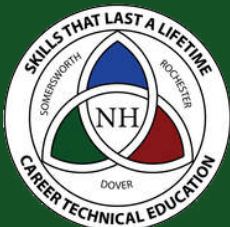
- Lakes Region Community College
 - LAUT 1200 Intro. to Automotive Services
 - LAUT 1211 Automotive Systems I
- University of Northwestern Ohio
 - AU126 Suspension and Steering
 - AU127 Hydraulic Brake Systems
- Universal Technical Institute
 - CRTN101 Basic Collision Repair

LICENSING, CERTIFICATION, CREDENTIALS:

- Automotive Service Excellence (ASE)
- S/P2 Safety
- Automotive Lift Institute
- Snap on Tools Multimeter
- Hunter Alignment
- Ford, Honda, Subaru, and Toyota Manufacture Training

CAREER PATHWAYS:

- Diesel Service Technicians
- Heavy Truck Technicians
- Service Technician or Consultant
- Automotive Sales Representative
- Motorcycle Powersports Technician



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Biomedical Science

Click here to view the [Program Website](#) or the [Program Video](#)

Biomedical Science Program (PLTW)

Year 1 – Honors Biomedical Science I

Year 2 – Honors Biomedical Science II

HONORS BIOMEDICAL SCIENCE I

Grades: 10-11

2 CREDITS (Full-year course)

In Semester I of the program, students explore concepts of biology and medicine to determine what led to the death of a fictional person. Students examine autopsy reports, investigate medical history and explore medical treatments that may have prolonged the person's life. In Semester II, students examine the interactions of human body systems as they explore identity, power, movement, protection, and homeostasis in the body. Students build organs and tissues on a skeletal manikin and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. Throughout the semester, students take on the roles of biomedical professionals to solve real-world medical cases. Students design experiments, investigate the structures and functions of the human body, and use data acquisition software to monitor body functions such as muscle movement, reflex and voluntary action, and respiration. This course meets the requirements of Honors Principles of Biomedical Science and Human Body Systems through Project Lead the Way.

Note: Fulfills 1 science elective credit.

REQUIRED: Students must submit a CTC program application.

HONORS BIOMEDICAL SCIENCE II

Grades: 11-12

2 CREDITS (Full-year course)

In Year 2 of the program, students follow the life of a fictitious family as they investigate how to prevent, diagnose, and treat disease. Students explore how to detect and fight infection, screen and analyze DNA, evaluate cancer treatments, and prevail when organs of the body fail. Interventions related to immunology, surgery, pharmacology, medical devices, and diagnostics are explored. In the final part of the course, students build on their acquired knowledge and skills to design innovative solutions for pressing health challenges of the 21st century. Topics range from public health, biomedical engineering, clinical medicine and physiology. This course meets the requirements of Medical Interventions and Biomedical Innovation through Project Lead the Way.

Note: Fulfills 1 science elective credit.

REQUIRED: Successful completion of Honors Biomedical Science I and submission of a CTC program application.

TOPICS OF STUDY:

- Bioethics
- Biomedical science career pathways
- Human body systems (selected) anatomy and physiology
- Cancer biology
- Cell biology
- Crime scene investigation
- Disease treatment and prevention
- Emergency medicine and medical surge
- Forensic investigation, manner, mechanism and cause of death
- Infectious disease transmission
- Molecular biology
- Pathology of disease: infectious, hereditary, and physiological diseases

COLLEGE ALIGNMENT:

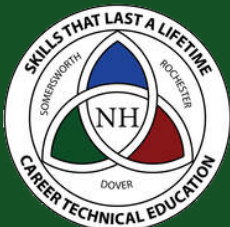
- Great Bay Community College
 - BTEC105G Introduction to Biotechnology
 - BIOL106G Human Body

LICENSING, CERTIFICATION, CREDENTIALS:

- First Aid
- CPR

CAREER PATHWAYS:

- Biotechnology
- Pharmaceutical
- Biomedical Engineer
- Clinical Researcher
- DNA Analysis
- Lab Technician



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Building Construction Technology

Click here to view the [Program Website](#) or the [Program Video](#)

Building Construction Technology Program

Year 1 – Building Construction Technology I

Year 2 – Building Construction Technology II

BUILDING CONSTRUCTION TECHNOLOGY I

Grades: 10-11

2 CREDITS (Full-year course)

From hand tools to hard hats, the fundamentals of construction technology will be experienced while gaining an appreciation for safety. Students will learn basic residential carpentry techniques beginning with a comprehensive unit on workplace and tool safety and progressing through residential framing techniques. Units of study will include tool selection and usage, plan reading, layout, footings and foundation, and floor and wall systems. Students should be comfortable on ladders and with working outside in a variety of conditions. Proper work boots and clothing is required.

REQUIRED: Students must submit a CTC program application.

BUILDING CONSTRUCTION TECHNOLOGY II

Grades: 11-12

2 CREDITS (Full-year course)

Students will expand their knowledge and experience the evolution of a structure from blueprint to rooftop using the latest technology and materials from the field. Students will gain experience and roof and stair framing, siding systems, insulating, window installation and finish work. Students will complete advanced projects in this course. Proper work boots and clothing are required.

Note: Fulfills .50 math credit.

REQUIRED: Successful completion of Building Construction Technology I and submission of a CTC program application.

TOPICS OF STUDY:

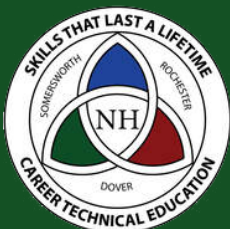
- Building Codes
- Construction & Safety
- Drywall Installation
- Estimation
- Exterior/Interior Finish Work
- Hand & Power Tool Use
- Green Framing
- Roofing

LICENSING, CERTIFICATION, CREDENTIALS:

- S/P2 Safety
- OSHA-10 Certification

CAREER PATHWAYS:

- Contractor
- Carpenter
- Roofer
- Project Manager
- Architect
- Real Estate
- Property Management
- Building Material Supplier
- Estimator
- Build Inspector
- Appraiser
- Siding Contractor



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Dover Regional Career Technical Center

25 Alumni Drive, Dover NH 03820

For more information: 603-516-6978



Computer Systems Networking

Click here to view the [Program Website](#) or the [Program Video](#)

Computer Systems Networking Pathway

Year 1 – Computer Systems Networking I

Year 2 – Computer Systems Networking II

Year 3 – Computer Systems Networking III

COMPUTER SYSTEMS NETWORKING I

Grades: 10-11

2 CREDITS (Full-year course)

Students learn the fundamentals of networking and the advanced concepts of device hardware including PC's, laptops, tablets, and hand-held devices. They will also learn how to install, configure and manage operating systems in these devices. Students will gain an understanding about networked communications, wireless connectivity, security, safety, environmental issues and communication skills. They will work in a collaborative, team environment and gain real-world experience. Hands-on lab activities are an essential element of this course. Student lab experiences (physical and virtual) have been integrated in to this course.

Note: Fulfills the computer credit requirement.

REQUIRED: Students must submit a CTC program application.

COMPUTER SYSTEMS NETWORKING II

Grades: 11-12

2 CREDITS (Full-year course)

Students will expand their networking knowledge and focus on advanced IP addressing techniques, intermediate routing protocols, configuration of routers and switches using command line interface, Ethernet switching, VLANs, ACLs, routing and trunking. Emphasis will be on application and demonstration of skills acquired in pre-requisite courses.

Note: Fulfills the computer credit requirement.

REQUIRED: Successful completion of Computer Systems Networking I and submission of a CTC program application.

TOPICS OF STUDY:

- PC hardware and software
- Windows, Linux, Mac Operating Systems
- Laptops, PCs, tablets, and mobile devices
- Computer troubleshooting/Maintenance
- Computer Networking Fundamentals
- Protocols, models, frames and packets
- Wireless, Fiber, and Copper
- Router and switch configuration
- Network topologies,
- Routing protocols
- Ethernet switching
- Cloud computing

COLLEGE ALIGNMENT:

- Great Bay Community College
 - IST 113 IT Essentials
 - IST 122 Intro. to Networks
 - CIS 146 Linux I
 - IST 123 Routing, Switching, & Wireless
 - CIS 177 Intro to Python - PCAP
 - IST 246 Linux II
 - IST 256 Cyber Security Operations

LICENSING, CERTIFICATION, CREDENTIALS:

- CompTIA Fundamentals, A+
- CompTIA Network+, Security+
- CompTIA Linx+
- LPI - Linux Essentials
- Cisco CNT, CNA, Cyber Ops Associate
- Python PCEP

CAREER PATHWAYS:

- Information Systems
- System Administration
- Linux Administrator
- Cloud Network Architect
- Network Engineer
- Cyber Security/Operations



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Computer Systems Networking

Click here to view the [Program Website](#) or the [Program Video](#)

Computer Systems Networking Pathway

Year 1 – Computer Systems Networking I

Year 2 – Computer Systems Networking II

Year 3 – Computer Systems Networking III

COMPUTER SYSTEMS NETWORKING III

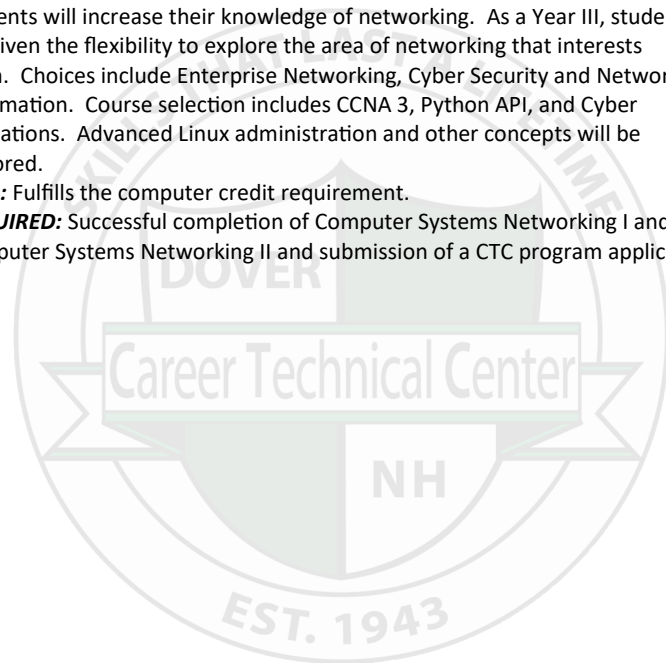
Grade: 12

2 CREDITS (Full-year course)

Students will increase their knowledge of networking. As a Year III, students are given the flexibility to explore the area of networking that interests them. Choices include Enterprise Networking, Cyber Security and Network Automation. Course selection includes CCNA 3, Python API, and Cyber Operations. Advanced Linux administration and other concepts will be explored.

Note: Fulfills the computer credit requirement.

REQUIRED: Successful completion of Computer Systems Networking I and Computer Systems Networking II and submission of a CTC program application.



TOPICS OF STUDY:

- PC hardware and software
- Windows, Linux, Mac Operating Systems
- Laptops, PCs, tablets, and mobile devices
- Computer troubleshooting/Maintenance
- Computer Networking Fundamentals
- Protocols, models, frames and packets
- Wireless, Fiber, and Copper
- Router and switch configuration
- Network topologies,
- Routing protocols
- Ethernet switching
- Cloud computing

COLLEGE ALIGNMENT:

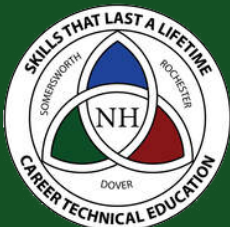
- Great Bay Community College
- IST 113 IT Essentials
 - IST 122 Intro. to Networks
 - CIS 146 Linux I
 - IST 123 Routing, Switching, & Wireless
 - CIS 177 Intro to Python - PCAP
 - IST 246 Linux II
 - IST 256 Cyber Security Operations

LICENSING, CERTIFICATION, CREDENTIALS:

- CompTIA Fundamentals, A+
- CompTIA Network+, Security+
- CompTIA Linx+
- LPI - Linux Essentials
- Cisco CNT, CNA, Cyber Ops Associate
- Python PCEP

CAREER PATHWAYS:

- Information Systems
- System Administration
- Linux Administrator
- Cloud Network Architect
- Network Engineer
- Cyber Security/Operations



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Dover Regional Career Technical Center

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Computer Programming

Click here to view the [Program Website](#) or the [Program Video](#)

Computer Programming Pathway

Year 1 – Computer Programming I

Year 2 – Computer Programming II

COMPUTER PROGRAMMING I

Grades: 10-11

2 CREDITS (Full-year course)

Students will learn HTML, or Hypertext Markup Language, is a markup language use to describe the structure of a web page. It uses a special syntax or notation to organize and give information about the page to the browser. Elements usually have opening and closing tags that surround and give meaning to content. Learn to make responsive websites that transition from one device to the next. Learn JavaScript which is a high-level programming language that all modern web browsers support. This course will introduce programming using Python for highly motivated students with little or no prior experience in programming. Students will create apps for mobile devices, automate tasks in both languages, find patterns in data, and interpret simulations. Students will collaborate to create and present solutions can improve people's lives. Students will develop confidence in applying programming solutions, will be exposed to pertinent terminology, and will learn the effective use of reference materials. Learn all that and more in this project-based course.

Note: Fulfills the computer credit requirement.

REQUIRED: Students must submit a CTC program application.

COMPUTER PROGRAMMING II

Grades: 11-12

2 CREDITS (Full-year course)

The purpose of this course is to provide a solid foundation in the Java programming language. Program planning, object-oriented design, and Java language syntax will be emphasized. Students will also grasp XML and how to work in the programming environment Android Studio. This course will prepare students for advanced study of the Java language as well as introduce students to app development in a project-based environment. Students will also receive hands on experience with LabVIEW and working with LEGO Mindstorm robots to compete and solve complex problems.

REQUIRED: Successful completion of Computer Programming I and submission of a CTC program application.

TOPICS OF STUDY:

- PC hardware and software
- Windows, Linux, Mac Operating Systems
- Laptops, PCs, tablets, and mobile devices
- Computer troubleshooting/Maintenance
- Computer Networking Fundamentals
- Protocols, models, frames and packets
- Wireless, Fiber, and Copper
- Router and switch configuration
- Network topologies,
- Routing protocols
- Ethernet switching
- Cloud computing

COLLEGE ALIGNMENT:

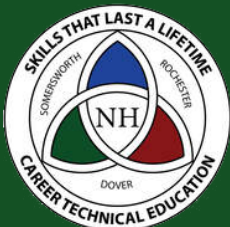
- Great Bay Community College
 - IST 113 IT Essentials
 - IST 122 CCNA 1: Introduction to Networks
 - CIS 146 Linux I
 - IST 123 CCNA 2: Routing, Switching, and Wireless Essentials

LICENSING, CERTIFICATION, CREDENTIALS:

- A+ certification
- CompTIA Fundamentals
- Network+ Certification
- Cisco Certified Network Technician
- Cisco Certified Network Associate
- IC3 Internet Computing Core

CAREER PATHWAYS:

- Information Systems
- System Administration
- Linux Administrator
- Cloud Network Architect
- Network Engineer
- Cyber Security/Operations



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Dover Regional Career Technical Center

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Cosmetology

Click here to view the [Program Website](#) or the [Program Video](#)

Cosmetology Program

Year 1 – Cosmetology I

Year 2 – Cosmetology II

Year 3 – Cosmetology III

COSMETOLOGY I

Grade: 10

2 CREDITS (Full-year course)

Begin with basic theory and learn practical skills in the classroom. Explore hands-on laboratory work consisting of hair sculpting, hair design, haircutting, manicuring, pedicuring, skin care and make-up application. After basic training hours are met students will move into a higher level as the program and the curriculum become more diverse and comprehensive. Professional ethics are a vital component to the process. The New Hampshire Board of Cosmetology recognizes the Dover Cosmetology training program and is an accredited program.

Note: The following fees are required: \$150 for the Introductory Kit including Mannequin and uniform, and \$25 for the Cosmetology Apprentice license.

Paperwork must be submitted before the first day of school for your Cosmetology State Board Registration. Failure to procure a student registration would forfeit student eligibility in the program per the State Board of Cosmetology

REQUIRED: Students must submit a CTC program application and have successfully completed Algebra and 9th or 10th grade Science.

COSMETOLOGY II

Grade: 11

4 CREDITS (Full-year double block course)

Build on the development of clinic and lab practices continuing in the classroom and the clinic/salon floor, working on school clients and mannequins. Theory instruction related to chemical texture and smoothing, hair coloring, diseases and disorders, and anatomy & physiology. After basic training and hours are met students will enter into a higher level as the program and curriculum become more diverse and comprehensive. Junior and senior students are placed in the school salon after basic skills training and the required training hours are met. This training program encompasses a powerful, all-inclusive cosmetology curriculum delivered through strong step-by-step hands on approach. The New Hampshire Board of Cosmetology recognizes the Dover Cosmetology Training Program and is an accredited program.

Note: A lab fee of \$125 will be required for two mannequin heads.

Note: Fulfills .50 science elective credit.

REQUIRED: Successful completion of Cosmetology I with a minimum of 325 hours accumulated and submission of a CTC program application.

TOPICS OF STUDY:

- Infection Control
- Hair Cutting
- Color
- Texture
- Nails
- Anatomy & Physiology
- Business
- Chemistry

LICENSING, CERTIFICATION, CREDENTIALS:

- NH Cosmetology License upon completion of 1500 hours over the three years of the program
- S/P2 Safety

CAREER PATHWAYS:

- Stylist
- Salon Owner
- Educator
- Platform Stylist
- Make-up Artist
- Beauty Writer
- Barber
- Esthetician
- Advertising Stylist



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Dover Regional Career Technical Center

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Cosmetology Cont.

Click here to view the [Program Website](#) or the [Program Video](#)

Cosmetology Program

Year 1 – Cosmetology I

Year 2 – Cosmetology II

Year 3 – Cosmetology III

COSMETOLOGY III

Grade: 12

4 CREDITS (Full-year double block course)

Knowledge of cosmetology services are continued with attention to refining skills, speed and accuracy, and working with salon clients which is designed to show new techniques while developing each individual's special interest within the cosmetology field. Students will complete project-based salon management, exploring all aspects of spa and salon operations, including physical design, inventory and financial operations. The final phase ends with the preparation for the final exam required for licensure in the cosmetology industry. The New Hampshire Board of Cosmetology recognizes the Dover Cosmetology training program and is an accredited program.

Note: A lab fee of \$125 will be required for additional mannequin heads. All licensing fees and equipment is the responsibility of the student.

Note: Fulfills 0.50 math credit

REQUIRED: Successful completion of Cosmetology II with a minimum of 900 hours accumulated and submission of a CTC program application.

TOPICS OF STUDY:

- Infection Control
- Hair Cutting
- Color
- Texture
- Nails
- Anatomy & Physiology
- Business
- Chemistry

LICENSING, CERTIFICATION, CREDENTIALS:

- NH Cosmetology License upon completion of 1500 hours over the three years of the program
- S/P2 Safety

CAREER PATHWAYS:

- Stylist
- Salon Owner
- Educator
- Platform Stylist
- Make-up Artist
- Beauty Writer
- Barber
- Esthetician
- Advertising Stylist



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Culinary Arts

Click here to view the [Program Website](#) or the [Program Video](#)

Culinary Arts Program

Year 1 – Culinary Arts I

Year 2 – Culinary Arts II

CULINARY ARTS I

Grades: 10-11

2 CREDITS (Full-year course)

This innovative, creative adventure into the world of culinary and pastry arts. You'll work on the same industry equipment used by chefs throughout the world. First-year students will learn about kitchen safety and sanitation, food fundamentals, culinary terminology, knife skills, and other culinary skills essential to the industry. Students will work as teams preparing food for Dover's restaurant, "Gourmet Table" as well as other culinary and catering function. Opportunity in the culinary and hospitality business is endless and is a profession that can be practiced anywhere in the world. This program is supported by the New Hampshire Restaurant and Lodging Association.

Note: Students are required to purchase a uniform which includes shoes, chef coat and hat.

REQUIRED: Students must submit a CTC program.

CULINARY ARTS II

Grades: 11-12

2 CREDITS (Full-year course)

Second-year students will build skills from Culinary I and take on a leadership role in menu design, working brigade positions such as Sous Chef, dining room manager, expediting and lead baker. Students rotate assuming all upper management positions within the kitchen and dining room. All students will assist in the operation of the Dover's restaurant, "Gourmet Table". Students may have the opportunity to complete in a state-wide/national skills competition (Skills USA). This program is supported by the New Hampshire Restaurant and Lodging Association.

Note: This is a course which allows students the opportunity to earn 9 college credits through Lakes Region Community College while concurrently earning credits toward their high school diploma. There is no cost associated with this program. See articulation agreement for details.

REQUIRED: Successful completion of Culinary Arts I and submission of a CTC program application.

TOPICS OF STUDY:

- Catering & Banquet Services
- Cooking/Baking Dining Room Services
- Food Safety & Sanitation
- Professional Equipment & Operations

COLLEGE ALIGNMENT:

- Great Bay Community College
- CULA146L Bakery & Production
- CULA151L Culinary Fundamentals
- CULA152L Sanitation & Safety

LICENSING, CERTIFICATION, CREDENTIALS:

- ServSafe Manager Certification

CAREER PATHWAYS:

- Chef
- Sous Chef
- Catering
- Athletic Stadium Food Industry
- Private Chef
- Restaurant Management
- Cruise Line Restaurant Management
- Nutritionist
- Test Kitchen
- Food Science
- Food Photography
- Baker
- Restaurant Owner



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Dover Regional Career Technical Center

25 Alumni Drive, Dover NH 03820

For more information: 603-516-6978



Electrical Technology & Renewable Resources

Click here to view the [Program Website](#) or the [Program Video](#)

Electrical Technology & Renewable Resources Program

Year 1 – *Electrical Technology & Renewable Resources I*

Year 2 – *Electrical Technology & Renewable Resources II*

Year 3 – *Electrical Technology & Renewable Resources III –
Solar Technology*

ELECTRICAL TECHNOLOGY & RENEWABLE RESOURCES I

Grades: 10-11

2 CREDITS (Full-year course)

Want to explore the world of electricity and become an apprentice electrician? Study the basic DC/AC theory and Ohms Law as they are applied to various types of circuits. Experience the safe and proper use of all hand and power tools utilized in the electrical/construction trades. Receive 250 hours of hands-on work experience towards your Journeyman's license. Assess the latest edition of the National Electrical Code and experience renewable energy systems. Configure and install solar and wind energy systems discovering how to convert, transmit, and store these renewable energies.

Note: All students are required to pay a \$80 fee for the cost of supplies and the student's own electrical tools kit that they will be able to take with them when they graduate, and NH State Electrical Apprentice License fee (\$30).

REQUIRED: Students must submit a CTC program application.

ELECTRICAL TECHNOLOGY & RENEWABLE ENERGY SYSTEMS II

Grades: 11-12

2 CREDITS (Full-year course)

Electricity got you all wired up? Interested in a career in the Electrical Trades? Explore advanced residential and commercial wiring projects. Discover industrial motors and controls and receive a Telecommunication Cabling Certificate. Complete an OSHA 10 hour safety training program and receive an OSHA 10 card for the construction industry. Receive an additional 250 hours of hands-on work experience towards your Journeyman's license. Upgrade your skills in renewable energy systems and develop the skills required to obtain a Journeyman Electricians License.

REQUIRED: Successful completion of Electrical Technology & Renewable Resources I and submission of a CTC program application. NH State Electrical Apprentice License fee (\$30).

TOPICS OF STUDY:

- Electrical Safety
- Electrical Theory
- Residential Wiring
- Raceway Installation
- Automation & Industrial Control Systems

COLLEGE ALIGNMENT:

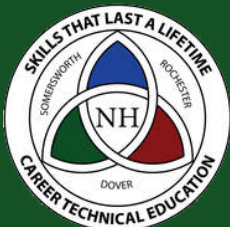
- Lakes Region Community College
 - LELC1260 Residential Wiring & Electrical Blueprint Reading

LICENSING, CERTIFICATION, CREDENTIALS:

- 2-yr program partially fulfills requirements for NH State Electrical Apprenticeship Night School program
- 500-hours work experience toward Journeyman's license
- OSHA-10 Certification
- S/P2 Safety

CAREER PATHWAYS:

- Residential Electrician
- Commercial Industrial Electrician
- Structured Cabling Specialist
- Electrical Inspector
- Process Control Specialist
- Solar Power Installer



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Electrical Technology & Renewable Resources Cont.

Click here to view the [Program Website](#) or the [Program Video](#)

Electrical Technology & Renewable Resources Program

Year 1 – Electrical Technology & Renewable Resources I

Year 2 – Electrical Technology & Renewable Resources II

Year 3—Electrical Technology & Renewable Resources III—
Solar Technology

ELECTRICAL TECHNOLOGY & RENEWABLE RESOURCES III - SOLAR TECHNOLOGY

Grade: 12

1 CREDITS (Semester long course, offered in semester 2 only)

This course is designed as a general introduction to Solar Photovoltaic (PV) technology and will prepare students to achieve a basic knowledge of the applications, design, installation and operation of solar PV systems. Students will learn the fundamental concepts and skills involved with becoming a solar PV installer. The course content is consistent with the North American Board of Certified Energy Practitioners (NABCEP) Solar PV Entry Level Learning Objectives. Percentage of time spent on course topics, and the weight placed on assessment questions match the learning priority levels established by NABCEP's course and test specifications. After successful completion of this course, students are eligible to register for the optional NABCEP Solar PV Entry Level Exam. Students that successfully pass the exam will be eligible for a job right out of high school in the field of Alternative/Renewable Energies.

Note: NH State Electrical Apprentice License fee (\$30).

REQUIRED: Successful completion of Electrical Technology & Renewable Resources I or concurrently taking Electrical Technology II and submission of a CTC program application.

TOPICS OF STUDY:

- Electrical Safety
- Electrical Theory
- Residential Wiring
- Raceway Installation
- Automation & Industrial Control Systems

COLLEGE ALIGNMENT:

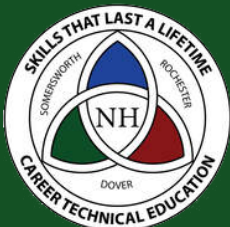
- Lakes Region Community College
 - LELC1260 Residential Wiring & Electrical Blueprint Reading

LICENSING, CERTIFICATION, CREDENTIALS:

- 2-yr program partially fulfills requirements for NH State Electrical Apprenticeship Night School program
- 500-hours work experience toward Journeyman's license
- OSHA-10 Certification
- S/P2 Safety

CAREER PATHWAYS:

- Residential Electrician
- Commercial Industrial Electrician
- Structured Cabling Specialist
- Electrical Inspector
- Process Control Specialist
- Solar Power Installer



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Dover Regional Career Technical Center

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For more information: 603-516-6978



Fire Science & EMT

Click here to view the [Program Website](#) or the [Program Video](#)

Fire Science & EMT Program

Year 1 – Fire Fighter I

Year 2 – EMT or Health Science 1

FIREFIGHTER I

Grades: 10-12

2 CREDITS (Full-year course)

Students choosing a career path in Firefighting and EMS can get started at Dover High School and Regional Career Technical Center. Students will be immersed in a rigorous training program to prepare them for a career in Emergency Medical Services. Students will learn about the scientific and mechanical principles associated with fire prevention. Students will become adept at rescue techniques, fire suppression, and other technical skills.. Included in this course is learning about the proper use of tools, apparatus and equipment while also learning how to don and doff gear within 90 seconds.. This program is offered in partnership with the Dover Fire Department and taught by NH State Certified Fire instructors offering hands on experiences and lessons at the North End Fire station in Dover. All classes will be at the station and students will be transported via bus daily for a double block. This is a semester long course. It is supported by the New Hampshire Fire Standards and Training Commission. Students seeking to enroll must be physically able to perform requirements associated with Firefighter I Certificate and must have medical permission.

Note: A parent or guardian must comply and sign the completed application and agree to comply with all rules and regulations cited on the special application prior to acceptance into the Academy.

REQUIRED: Students must submit a CTC program application. Students must have a current medical examination comparable to the National Fire Protection Association Standard #1582. Students are evaluated for heights phobia and claustrophobia; they should not be considered obese and they must have the stamina and physical ability to work in untenable conditions for several consecutive 30-minute durations.

TOPICS OF STUDY:

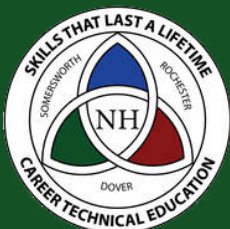
- Fire Behavior
- Fire Science
- Fire Fighting Skills:
 - Ladder
 - Search/Rescue
 - Fire Fighting Equipment
 - Forceable Entry
 - Ventilation
 - Identify General Building Type
 - Fire Suppression
- Behavioral Emergencies
- Cardiac Emergencies
- Environmental Emergencies
- Non-Traumatic Shock
- Pain Management
- Respiratory Distress
- Trauma Protocol
- Airway Management
- Physical and chemical Restraints

LICENSING, CERTIFICATION, CREDENTIALS:

- Professional Rescuer CPR and AED
- Level 1 Firefighter Certification
- National Registry of Emergency Medical Technicians - Basic EMT Certification

CAREER PATHWAYS:

- Paramedics
- Firefighter
- EMT
- Public Safety
- Medical Field



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Fire Science & EMT Cont.

Click here to view the [Program Website](#) or the [Program Video](#)

Fire Science & EMT Program

Year 1 – Fire Fighter I, Health Science 1, BioMed 1, or Sports Med 1

Year 2 – EMT

EMERGENCY MEDICAL TECHNICIAN (EMT)

Grade: 12

2 CREDITS (Full-year course)

This course trains students to handle emergency situations where assessing and treating victims of sudden illness and injury is required. This is a demanding course requiring strong study skills. The primary focus of the Emergency Medical Technician (EMT) is to provide basic emergency medical care and transportation for critical and emergent patients who access the emergency medical system. Emergency Medical Technicians perform interventions with the basic equipment typically found on an ambulance. This course is offered in collaboration with the New Hampshire Bureau of EMS, and follows a national curriculum that provides students with experience and knowledge of the skills and responsibilities of an EMT. Student Medical Release required by New Hampshire Department of Safety Division of Fire Standards and Training and Emergency Medical Services. Upon successful completion of this course, students who are 18 years of age will be eligible to take the EMT certification exam through the National Registry of EMTs.

Note: \$95 CBT Exam (cognitive), \$80 State practical exam fee (note: host site sets price so this may vary depending on state of pandemic and available testing facilities). There are three chances to take the cognitive exam in which a new payment of \$95 must be made for each attempt.

REQUIRED: Successful completion of Firefighter I, Health Science I or Sports Medicine I and current certification in First Aid and CPR and submission of a CTC program application.

TOPICS OF STUDY:

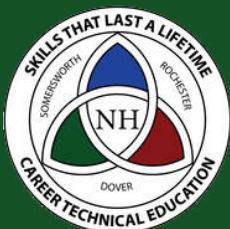
- Fire Behavior
- Fire Science
- Fire Fighting Skills:
 - Ladder
 - Search/Rescue
 - Fire Fighting Equipment
 - Forceable Entry
 - Ventilation
 - Identify General Building Type
 - Fire Suppression
- Behavioral Emergencies
- Cardiac Emergencies
- Environmental Emergencies
- Non-Traumatic Shock
- Pain Management
- Respiratory Distress
- Trauma Protocol
- Airway Management
- Physical and chemical Restraints

LICENSING, CERTIFICATION, CREDENTIALS:

- Professional Rescuer CPR and AED
- Level 1 Firefighter Certification
- National Registry of Emergency Medical Technicians - Basic EMT Certification

CAREER PATHWAYS:

- Paramedics
- Firefighter
- EMT
- Public Safety
- Medical Field



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Dover Regional Career Technical Center

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Health Science Technology

Click here to view the [Program Website](#) or the [Program Video](#)

Health Science Technology Program

Year 1 – Health Science Technology I or Biomedical Science I

Year 2 – Health Science Technology II or EMT or Biomedical Science I/II

Year 3—EMT or Biomedical I/II or Health Science Technology II

HEALTH SCIENCE TECHNOLOGY I (LNA)

Grades: 10-11

2 CREDITS (Full-year course)

The course will reveal various healthcare occupations and will provide the basic skills needed to practice in a healthcare setting. Instruction includes an introduction to medical terminology, anatomy and physiology with an emphasis on body systems, disease process, and disorders. The HST I program utilizes the New Hampshire Board of Nursing-Nursing Assistant program approved curriculum providing 160 hours of theory instruction and 60 clinical hours in Assisted Living and Long-Term Care facilities. Students will be given the opportunity to provide direct patient care utilizing nurse assistant skills. Successful completion of this program and the NH State License written & skills exam will allow the students to apply for a NH Board of Nursing License to practice as a Licensed Nurse Assistant. Students will also complete an American Heart Association Health Care Provider & Automatic External Defibrillator (AED) certification and American Heart Association First Aid Certification. Students accumulate clinical hours, evenings, weekends and after-school. They are expected to arrange for their own transportation.

Note: State LNA written and skills licensure exam, \$200; on-line license, \$35; Live-Scan fingerprinting, \$55; Uniforms, \$25; and other health care equipment, \$25. Requirements and Fees are subject to change.

Note: Fulfills a science credit.

Note: This may be a concurrent enrollment course which allows students the opportunity to earn college credits while earning credits toward their high school diploma. The cost of earning college credits through this course is currently \$150.00.

REQUIRED: Students must submit a CTC program application. HST I students must be at least 15 years of age by course completion. Each year all HST I students must agree to a criminal background check, a physical examination, TB test, drug screen, annual flu shot and provide a copy of their current immunization record. Uniform, duty shoes and watch with a second hand are required.

TOPICS OF STUDY:

- Anatomy & Physiology
- Diseases & Disorders
- Medical Mathematics
- Health Care Delivery Systems
- Employability & Communication Skills
- Legal Responsibilities
- Ethical & Safety Practices
- Healthcare Teams
- Disease Prevention
- Information Technology

COLLEGE ALIGNMENT:

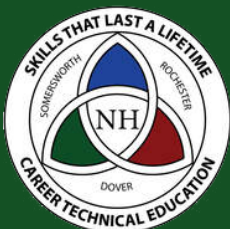
- Great Bay Community College
 - AH110 Medical Terminology

LICENSING, CERTIFICATION, CREDENTIALS:

- NH Board of Nursing, Nursing Assistant License
- American Heart Association Health Care Provider & Automatic External Defibrillator (AED) certification
- Advanced Skills for Health Care providers & Restorative Certificate
- Electrocardiography (EKG) Technician

CAREER PATHWAYS:

- Medical Doctor
- NP, RN, LPN, PA, LNA, MNA, EMT
- Radiology/Ultrasound Technician
- Physical, Occupational, Speech, Respiratory, or Radiation Therapist/Aide
- Health Administration & Policy
- Psychologist or Social Worker/Counselor



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Health Science Technology Cont.

Click here to view the [Program Website](#) or the [Program Video](#)

Health Science Technology Program

Year 1 – Health Science Technology I or Biomedical Science I

Year 2 – Health Science Technology II or EMT or Biomedical Science I/II

Year 3—EMT or Biomedical I/II or Health Science Technology II

HEALTH SCIENCE TECHNOLOGY II

Grades: 11-12

2 CREDITS (Full-year course)

This course offers students the opportunity to complete a Medical Terminology Course (3 credits) offered by Great Bay Community College. An Electrocardiogram (EKG) Technician Certification Program is also provided which prepares the student to work as an EKG Technician. Students are also prepared to complete clinical job observations in a hospital setting (Emergency Care, Wound Care, Respiratory Care, Physical Therapy, Occupational Therapy, Speech Therapy, Woman & Children Department, Medical Surgical Units, Pain Center, Same Day Surgery, Endoscopy, Etc.) Emphasis is placed on critical thinking skills and analyzing professional and ethical characteristics required of healthcare professions. The course provides students with a strong foundation of knowledge and skills to successfully transition into a post-secondary health care program. Additional certifications and internships may be available.

Note: Fulfills a science credit.

Note: At the start of the semester students are required to have their LNA licenses. In addition, students must have documentation for the following: TB test, recent physical, annual flu shot, criminal background check and full uniform. Students cannot go off-site for clinical experience without these requirements being met.

REQUIRED: Successful completion of Health Science I and current Certification in First Aid and CPR. Students must submit a CTC program application.

TOPICS OF STUDY:

- Anatomy & Physiology
- Diseases & Disorders
- Medical Mathematics
- Health Care Delivery Systems
- Employability & Communication Skills
- Legal Responsibilities
- Ethical & Safety Practices
- Healthcare Teams
- Disease Prevention
- Information Technology

COLLEGE ALIGNMENT:

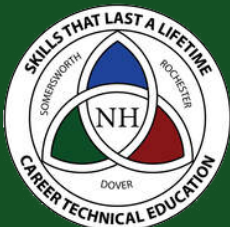
- Great Bay Community College
 - AH110 Medical Terminology

LICENSING, CERTIFICATION, CREDENTIALS:

- NH Board of Nursing, Nursing Assistant License
- American Heart Association Health Care Provider & Automatic External Defibrillator (AED) certification
- Advanced Skills for Health Care providers & Restorative Certificate
- Emergency Medical Technician Basic (EMT)

CAREER PATHWAYS:

- Medical Doctor
- NP, RN, LPN, PA, LNA, MNA, EMT
- Radiology/Ultrasound Technician
- Physical, Occupational, Speech, Respiratory, or Radiation Therapist/Aide
- Health Administration & Policy
- Psychologist or Social Worker/Counselor



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Navy Junior Reserve Officer Training Corps

Click here to view the [Program Website](#) or the [Program Video](#)

NJROTC Program - Leadership Education & Training (LET)

Year 1—Leadership Education & Training I (LET 1)

Year 2—Leadership Education & Training II (LET 2)

LEADERSHIP EDUCATION & TRAINING 1 (LET1)

Grades: 10-11

2 CREDITS (Full-year course)

In this course you will evaluate the challenge of managing a process, the qualities of an effective manager, and how to evaluate performance and give instruction. Classroom discussions include how attention to detail becomes a key component in successful career development. You will also gain keen insights to the inner working of our government and national security and how the government authenticates naval operations and support functions. Additional subjects include an introduction to applied physics as it pertains to electromagnetic energy and weapon systems and aircraft operations. You will have the opportunity to be promoted to staff positions and exercise increased responsibilities by managing the operations, administration, public affairs, and supply departments of the NJROTC unit.

Note: Fulfills 1/2 credit math elective.

REQUIRED: Students must submit a CTC program application.

LEADERSHIP EDUCATION & TRAINING 2 (LET 2)

Grades: 11-12

2 CREDITS (Full-year course)

This is where it all comes together! As the leaders of fellow cadets, this is your command! The leadership practicum is designed to give you supervised practical application of previously studied leadership theories. You will be afforded the opportunity to apply those leadership traits outside of the classroom during several field trips. The introduction of ethics becomes an added layer to the leadership continuum and allows for a focused engagement for practicing ethical leadership techniques. By practicing your leadership style, you will have the opportunity to put your legacy into the history of this program. You will then analyze the reasons for the varying degrees of success throughout the year. You will also be provided access to ACT/SAT preparation courses, guidance in selecting a college and pursuing available scholarships. Classroom activities include seminars, reading assignments, classroom presentations, and practical work with younger cadets. Seniors are mentored/guided in their preparation for life after high school including college preparation, scholarship applications, and the variety of choices that are available to them.

REQUIRED: Students must submit a CTC program application.

TOPICS OF STUDY:

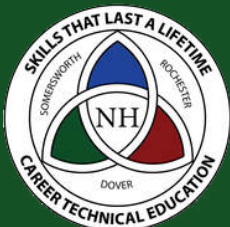
- Professional Skills Communication, Collaboration, Inventiveness, Self-Direction
- Career Planning
- Principles of Ethical Leadership and Followership with Core Values
- STEM Education with SAT Preparation
- Extra-curricular activities including community service projects and events, academic, athletic, drill, marksmanship and orienteering events and competitions.
- Leadership and Civic training opportunities ranging from 1-2 weeks during the summer months include: Basic Leadership Training, Leadership Academy, and Science Technology Engineering and Math (STEM) programs at major universities.

LICENSING, CERTIFICATION, CREDENTIALS:

- Cadets accepted for enlistment, who provide evidence of successful completion of at least 3 years of NJROTC are entitled to advanced promotion to pay grades E-3 upon initial enlistment in an active or reserve component of the Navy, or Air Force, and pay grade E-2 in the Army or Marine Corps; Completion of 2 years are entitled to E-2 in the Navy.

CAREER PATHWAYS:

- 4-year Scholarship Opportunities
- 4- or 2-Year college including US Naval Academy, West Point, US Air Force Academy
- Trade School or Apprenticeship
- Military



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Pre-Engineering

Click here to view the [Program Website](#) or the [Program Video](#)

Pre-Engineering Program (PLTW)

Year 1 – Honors Pre-Engineering I

Year 2 – Honors Pre-Engineering II

Year 3 – Honors Pre-Engineering III

HONORS PRE-ENGINEERING I

Grades: 10

2 CREDITS (Full-year course)

Dig deep into the engineering design process, applying math, science, and engineering standards to hands-on projects. Work both individually and in teams to design solutions to a variety of problems using 3D modeling software, and use an engineering notebook to document their work. Through problems that engage and challenge, explore a broad range of engineering topics, including mechanisms, the strength of structures and materials, and automation. Develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation. This course meets the requirements of Introduction to Engineering Design and Principles of Engineering through Project Lead the Way.

Note: Fulfills .50 computer and .50 visual art credit requirements upon successful completion of this year of the pre-engineering program and presentation of a portfolio to an approved representative of the respective department.

REQUIRED: Successful completion of CP or Honors Geometry or concurrently enrolled and submission of a CTC program application.

TOPICS OF STUDY:

- Technical Drawing
- Design Process
- Technical Measurement
- Electricity/Electronics Theory
- Robotics/Automation
- Programming
- Manufacturing

COLLEGE ALIGNMENT:

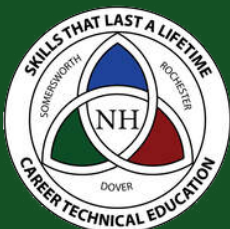
- New Hampshire Technical Institute
 - ELET121N Digital Circuits 1
- New Hampshire Technical Institute
 - MCET105 Engineering Design
 - MCET110 Principles of Engineering
 - MFET241 Computer Integrated Manufacturing

LICENSING, CERTIFICATION, CREDENTIALS:

- OSHA 10
- Certified SolidWorks Associate (CSWA)

CAREER PATHWAYS:

- Mechanical Engineer
- Civil Engineer
- Electrical Engineer
- Draftsman
- Surveyor
- Manufacturing Technician
- Instrumentation/Calibration Technician



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Pre-Engineering Cont.

Click here to view the [Program Website](#) or the [Program Video](#)

Pre-Engineering Program (PLTW)

Year 1 – Honors Pre-Engineering I

Year 2 – Honors Pre-Engineering II

Year 3 – Honors Pre-Engineering III

HONORS PRE-ENGINEERING II

Grade: 11

2 CREDITS (Full-year course)

From smart phones to appliances, digital circuits are all around us. Through the use of cutting edge technologies students will design, build, and troubleshoot digital circuits. Students will apply the fundamental theories of digital logic and explore how digital devices are used to control automated equipment and robotic systems. Manufactured items are part of everyday life, yet most students have not been introduced to the high-tech, innovative nature of modern manufacturing. Discover opportunities related to understanding manufacturing and engage in the manufacturing processes, product design, robotics, and automation. Students can earn a virtual manufacturing badge recognized by the National Manufacturing Badge system. This course meets the requirements of Computer Integrated Manufacturing and Digital Electronics through Project Lead the Way.

REQUIRED: Successful completion of Honors Pre-Engineering I and submission of a CTC program application.

HONORS PRE-ENGINEERING III

Grade: 12

2 CREDITS (Full-year course)

Propel your knowledge in the fundamentals of atmospheric and space flight as you explore the physics of flight. Bring the concepts to life by designing an airfoil, propulsion system, and rockets. Apply basic orbital mechanics using industry-standard software while exploring robot systems through projects such as remotely operated vehicles. Apply engineering principles and practices of the preceding courses to real-world problems. Design and construct the engineering solution to an engineering problem in teams of two to four. Teams will identify an issue and then research, design, and test a solution, ultimately presenting their project to a panel of engineers. Utilize professional skills developed to document the design process to standards. This course meets the requirements of Aerospace Engineering and Engineering Design and Development through Project Lead the Way.

REQUIRED: Successful completion of Honors Pre-Engineering II and submission of a CTC program application.

TOPICS OF STUDY:

- Technical Drawing
- Design Process
- Technical Measurement
- Electricity/Electronics Theory
- Robotics/Automation
- Programming
- Manufacturing

COLLEGE ALIGNMENT:

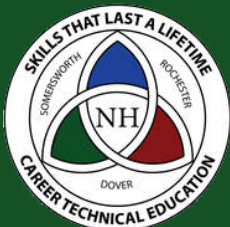
- New Hampshire Technical Institute
 - ELET121N Digital Circuits 1
- New Hampshire Technical Institute
 - MCET105 Engineering Design
 - MCET110 Principles of Engineering
 - MFET241 Computer Integrated Manufacturing

LICENSING, CERTIFICATION, CREDENTIALS:

- OSHA 10
- Certified SolidWorks Associate (CSWA)

CAREER PATHWAYS:

- Mechanical Engineer
- Civil Engineer
- Electrical Engineer
- Draftsman
- Surveyor
- Manufacturing Technician
- Instrumentation/Calibration Technician



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Sports Medicine

Click here to view the [Program Website](#) or the [Program Video](#)

Sports Medicine Program

Year 1 – Sports Medicine I

Year 2 – Sports Medicine II

Year 3 – EMT

SPORTS MEDICINE I

Grades: 10-11

2 CREDITS (Full-year course)

This course is for students interested in health and rehabilitation-related fields such as physical therapy, personal training, exercise physiology/kinesiology, athletic training, nutrition, paramedicine, and emergency-medicine. The first year includes class work and practical hands-on application in the following areas: anatomy and physiology, how the body responds to stressors such as exercise, injury and environmental factors, patient assessment, emergency procedures, treatment and rehabilitation of sports injuries, and exercise implementation and demonstration. There will be a chance to gain certification in BLS CPR (Basic Life Support for the professional rescuer) as well. This course is intended to help students gain an interest and understanding of the health field and the human body with a lens from an athlete's perspective. Skills in this class apply 1-1 with a collegiate program down the road.

REQUIRED: Students must submit a CTC program application.

SPORTS MEDICINE II

Grades: 11-12

2 CREDITS (Full-year course)

This class will expand on the areas covered in Sports Medicine I in depth and also explore more applied concepts and topics such as nutrition, sports psychology, and strength/resistance training. This course includes the National Academy of Sports Medicine (NASM) Certified Personal Training Course and is recommended for students who have a passion for health and fitness concepts. Students ideally leave the program with a rich, surface level understanding of the human body and can apply those skills practically.

Note: \$100 for CPT materials and exam

REQUIRED: Successful completion of Sports Medicine I and submission of a CTC program application.

TOPICS OF STUDY:

- Sports Injury Assessment
- Injury Prevention
- Rehabilitation of Sports Injuries
- Taping & Wrapping Sports Injuries
- First Aid & CPR
- Emergency Procedures

COLLEGE ALIGNMENT:

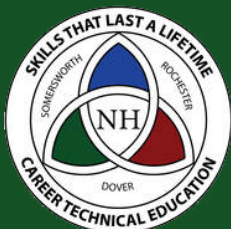
- Manchester Community College
 - HFIT105M Essentials of Exercise Science

LICENSING, CERTIFICATION, CREDENTIALS:

- BLS CPR (Basic Life Support)
- National Academy of Sports Medicine (NASM) Certified Personal Trainer (CPT)

CAREER PATHWAYS:

- Physical Therapy
- Athletic Training
- Strength & Conditioning
- Physical Education
- Personal Training
- Physical Therapy Aide
- Strength & Conditioning Intern



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Welding Technology

Click here to view the [Program Website](#) or the [Program Video](#)

Welding Technology Program

Year 1 – Welding Technology I

Year 2 – Welding Technology II

WELDING TECHNOLOGY I

Grades: 10-11

2 CREDITS (Full-year course)

In this course, we will first and foremost have fun! Welders are in high demand, so this class is designed to teach you the basics of the most common welding processes, along with hand and power tools in the shop. You will work on completing a list of welding objectives for oxy/fuel welding, shielded metal arc welding, gas metal arc welding and gas tungsten arc welding, all in the flat and horizontal welding positions, with mild steel. You will become proficient using thermal arc cutting processes, such as oxy/acetylene and plasma arc. An introduction will be given to welding symbols, technical drawings, and shop math for estimating jobs. At the end of the course, you will apply all your knowledge and create a final project to show off your new skills.

Note: Steel toe boots must be worn in the welding shop.

REQUIRED: Students must submit a CTC program application.

WELDING TECHNOLOGY II

Grades: 11-12

2 CREDITS (Full-year course)

Get ready to step it up a notch! After a review of what was covered in Welding I, we will work towards advancing your skills by learning to weld in the vertical and overhead positions, using SMAW and GMAW. We will learn pipe welding, using a root and cover pass with both SMAW and GTAW. Getting ready for the workforce, we will concentrate on career readiness skills including resume building, interviewing skills, email writing processes and much more. This course will teach you how to prepare for AWS certification testing, decipher weld codes, perform various types of weld inspection, and advance your fabricating skills by incorporating online drawing programs. We will have the opportunity to tour a few local colleges and welding shops, to help prepare you for a career after graduating.

REQUIRED: Successful completion of Welding Technology I and submission of a CTC program application

TOPICS OF STUDY:

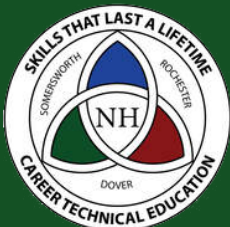
- Safety
- Oxyfuel Cutting & Welding
- Gas Metal Arc Welding
- Plasma Arc Cutting
- Shielded Metal Arc Welding
- Blueprint Reading
- Welding Codes
- Metallurgy
- Fabricating Techniques
- Weld Testing & Inspection

COLLEGE ALIGNMENT:

- Great Bay Community College
 - WELD100G Basic Welding Technologies
 - WELD150G Intermediate Welding Technologies

CAREER PATHWAYS:

- Pipe Welder/Pipe Fitting
- Aerospace
- Underwater Welding
- Pharmaceutical Welding
- Heavy Equipment Repair
- Food Grade Steel Welding
- General Repair
- Sheet Metal
- Jewelers
- Plumbing



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