



**PROGRAM OF STUDIES
2021-2022**

**Huot Career and Technical Center
Program of Studies 2021-2022**

Career and technical education is designed to provide knowledge and technical expertise in various career pathways. It involves the development of an individual's abilities and understanding of attributes that result in future employment or pursuit of post-secondary educational opportunities. All programs articulate with at least one college or professional licensing organization to provide students with the opportunity for advanced placement or dual enrollment. Huot classes can also be used to fulfill academic requirements at the discretion of the sending high school.

Students receive a great deal of laboratory experience in settings that simulate business, industry, and community resources. All Huot classes run 90 minutes per day. Classroom theory and related instruction is provided to enhance learning. There are opportunities for participation in a variety of student leadership groups. Students may also be eligible for and participate in career experiences and internships available within the business community. Honors credits by contract are possible for certain classes at the discretion of the instructor, Huot Director and sending high school.

Priority for enrollment in **level one** programs will be given to 11th and 12th grade students. Sophomores may enroll in certain HTC programs on a space available basis. Entrance to the **level two** of any career and technical education program is competitive and determined by specific criteria available from the career center administration. Males and females are strongly encouraged to explore enrollment in any program of interest.

All students wishing to enroll at the Huot Career and Technical Center must complete an application. Certain programs have specific requirements and age restrictions listed below. All courses and course descriptions in the Program of Studies are subject to annual budget approval, applicable state and local regulation changes and minimum enrollment.

Program Notes and Definitions

- Listed college credit and industry certifications are *potential* outcomes and are not guaranteed
- Times listed are approximate and subject to change
- All offerings are subject to minimum enrollment and budgetary approval
- LRCC, Lakes Region Community College; CMCC, Central Maine Community College; NHTI, New Hampshire Technical Institute; RS, Running Start (transcripted college credit for fee)
- Sophomores may only request Running Start credit on a case-by-case basis at the discretion of the college. Freshmen are not eligible for Running Start credit.
- Running Start and dual enrollment credit is not automatic. Students must register with the college at the start of the semester and fees may apply.

The Laconia School Board and Huot Technical Center do not discriminate in the administration of our educational programs, activities, or employment practices on the basis of race, color, national/ethnic origin, age, gender, religion, disability, sexual orientation, or marital status. This statement is a reflection of the mission of the Laconia School District and refers to, but is not limited to, the provisions of the following laws:

** Title VI and VII of the Civil Rights Act of 1964*

** The Age Discrimination in Employment Act of 1967*

** Title IX of the Education Amendment of 1972*

** Section 504 of the Rehabilitation Act of 1973*

** The Americans with Disabilities Act of 1975*

** NH Law Against Discrimination (RSA 354-A)*

Inquiries regarding discrimination and Laconia School District's compliance with regulations implementing these laws may be directed to: Amy Hinds, Assistant Superintendent, SAU 30, 39 Harvard Street, Laconia, NH 03246, telephone number (603) 524-5710 and ahinds@laconiaschools.org.

Inquiries may also be directed to:

U.S. Department of Education * Office for Civil Rights * 33 Arch Street, Suite 900 * Boston, MA 02110-1491 (617-289-0111) * TTY (877) 521-2172

Equal Employment Opportunity Commission, JFK Federal Building, Room 475, Government Center, Boston, MA 02201 (617-565-3200) **NH Commission for Human Rights** * 2 Chenell Drive * Concord, NH 03301 (603-271-2767)

Rev: July, 2015

Application Process and Required Documentation

Students wishing to enroll at the Huot Career and Technical Center must complete an application. Selection for first year programs is managed by the student's home/sending school based on Huot expectations, regional seat allotments, state regulation and various priority systems that may exist at the home/sending school. Second year application is managed by the Huot Center based on criteria found in our *Student Handbook*.

It is the responsibility of the student's home/sending school to provide the following documentation:

- A completed application for every student
- A copy of any IEP, 504 or medical plans prior to the start of the student's participation in Huot programs. If a student begins classes after the normal start of school, the home/sending school should provide the above mentioned documents within 10 school days.

It is the responsibility of student/parent to complete all required HTC forms including the following:

- Huot medical information and release form
- Huot media release
- Laconia School District internet release form

The Huot Center reserves the right to limit a student's participation in program activities should the above-mentioned documents not be provided in a timely manner.

Academic Credit

Certain Huot courses may be used for academic credit at the discretion of your sending high school. Please see your guidance counselor for a list of courses that may also count as academic (math, social studies, etc...) credit.

Additionally, some level II (second year) courses may be taken for Honors credit with approval of your sending high school and the HTC administration. Honors options require significant additional work and are a year-long commitment. Your instructor will announce this option at the start of the year.

Students should also be aware that the number of credits given vary from school to school. The average is two credits towards high school graduation for a full year course. Students must earn a 65 or better in their course and stay within our attendance limit to earn credit.

Workplace Readiness Focus/Portrait of a Graduate:

The Huot Center and its industry partners, believe strongly that skills and behaviors such as appropriate communications, collaboration, care and commitment are the most important traits we can instill in our students. As such, the center uses our *College and Career Readiness Standards (CCRS)* to evaluate our students on a regular basis. This rubric score represents a significant portion of a student's quarterly grade. Students will receive classroom instruction, mentoring and role-modeling to help them improve in these important areas.

Automotive Technology I - HTC300

Times Offered: 10:33am-12:03pm, 12:30pm - 2:00pm

In the first year of Automotive Technology at the Huot Technical Center students will be introduced to all systems of modern automobiles. Students will learn the proper safety techniques for working in the shop and how to properly select and use the proper tools for the job. They shall pass Industry-established written and performance-based safety tests before engaging in any hands-on element of the program. They will also learn the technical skills needed to run an automotive service facility. They will write repair orders, communicate with customers, and parts suppliers. Students will then learn the basics of engine repair, electronics, suspension and steering, and hydraulic brakes. Program time is divided between classroom instruction and actual vehicle repair and simulations.

Transfer Goals: Effectively communicate with varied audiences and for varied purposes while displaying appropriate technical understanding. Students will be able to apply their knowledge in real world applications.

Enduring Understandings:

- How to efficiently interview the customer about their vehicle in order to properly diagnose their concerns.
- How to effectively communicate with the various roles that contribute to a successful automotive business.

Essential Questions:

- What information is needed when the customer drops off a vehicle?
- What are the habits of good technicians, especially when faced with a problem they might not understand?

Course Highlights

- Gain hands-on experience with the vast tools used in the trade.
- Learn new and emerging technology in our ASE-EF approved program.
- Gain skills and understandings that can be used to launch a career or be well on your way when starting at a college.

Course Outcomes

- University of Northwestern Ohio - *Automotive Maintenance and Light Repair* - 3 college credits
- Student Entry Level ASE Certifications

Automotive Technology II- HTC400

Times Offered: 9:00am - 10:30am

Automotive Technology II at the Huot Technical Center builds on the knowledge gained in the student's first year. The year begins with a recap of tools and safety to make sure the students have the knowledge needed to be safe in an automotive service facility and while working on live vehicles. The students will then explore topics such as engine performance and diagnostics, advanced electronics, drivetrains, manual transmissions, automatic transmissions, and air conditioning diagnostics. Students that have excelled in this year will also be given the opportunity to be sent out on a co-op or internship.

Transfer Goals:

Effectively communicate with varied audiences and for varied purposes while displaying appropriate technical understanding. Apply technical knowledge to analyze and model engine control relationships in the context of a situation in order to make decisions, diagnose and repair problems.

Enduring Understandings:

- Practical application of safe work habits and the correct use of tools and precision test instruments.
- Computerized engine controls are a complex and intricate part of our vehicles.
- Practical application of safe work habits and the correct use of tools and precision test instruments.

Essential Questions:

- What do proper lab and shop safety procedures look like?
- What are the dangers inherently associated with automotive electrical components?
- How do we properly work around them in order to assess problems?
- What specialty tools are used to assess the source of electrical components?

Course Highlights

- Gain hands-on experience on modern vehicles.
- Learn new and emerging technology in our NATEF approved program.
- Gain skills that can be used to launch a career or be well on your way when starting at a college.

Course Outcomes

- University of Northwestern Ohio - *Automotive Maintenance and Light Repair* - 3 college credits
- Student ASE Certifications

AUTOMOTIVE CAREER PATHWAY PLAN OF STUDY		
<p>Career Pathways</p> <ul style="list-style-type: none"> ● Automotive Technician ● Automotive Service Advisor ● Automotive Business Development ● Automotive Parts Specialist ● Warranty Administrator ● Automotive Service Manager ● Automotive Salesperson 	<p>College Pathways</p> <ul style="list-style-type: none"> ● Manchester Community College – ● Lakes Region Community College ● Nashua Community College ● University of Northwestern Ohio 	<p>Professional Certifications</p> <ul style="list-style-type: none"> ● SP/2 Certification ● Entry Level ASE Certification ● Ford Asset Factory Training/Certifications ● Subaru University Certifications <p><i>*Certification may be earned through CTE program</i></p>
<p>Suggested Academic Preparation</p> <ul style="list-style-type: none"> ● Math courses through Algebra II including geometry. ● Personal or Business Finance/Accounting. ● Electronics, Robotics or Engineering course 		

Bio-Medical Technology I/ II - HTC480

(Times Offered: 12:30pm -2:00pm.

**NH Scholars Eligible*

Bio-Medical Technology is the use and application of a part, product, or entire living thing to solve a human medical problem. In this class, students will learn the fundamentals of medical lab science and engage in real science tasks and skills. This class will teach students lab skills necessary for a medical or scientific career in college or in a lab environment, including micropipetting, aseptic procedure, DNA extraction, isolation, and confirmation, basic immunology, gel electrophoresis, PAGE, and how to use the chemical fume hood, thermocycler, and autoclave. Students learn these lab skills as well as advanced biology, chemistry, genetics, and protein studies. This program articulates with Plymouth State University for a possible five credits.

Transfer Goals: Employ scientific method and lab skills to solve a problem.

Enduring Understandings:

- A balance of soft and hard skills are necessary to be successful at a Biomedical Technology facility
- Safety in the Biomedical Laboratory is everyone’s responsibility.
- Scientists must successfully interpret data and communicate findings in order to progress.

Essential Questions:

- How is my life impacted by Biomedical Technology?
- How do scientists know they are correct?
- What does it mean to be clean and safe in the lab?

Course Highlights

- Biotech careers are some of the fastest growing and highest paying in the nation
- Prepare for a variety of career paths ranging from pharmacy and clinical application to research and biomedical design
- Work in cutting edge lab featuring unique tools for biomedical research

Course Outcomes

- Up to 5 credits available through articulation with Plymouth State University

BIO-MEDICAL CAREER PATHWAY PLAN OF STUDY		
Career Pathways <ul style="list-style-type: none">● Science Research● Hospital Lab Technician● Genetic Counselor● BioMedical Engineering● BioMedical Technology● Biologist● Genetic Engineering● Lab Manager	College Pathways <ul style="list-style-type: none">● Plymouth State University (Biology)● UNH (Biomedical Technology)● Great Bay Community College (Biotechnology)	Professional Certifications
Suggested Academic Preparation <ul style="list-style-type: none">● Biology and Chemistry (concurrent)● Math courses through Algebra 2		

Building Construction I - HTC310

Times Offered: 10:33am-12:03pm, 12:30pm - 2:00pm

The first year of the Building Construction program provides skill training in the area of residential and light commercial building construction. We begin with a respectful look at the understanding of Safety in the Building Construction Industry. Construction tools and equipment are then introduced to practice the many skills that are necessary for the residential construction career fields. Students perform measuring tasks and measurement computations. They also will learn and practice safe power and hand tool use. First year students build sawhorses, picnic tables, storage buildings as well as support the second year Building Construction program in some of their school year projects. Curricular components of the program include OSHA 10 training, reading project plans, understanding basic building materials, concrete, and wood framing of floors, walls, and roofs.

Transfer Goals:

- Students will be able to realize the importance of having a foundation in safety within all they do, not just within the building trades. They will aid in creating safe environments at home, in the workplace, and abroad.
- Students will use their new ability to use construction tools and equipment at home or in the workplace.
- Students will be able to take their hands-on experience with building projects and apply that knowledge when confronted with similar projects outside of school.

Enduring Understandings:

- Students will understand that Safety is a real thing and must be respected at all cost across all areas of life.
- Students will understand that using a tool or piece of machinery well takes time and repetition to master.
- Students will understand that there are many things to learn within a project and part of the project is to figure out what those things are.

Essential Questions:

- Why is safety in construction so important and without it nothing can be done?
- Why are there so many different tools and machinery within the world of Construction?
- How many different lessons can be taught from a building project?

Course Highlights

- Hands-on projects, using tools and applying the knowledge learned in class.
- Learn skills that will last a lifetime
- Regular participation of trade professionals to visit and share with students

Course Outcomes

- Ability to operate safely an array of building construction tools and machinery.
- OSHA-10 certification

Building Construction II - HTC410

Times Offered: 9:00am - 10:30am

Second year students continue their experiences in light residential construction by extending their previously learned knowledge towards more challenging aspects of the industry. Students in year two explore new curricular components such as closing-in residential structures, windows and doors, interior finishes, trim, and insulation. Second year students are expected to be prepared with the correct work wear and personal protective equipment as they build projects at off-campus construction sites. Second year students are also expected to create digital portfolios, develop a resume, embark on career exploratory activities such as job shadows and internships, demonstrate strong attendance, and maintain excellent behavior as they represent the program in community projects and activities.

Transfer Goals:

- Students will use their learning to pursue a lifelong career in Building Construction.
- Students will use their learning to become the next generation of Carpenters, eventually taking on the training role for the generation of apprentices and trainees to follow.

Enduring Understandings:

- Students will understand that the field of Building Construction is always changing and improving with technology and it is a lifelong pursuit learning new techniques, materials and best practices.
- Students will understand the importance of Building Construction to the health of a community, protecting the health and wellness while providing comfort for its citizens.
- Students will understand the importance of learning to work with all the different trades within the construction field.

Essential Questions:

- What can students do to improve their network and industry connections to help prepare to enter the trade upon graduation from high school?
- Why is it important for students to continue pursuing the trade and becoming the next generation of craftsmen?
- How many different trades does a typical jobsite require?

Course Highlights

- Hands-on projects, using tools and applying the knowledge learned in class.
- Field Sites, going off school property to work on real job
- Learn skills that will last a lifetime

Course Outcomes

- OSHA-10 certification
- CMCC – *Intro to Hand and Power Tool Safety* - 1 Credit
- Vermont Technical College – 3 Credits

BUILDING CONSTRUCTION CAREER PATHWAY PLAN OF STUDY

<p>Career Pathways</p> <ul style="list-style-type: none"> ● Carpenter, Rough Carpenter, Finish Carpenter ● Roofing Contractor ● Flooring Installer ● Drywall Contractor ● Residential Remodeler ● General Contractor ● Foreman ● General Laborer 	<p>College Pathways</p> <ul style="list-style-type: none"> ● Central Maine Community College 	<p>Professional Certifications</p> <ul style="list-style-type: none"> ● OSHA 10*/OSHA 30 ● HBI
<p>Suggested Academic Preparation</p> <ul style="list-style-type: none"> ● Math courses through Algebra I and Geometry ● Personal or Business Finance/Accounting ● 2 Years CTE Building Construction 		

HUOT BUSINESS and FINANCE COURSES

Personal Finance – HTC330

12:30-2:00pm – Fall/Spring Semester

During this semester course students will learn the basic understanding of personal financial management. Students study the fundamentals of economics and money systems. Students will use textbooks, online resources, simulations and instructional materials to gain an adult perspective on personal financial planning and decision-making. Students will explore the relationships between earning, budgeting, saving, investing, debt, insurance and retirement as part of their own financial life cycle. During the semester, students will explore in depth financial planning for college in order to establish the value proposition inherent in this common first large personal financial decision. Students may elect for an extended version of this course as a Running Start college credit option in conjunction with LRCC, (FIN 180L).

Transfer Goals: Understand and complete a yearly tax return as a dependent or as a head of household. Create a personal financial plan including a budget and appropriate investing goals for their individual situation. Demonstrate an understanding of current college and post-secondary school financing options as well as the impact of their investment choices in education or technical training on their personal financial outlook.

Enduring Understandings:

The relationship of financial literacy to emotional and physical well-being. The time value of money in relation to saving, investing and debt. The abstraction of money and wealth in comparison to the tangible coins and bills used daily for payments.

Essential Questions:

- How would you manage an unexpected 1 million dollar inheritance?
- To which theory of money do you subscribe, the commodity theory of money (money representing a physical commodity) or the credit/quantity theory (money as a social/political construction)?

Course Highlights

- Fundamental financial planning to include banking, managing assets, paying for college, credit, insurance needs, budgets, retirement, and estate planning.
- Introduction to the concepts of investment as part of the planning process.
- Career planning and career decision’s financial significance.
- Range of careers available in business, accounting and finance.

Course Outcomes

- *Personal Financial Management* FIN180L (3 credits LRCC), (Optional)
- LHS math credit possible

Accounting and Financial Management – HTC430

10:33-12:03pm – Fall Semester

This course continues the topics introduced in Business I with a focus on financial management. The student is introduced to the procedures necessary to record, classify and summarize basic business transactions. The course will cover the accounting cycle for service and merchandising sole proprietorships, including preparing worksheets and financial statements. The course will involve using Excel spreadsheets to prepare accounting worksheets in preparation of closing activities and financial report generation.

Transfer Goals:

Students will apply the fundamental accounting principles learned in their role as a small business owner, a mid-level manager in a business or as a private individual managing their personal finances. They will take the concepts of the basic accounting equation's relationship between assets, liabilities and equity to be able to determine a business or private individual's net worth and balance sheet position. The utility of this is fundamental to understanding financial health and profitability of any individual's finances or any business's finances and financial outlook.

Enduring Understandings:

Students' persistent knowledge shall include the relationships between the simple elements of the accounting equation; assets, liabilities and equity. Students shall gain understanding of the double entry accounting system, debits and credits and the application of these concepts in the expanded accounting equation and account types. A final enduring understanding shall be the types of financial reports a business keeps and updates regularly, the relationship and utility of these reports to stakeholders in the business.

Essential Questions:

- Why do businesses rely on accrual accounting and double entry bookkeeping?
- How can a business owner manage their business's cash, equipment and debts effectively?
- Why is accounting called the language of business?

Course Highlights

- Develop understanding of different types of business structures and why they exist
- Introduction to the "Language of Business" and develop basic fluency with accounting principles
- Explore through guest speakers, field trips and hands on activities real-world accounting examples
- Participate in Student Business Enterprise

Course Outcomes

- *Accounting I* (3 credits LRCC-in process)
- QuickBooks User Certification
- LHS math credit possible

Marketing and Social Media Management – HTC431

10:33-12:03pm – Spring Semester

During this semester-long course, students will develop a basic understanding of Marketing and Social Media Marketing. Students study the principles of Marketing including the "4P's". Students will use textbooks, online resources, simulations and instructional materials to gain a perspective on Marketing for Manufacturing, Service and Non-profit businesses with emphasis on 21st century marketing strategies and tactics. During the semester, students will use simulation tools to plan, implement, deploy and measure digital and social media marketing strategies.

Transfer Goals: Understand the evolution of marketing. Recognize the 4P's of Marketing in the consumer media landscape and craft a marketing strategy applying the 4P's for a product, service or non-profit business. Analyze, develop, deploy and measure a digital and social media marketing campaign for a product, service or non-profit business.

Enduring Understandings:

The role of marketing in everyday life and the marketing principles and practices at work in the real world and online. The fundamental difference between being a social media consumer and a social media creator. The power of digital and social media to level the competitive barriers to marketing for small/medium and large product, service or non-profit businesses.

Essential Questions:

- Identify and break down the rationale behind the Marketing 4P's for a major national or global brand's product or service?
- You're an entrepreneur launching a new business, what are the essential first steps in your marketing plan?
- A family friend learns you are taking a course in Social Media Marketing and asks for your help in getting their business to appear as prominently as their local competition, what specifically will you do to help them?

Course Highlights

- Explore the history and current practices of marketing for product, service and non-profit businesses.
- Understand the major social media platforms, their strengths, weaknesses and opportunities as part of a Marketing plan.
- Using simulation tools plan, deploy, measure and improve a social media marketing campaign
- Learn Social Media Marketing principles and practices from industry experts through guest speaker, field trip and project based activities.

Course Outcomes

- *Google Fundamentals of Digital Marketing Certification (pending approval)*

Business Technology Essentials**12:30-2pm - Spring Semester**

This course introduces students to Microsoft Office Business software applications including Word, Excel and PowerPoint. The student will learn to effectively use the different business application software tools essential to success in a business environment. The course will prepare the student to sit for certification and credentialing as a Microsoft Office Specialist thereby demonstrating competency with these essential business technologies.

Transfer Goals:

Students gain working knowledge of word processing, spreadsheet and presentation software tools applicable in academic and business tasks. The communication, analysis and presentation tools understandings are transferable to similar tools. The understanding and proficiency with principles of written communication, numerical analysis and presentations have overarching application in education, career and community life.

Enduring Understandings:

Students' persistent knowledge shall include the effective use of word processing, spreadsheet numeric processing and digital presentations, enabling more effective expression of thoughts, ideas, data and messages in academic, professional and community life. A thorough grounding in the use of business application software carries forward into increased academic achievement in college, higher credibility and professionalism in the workplace and more efficient use of their time in completing academic and professional tasks.

Essential Questions:

EQ1 – Why are there different software tools for writing letters, analyzing numeric data numbers or sharing information to a live audience?

EQ2 – Is it better to build a table with text and data in a spreadsheet, in word processing software or in presentation tools?

EQ3 – What elements make for an effective presentation?

Course Highlights

- *Develop understanding of the 3 fundamental different types of business application software*
- Introduction to Microsoft Office and develop basic fluency with Word, Excel and PowerPoint
- Prepare through training tools, practice projects and practice exams to sit for certification testing as a Microsoft Office Specialist.
- Participate in a Student Business Enterprise

Course Outcomes

- Microsoft Office Specialist certification credential
- Basic fluency with Microsoft Office Business tools
-

BUSINESS PROGRAM CAREER PATHWAY PLAN OF STUDY

Career Pathways <ul style="list-style-type: none"> • Office clerk • Bank Teller/Clerk • Bookkeeper’s assistant • Small business owner • Marketing Assistant 	College Pathways <ul style="list-style-type: none"> • Lakes Region Community College – A.A. in Business • Lakes Region Community College – A.A. in Accounting • Lakes Region Community College – A.A. in Office Technology Management • University System of NH – Business/Finance/Marketing Major 	Professional Certifications <ul style="list-style-type: none"> • Microsoft Office Specialist certification credential • Quickbooks certification
Suggested Academic Preparation <ul style="list-style-type: none"> • English • Mathematics • Economics • Design/Art/Digital Design 	Suggested Internships/Experiences <ul style="list-style-type: none"> • Banking Internship • Marketing Internship • Entrepreneurial Venture • FBLA Member/Competitor • Job Shadows in Business, Accounting, Financial Planning, Marketing 	

MANUFACTURING and ENGINEERING COURSES

Intro to Engineering Design - HTC385 (Semesters)

Times Offered: 12:30pm - 2:03pm, Fall/Spring

**New Hampshire Scholars Eligible*

Level I students will have the opportunity to design, develop, and gain skills in the development of manufactured products using the latest solid modeling software and virtual CNC machinery. Amatrol eLearning Technical Training courses are widely used. Students are introduced to the engineering design process, applying math, science, and engineering standards to identify and design solutions to a variety of real-world problems. Students work both individually and as a team to develop and document design solutions using engineering notebooks.

Transfer Goals:

- Students can identify problems that could be solved through engineering design.
- Organize and manage the engineering design process that includes optimal use of materials, process, time, and expertise.
- Applies research and development and experimentation in the production of new or improved products, processes, and materials.
- Understands engineering as it is practiced as a future career option.

Enduring Understandings:

- Introduce students to the world of engineering, including opportunities for students to explore various career opportunities.
- Define and understand the Engineering Design Process and apply the process to various projects that utilize computerized machinery.
- Promote interdisciplinary and cooperative learning along with generic teamwork skills

Essential Questions:

- How does the engineering design process relate to problem solving and critical thinking?
- What role does creativity have in engineering design?
- Why follow a process?
- What makes a solution the “best”?

Course Highlights:

- Latest 3D Computer Aided Drafting Programs using high powered dual-monitor computer systems
- Virtual CNC set-up and programming of the ProMill 8000 Milling Machine
- Numerous hands-on, self-paced projects and assignments that are connected with “Real-World” experiences.
- VEX – Robotics
- AMATROL eLEARNING Technical Training Courses

Course Outcomes:

- SolidWorks (CSWA-Certified SolidWorks Associate)

Computer Integrated Manufacturing - HTC485

Times Offered: 9:00am - 10:30am

**New Hampshire Scholars Eligible*

Level II students will work with Advanced CNC set-up and operations, Computer Aided Manufacturing (CAM) operations, operational management skills and current manufacturing principles such as Lean production flow and inventory, 5-S workplace organization - Amatrol eLearning Technical Training courses are widely utilized. Students have the opportunity to receive college credits Project Running Start, and the course articulates with Central & Southern Maine Community Colleges. In addition, students can earn industry-recognized certifications such as; CSWA-Certified SolidWorks Associate & Professional Level, Master CAM-Associate Level, MSSC-Certified Production Technician and Tooling University Certificates.

Transfer Goals:

- To provide students with a strong technical education, and effective communication skills that will enable them to have successful careers in a wide range of industrial and professional environments.
- To prepare students for rapidly changing technological environments with the core knowledge central to multidisciplinary development AND personal improvement throughout their professional careers.
- To instill in students a strong sense of humanistic values and professionalism so they can conduct themselves ethically and knowledgeably regarding future technological impacts and issues facing society.

Enduring Understandings:

- Introduce students to the world of engineering including opportunities for students to explore various career opportunities.
- Define and understand the Engineering Design Process and apply the process to projects that utilize computerized machinery.
- Promote interdisciplinary and cooperative learning along with generic teamwork skills.

Essential Questions:

- How does the engineering design process relate to problem solving and critical thinking?
- What role does creativity have in engineering design?
- How are computerized machines changing opportunities in advanced manufacturing?

Course Highlights:

Students utilize advanced features of SolidWorks CAD software to design a working product and blueprint for manufacturing.

- Students utilize AMATROL eLEARNING Technical Training courses.
- Students train on the use of computerized machines worth more than \$50,000 each.
- Students train on the use of a computerized laser cutting machine

Course Outcomes

- Numerous certification opportunities listed in Career Pathway Plan of Study
- *LRCC Running Start – MAN1310L – Blueprint Reading – 3 college credits*
- *LRCC Running Start – MAN1320L– Solid Modeling – 3 college credits*
- *CMCC – PMT111 – Intro to Lathes and PMT116 – Milling & Grinding – 3 college credits*

Principles of Engineering – HTC415

Times Offered: 10:30am-12:03am

**New Hampshire Scholars Eligible*

Through problems that engage and challenge, students explore a broad range of engineering topics, including mechanisms, the strength of materials and structures, automation, and motion. Students develop skills in problem solving, research, and design while learning strategies for design process documentation, collaboration, and presentation. Students develop problem-solving skills using SolidWorks computer aided-drafting software with an emphasis placed upon the concept of developing a 3-D model or solid rendering of an object. Amatrol eLearning Technical Training courses are widely used. State of the art computer hardware and software will be used to emphasize design development processes and computer aided drafting & design.

Transfer Goals:

- To provide students with a strong technical education, and effective communication skills that will enable them to have successful careers in a wide range of industrial and professional environments.
- To prepare students for rapidly changing technological environments with the core knowledge central to multidisciplinary development AND personal improvement throughout their professional careers.
- To instill in students a strong sense of humanistic values and professionalism so they can conduct themselves ethically and knowledgeably regarding future technological impacts and issues facing society.

Enduring Understandings:

- Introduce students to the world of engineering including opportunities for students to explore various career opportunities.
- Define and understand the Engineering Design Process and apply the process to various projects.
- Promote interdisciplinary and cooperative learning along with generic teamwork skills.

Essential Questions:

- How does the engineering design process relate to problem solving and critical thinking?
- What role does creativity have in engineering design?
- Why follow a process?
- What makes a solution the “best”?

Course Highlights:

- Learn and utilize college and industry level software packages (SolidWorks, Chief Architect, SolidCAM, EasyC)
- AMATROL eLEARNING Technical Training courses
- Design parts and utilize a 3D printer to make your concepts real.
- Build and program custom robots using VEX Robotics equipment.
- Build, test custom bridges and solid fuel rockets

Course Outcomes

- SolidWorks (CSWA-Certified SolidWorks Associate)
- SolidWorks (CSWP-Certified SolidWorks Professional)
- ToolingU – Society of Manufacturing Engineers – Additive Manufacturing Certification (Fundamentals and Technician Level)
- Six Sigma (White & Yellow Belt Certification)
- Amatrol – Certified Production Technician (140 hours min.)
- Tooling University – Certificates of Completion options
- SolidCAM (CSCA-Certified SolidCAM Associate)
- *LRCC Running Start – MAN1310L – Blueprint Reading – 3 college credits*
- *LRCC Running Start – MAN1320L – Solid Modeling – 3 college credits*
- *CMCC – PMT111 – Intro to Lathes and PMT116 – Milling & Grinding – 3 college credits*

**CAREER PATHWAY PLAN OF STUDY
ENGINEERING PROGRAM**

<p>Career Pathways</p> <ul style="list-style-type: none"> Aeronautical Engineer Aerospace Engineer Agricultural Engineer Agricultural Technician Application Engineer Architectural Engineer Automotive Engineer Biomedical Engineer Biotechnology Engineer CAD Technician Chemical Engineer Civil Engineer Communications Engineer Computer Programmer Construction Engineer Electrical Engineer Electronics Technician Geothermal Engineer Industrial Engineer Manufacturing Engineer Manufacturing Technician Marine Engineer Mechanical Engineer Metallurgist Mining Engineer Nuclear Engineer Petroleum Engineer Product/Process Engineer Survey Technician Systems Engineer Transportation CNC Programmer CNC Operator Machinist 	<p>Local College Pathways</p> <ul style="list-style-type: none"> ● LRCC – Advanced Manufacturing and Electromechanical Technology ● NHTI – Industrial Design, Mechanical, Manufacturing, Computer, Robotics Engineering. ● Central Maine Community College - Electromechanical Technology, Precision Machining 	<p>Professional Certifications</p> <ul style="list-style-type: none"> ● Certified SolidWorks Associate Level* ● Certified SolidWorks Professional Level* ● Six-Sigma White Belt Certification* ● Six-Sigma Yellow Belt Certification* ● Additive Manufacturing Certification(s) – Society of Manufacturing Engineering* ● Amatrol – Certified Production Technician Certification* ● Various Tooling-University Certificates of completion* ● OSHA 10* ● SolidCAM Certification* <p><i>*Certification may be earned through this CTE program</i></p> <hr/> <p><u>Embedded Credits (in addition to the Elective credit – see below) (currently for Laconia High School students)</u></p> <p align="center"><u>Art or Technology</u></p>
<p>Suggested Academic Preparation</p> <ul style="list-style-type: none"> ● Introduction to Engineering Design ● Computer Integrated Manufacturing ● Physics I & II ● Pre-Calculus ● Statistics ● Computer Science ● Robotics 		

Culinary Arts I - HTC360

Times Offered: 10:33am-12:03pm, 12:30pm - 2:00pm

Students will learn the proper use and maintenance of commercial kitchen equipment that are used in most restaurants. Safety, sanitation, equipment operation, and employability skills is a daily focus. Students with a strong work ethic, problem solving skills and good time management should be able to excel in this program. This program runs a restaurant which is open several days per week catering to staff and students. The expectations are that students will learn how to create, bake, or cook a variety of foods by themselves to a level suitable to sell it to customers.

Transfer Goals: Students will create, bake, or cook a variety of foods independently to a level suitable to sell to customers.

Enduring Understandings:

- It is essential to understand and apply all aspects of safety and sanitation. Everything from personal hygiene, food handling, equipment operation, and customer service, can put a consumer at risk for injury, illness or death.
- It is important to know how to correctly use small kitchen tool, equipment and knives to be safe, efficient and productive.
- The foundation of Culinary Arts is reading a recipe and being able to create the product as is supposed to be.

Essential Questions:

- What are the main factors necessary to work in a restaurant environment?
- What are the benefits of proper standardized measurements, tools, recipes and safety in the restaurant operations?

Course Highlights

- Prepare and serve food in a working kitchen/restaurant.
- Use cutting edge kitchen equipment.
- Cook, bake and try a variety of foods.

Course Outcomes

- Serv-Safe Food Handler Certificate®

Culinary Arts II - HTC460

Times Offered: 9:00am - 10:30am

Students will continue to use the kitchen equipment to improve their skills. Safety, sanitation, equipment operation, and employability skills are a daily focus. Students will be expected to prep, cook and bake food to be served in the restaurant by the end of class time. Teamwork and individual skills are stressed to prepare students for immediate employment or to seek advanced education at a Culinary Arts School. The units of study for Culinary II are as follows: Safety & Sanitation, Measurements, Basic Baking, Yeast Dough, Breads, Appetizers, Stocks, Sauces, Soups, Meat, Poultry, Menu Planning.

Transfer Goals: To prepare students for immediate employment and or to seek advance education in Culinary Arts.

Enduring Understandings:

- Baking is a science and requires accurate measurements. It is different in many ways from culinary arts but is just as important to the food industry.
- The foundation of Culinary Arts is reading a recipe and being able to create the product as intended.
- Most restaurants that fail are because of bad cost management. Recipe cost, food cost and labor cost must be known and controlled to stay in business.

Essential Questions:

- What skills are necessary for employment in culinary based operations.
- What skills, experience and course work would prepare you for advance education in Culinary Arts.

Course Highlights

- You will be cooking, baking and serving for important community events.
- Your kitchen job changes every day.
- Make and bake items that you don't normally do at home.
- Work through a series of colored aprons to achieve a personalized Chef Coat.

Course Outcomes

- LRCC - LCUL 1510 - Culinary Fundamentals - 3 college credits RS
- LRCC - LHOS 2160 - Catering - 1 college credit RS
- SMCC – CULA-100 – Introduction to Culinary Arts 3 credits

CAREER PATHWAY PLAN OF STUDY		
<p>Career Pathways</p> <p>Executive Chef Chef Pastry Chef Sous Chef Caterer Cook Baker Prep Cook Food & Beverage Manager Food Service Manager Nutritional Consultant Restaurateur</p>	<p>College Pathways</p> <p>Johnson & Wales Lakes Region Community College Culinary Institute of America Central Maine Community College</p>	<p>Professional Certifications</p> <p>ServSafe Food Handlers Certification ServSafe Allergens Certificate ServSafe Managers Certification</p>
<p>Suggested Academic Courses/Other Requirements</p> <p>Fundamentals of Math Home Economics Business Economics *A uniform is required for this course.</p>		

Digital Media Arts I - HTC390

Times Offered: 10:33am-12:03pm, 12:30pm - 2:00pm

First year students in the Digital Media Arts program will learn basic skills in commercial arts production. Students will begin by learning basic design principles and move on to numerous digital media arts including commercial photography, video production, filmmaking, television, motion graphics and graphic design.

Transfer Goals:

- Work collaboratively with peers and customers in an effective and professional manner.
- Analyze given problems, apply concepts, connect meanings, design creative solutions and produce quality products.
- Follow through on commitments, make deadlines and communicate effectively

Enduring Understandings: DMA students will understand:

- *That all media pieces (photographs, film, audio, etc..) are constructs. They have been created by someone, using specific tools for a reason. The how and whys of this construction are critical to being able to construct one's own media pieces. Being able to deconstruct others' work and have it inform your own is an integral part of learning and understanding media.*
- *Media is rarely produced and almost never consumed by a singular person. By design it is a collaborative and communal communication. Being able to work with others in a collaborative, creative manner is central to media creation.*
- *Appropriate and proficient use of technology is crucial to successfully bring a project from the initial idea to the final project. Mastery of tools aids your ability to tell your media "story" effectively.*
- *Understanding that others will be consuming your media product, what their viewpoint, experiences and sensibilities are can and should impact why and how you create your message.*
- *Organization. Understanding and utilizing the three phases of production is crucial to the success and effectiveness of media creation.*

Essential Questions:

- How does knowing your audience shape a media project?
- How does knowing how to effectively use media tools (hardware and software) make for a more effective means of communicating?
- In what ways do effective; planning, execution and refinement aid effective production?
- How can you use relationships, collaboration and communication to positively affect the outcome of media projects?

Course Highlights:

Students will learn how to design, capture and edit media projects using the latest equipment and software from Adobe, Apple, BroadcastPix, Nikon and JVC. Students will learn the basics in the areas of; Photography, Graphic Design, Video production and Sound Design. Students will participate in a weeklong live television auction in collaboration with Lakes Region Public Television, Atlantic Broadband, and WLKZ and WJYY radio, as the television production crew.

Course Outcomes

Acceptance into 2nd year

Digital Media Arts II - HTC490

Times Offered: 9:00am - 10:30am

Digital Media Arts II students continue to develop knowledge in the areas of commercial photography, video production, audio design as well as graphic and motion graphic design. Students explore options in post-secondary education, the digital media career fields, as well as business creation and entrepreneurship. Students have opportunities to fine-tune their skills in the areas of the program that most interests them, as well as preparing a portfolio of their work.

Transfer Goals:

- The ability to work collaboratively with peers and customers in an effective and professional manner.
- Analyze given problems, apply concepts, connect meanings, design creative solutions and produce quality products.
- The ability to follow through on commitments, make deadlines and communicate effectively

Enduring Understandings: DMA students will understand:

- Media pieces (photographs, graphics, film, audio, video etc..) are constructs that have been created by someone, using specific tools for a reason. Being able to deconstruct others' work and have it inform your own is an integral part of learning and understanding media.
- Teamwork. Being able to work with others in a collaborative, creative manner is central to media creation.
- Appropriate and proficient use of technology is crucial to successfully bring a project from the initial idea to the final project.
- Empathy. Understanding that others will be consuming your media product, what their viewpoint, experiences and sensibilities are can and should impact why and how you create your message.
- Organization. Understanding and utilizing the three phases of production is crucial to the success and effectiveness of media creation.

Essential Questions:

- How does knowing your audience shape a media project?
- How does effective use of media tools (hardware and software) make for a more effective means of communicating?
- In what ways does effective planning, execution and refinement aid effective production?
- How can you use relationships, collaboration and communication to positively affect the outcome of media projects?

Course Highlights:

Students will continue to learn how to design, capture and edit media projects using the latest equipment and software from Adobe, Apple, BroadcastPix, Nikon and JVC. Students will learn advanced skills in the areas of; Photography, Graphic Design, Video production and Sound Design. Students will participate in a weeklong live television auction in collaboration with Lakes Region Public Television, Atlantic Broadband, and WLKZ and WJYY radio, as the television production crew. Students will compete in State and National production challenges and contests. Students will create college and career materials/ portfolio containing resume, business email, Pitch/proposal documents, business plan, final portfolio/reel

Course Outcomes

Acceptance into Post Secondary Education, placement in training programs, employment.

CAREER PATHWAY PLAN OF STUDY		
<p>Career Pathways</p> <ul style="list-style-type: none"> Possible college and career pathways for this program include: Photographer, Videographer, Audio Technician, CGI operator, Video Editor, Director, Producer, and Graphic Artist. 	<p>College Pathways</p> <ul style="list-style-type: none"> Husson University Kenne State University Northern Vermont University Central Maine Community College Full Sail University New England Technical Institute 	<p>Professional Certifications</p> <p>Adobe Certified associate Apple Certified Professional</p>
<p>Suggested Academic Preparation 2 years CTE Digital Media Arts</p>		

Health Science I - HTC340

Times Offered: 9:00am – 10:30am, 10:33am-12:03pm, 12:30pm - 2:00pm

**NH Scholars Eligible (science)*

Students in Health Science I will explore diversified health occupations, the foundations of healthcare, and basic healthcare skills. Theoretical and clinical instruction includes learning medical terminology, anatomy and physiology, and pathophysiology. In addition, students will earn certifications in American Heart Association Heart-Saver Cardiopulmonary Resuscitation (CPR) and First Aid. Students also learn hands-on skills in the simulated clinical laboratory using equipment designed for scenario-based training for the assessment, care, and management of patients. In addition, students have the opportunity for observation of a variety of health careers in the community.

Transfer Goals:

- Demonstrate comprehension and understanding of theory curriculum and have the ability to transfer retained knowledge into a clinical setting
- Differentiate between wellness and disease
- Understand accepted ethical practices
- Apply technical skills required for career specialty
- Develop writing and verbal literacy skills

Enduring Understandings:

- Essential core qualities demonstrated by effective healthcare professionals
- Concept of wellness and sickness
- Language of health care
- Technology in health care

Course Highlights:

- Explore multiple facets of the healthcare industry
- Safety is a priority in healthcare
- Learn hands-on skills

Course Outcomes

- American Heart Association First Aid Certification
- American Heart Association - HeartSaver Cardiopulmonary Resuscitation (CPR) certification
- Teen Cert (Community Emergency Response Team) certification
- Stop the Bleed certification through FEMA (Federal Emergency Management Agency)

- Potential eligibility for Health Science/Allied Health II

CAREER PATHWAY PLAN OF STUDY		
<p>Career Pathways</p> <p>Dental Services, Diagnostic Medical Imaging, Dietetics, Health Information Technology, Human Services, Emergency Medical Services, Sports Medicine, Laboratory Science, Nursing Military Service</p>	<p>College Pathways</p> <ul style="list-style-type: none"> • NH Community Colleges • University System of NH • Private secondary colleges • Workforce educational opportunities 	<p>Professional Certifications</p> <ul style="list-style-type: none"> • American Heart Association CPR/AED/First Aid* • Stop the Bleed (FEMA)* • Teen CERT (FEMA)* <p><i>*Available through CTE program while enrolled in this class</i></p>
<p>Suggested Academic Preparation</p> <ul style="list-style-type: none"> • 2 years Health Science and Technology (option of Nursing Assistant or Allied Health programs in year two) • Complete OSHA 10 for Healthcare (HST II) • Math courses through Algebra I • Biology • Chemistry 		

Health Science and Technology II/Nursing Assistant Track - HTC440

Times Offered: 9:00am - 10:30am

**NH Scholars Eligible*

The Huot Technical and Career Center, offers a New Hampshire Board of Nursing (BON) approved nursing assistant education program. The Licensed Nursing Assistant (LNA) Program Coordinator and Clinical Instructor are responsible for teaching the competency of the nursing assistant curriculum that is approved by the BON. Upon completion of the curriculum, a nursing assistant shall be able to assist individuals to attain and maintain functional independence in a health care setting. Nursing students are expected to demonstrate comprehension related to individuals’ emotional, mental, physical, and social health needs through skillful, direct nursing-related activities. Upon successful completion of the program and state certification, written and clinical testing students are eligible to apply for LNA licensure through the BON. The course includes both classroom study, simulated lab skills, and clinical experiences in various health care organizations. The BON mandates that nursing assistant students are required to obtain 60 classroom theory hours and 65 clinical hours experience to be eligible to take the State of New Hampshire LNA exam at the end of the program. In addition, per BON and Federal regulations students must maintain a theory and clinical grade of 70 or greater consistently to meet the criteria and eligibility of participating in clinical experiences and end of program State Certification testing.

Additional program requirements may include drug and criminal background testing according to participating healthcare facility policy and meet any other criteria as established by the BON. In circumstances where the Board of Nursing rules and regulations are stricter than local school district policy, the BON rules and regulations shall be the guiding factor in decision making.

Students must meet specific State of New Hampshire Board of Nursing mandated requirements to participate in and complete this program.

Additional costs and requirements include:

- A two-step PPD test administered prior to the start of clinical hours
- Navy-blue scrubs, sneakers or nursing-style shoes
- Criminal background check with Livescan fingerprinting
- State certification examination fees, LNA licensing fees, criminal background fees

Transfer Goals:

- Students must demonstrate comprehension and understanding of theory curriculum and have the ability to transfer that knowledge into a clinical setting.
- Development of writing and verbal literacy skills. Development of critical thinking skills.

Enduring Understandings:

- Healthcare is consumer driven and person-centered.
- Safety is a priority in healthcare.
- Professional, effective communication and collaboration is a requirement in healthcare.

Essential Questions:

- How will a student's LNA skills help to pursue employment opportunities?
- How can student's pursue further education in healthcare?

Course Highlights

- New Hampshire Board approved curriculum to obtain LNA licensure
- Hands-on nursing skills practiced in the SIM lab and in local healthcare facilities
- Eligibility to take the State of New Hampshire Licensed Nursing Assistant (LNA) exam at the end of the program

Course Outcomes

- Student opportunity to explore health care pathways
- Opportunity to sit for competency LNA exam
- Prepares students for college and workforce opportunities

CAREER PATHWAY PLAN OF STUDY

<u>Career Pathways</u>	<u>Educational Pathways</u>	<u>Professional Certifications</u>
<p><u>Medication Nurse Assistant</u></p> <p>Phlebotomy EKG, technician Hospitals Long term care facilities Community Clinics Public school personal student LNA assistant Home care nursing Hospice nursing</p>	<ul style="list-style-type: none"> • Community College Systems • University Systems • Private colleges and universities • Hospital training programs • BON approved continuing education 	<ul style="list-style-type: none"> • OSHA 10 for Healthcare* • American Heart Association CPR/AED/First Aid (HST I) * • Stop the Bleed (HST I) (FEMA)* • Teen CERT (HST I) (FEMA)* • New Hampshire Board of Nursing licensure. <p>Running Start course credits available through Central Maine Community College.</p> <p><i>*Available through CTE program while enrolled in this class</i></p>
<p><u>Suggested Academic Preparation</u></p> <ul style="list-style-type: none"> • Health Science and Technology I (required) • Complete OSHA 10 for Healthcare(required) • Current AHA CPR/AED/First Aid (required) • Math courses through Algebra I (required) • Algebra II (suggested) • Biology (required) • Chemistry (suggested) • Anatomy and Physiology I (suggested) 		

Health Science II: Allied Health Careers - HTC 441

Times Offered: 10:30-12pm, 12:30pm-2:00pm

**New Hampshire Scholars Eligible*

Allied Health Careers prepares students for post-secondary study in a variety of health-related career fields. Students will explore, through a series of guided lab activities, careers in dental, veterinary medicine, medical assisting, clinical lab, diagnostic imaging and emergency medicine. Specific units on medical law and ethics, aseptic procedures, medical terminology, Basic Life Support and medical office procedures are paired with significant opportunities for student specific, independent study.

Students pursuing the Medical Assisting track must meet additional requirements of the clinical site and Huot Center. Space is limited for this option. If interest exceeds capacity of the clinical site the Huot Administration, in consultation with the program instructor and clinical partner, will select the students based on alignment to long-term career goals, demonstrated academic success within Health Science and a personal interview.

Transfer Goals:

- Students will learn to integrate knowledge of an allied health care field with the dynamics and complexity of the health care industry.
- Learn to apply personal and professional ethical principles and recognize the impact of ethical behavior in health care.
- Demonstrate proper laboratory procedures, office procedures, and emerging technologies in the health care industry.

Enduring Understandings:

- Personal choices impact current and long-term outcomes on individuals, family, and society.
- Recognizing risk factors and applying risk reducing strategies can prevent health consequences.
- Knowledge of the major structures and their functions found in each of the major body systems is linked directly to health and quality of life.

Essential Questions:

- How have past health care practices influenced current health care trends?
- How does one use the health care continuum?
- Why are interpersonal communication skills critical in health-care delivery?

Course Highlights:

- Curriculum replicates experiences of an actual medical office environment.
- High level of customization possible based on student interest.
- Students eligible for 40+ hour field-site experience.

Course Outcomes

- Basic Life Support for Health Care Workers
- CMCC – Medical Terminology – 3 college credits
- CMCC - Law and Ethics for the Medical Profession - 3 college credits

CAREER PATHWAY PLAN OF STUDY		
<u>Career Pathways</u>	<u>College Pathways</u>	<u>Professional Certifications</u>
Surgical Technologist Medical Sales Rep Tissue/Organ Procurement & Transplantation Technician Laser/Endoscopic Technician Materials Manager Anesthesia Technician Educator	Community College System of NH: Dental Assisting Dental Hygiene Diagnostic Medical Sonography Health Fitness Professional Health Information Management Legal Nurse Consultant Medical Assistant	*Basic Life Support for Health Care Workers *CMCC – Medical Terminology – 3 college credits *CMCC - Law and Ethics for the Medical Profession - 3 college credits

Surgical First Assistant Surgical Nurse Surgeon’s (Physician’s) Assistant Anesthesiologists/Surgeon Admitting Clerk Community Services Specialist Data Information Manager Health Information Coder Medical Assistant Medical Information Technologist Medical Secretary Medical Office Management Patient Financial Services Representative Pharmacy Technician Reimbursement Specialist Transcriptionist	Medical Coding Medical Laboratory Technician Nursing Occupational Therapy Assistant Orthopedic Technology Paramedic Emergency Medicine Phlebotomy Physical Therapist Assistant Radiation Therapy Respiratory Therapy Surgical Technology Veterinary Assistant Veterinary Technology	*Adult, Child, Infant CPR & First Aid Certification *Certified Clinical Medical Assisting Certification through the NHA *Certification may be earned through this CTE program <hr/> <u>Embedded Credits (in addition to the Elective credit – see below) (currently for Laconia High School students)</u> <u>Science Elective</u>
Suggested Academic Preparation <ul style="list-style-type: none"> ● Health Science I (mandatory) ● Algebra II or Technical Based Math ● Biology ● Chemistry ● Anatomy & Physiology ● Introduction to Psychology ● Advanced Writing ● Communications ● Health Related Fitness 		

PROTECTIVE SERVICES and EMS COURSES

Principles of Emergency Services - HTC365

Time Offered: 9am-10:30am, Spring Semester

This course provides an overview of fire protection and emergency services and related career opportunities. In this introductory level class, students will learn about the science, laws and theories behind fire protection and emergency operations. Upon successful completion of the course, students are encouraged to continue their studies in our Health Science or Law Enforcement program.

This class is intended for Sophomores, however, students in other grades may enroll as space is available.

A pathway in our EMS track would look as follows:

Sophomore Year: *Principles of EMS*

Junior Year: *Health Science I or Law Enforcement I*

Senior Year: *EMT-B (tentative new course for 2022-2023)*

Law Enforcement I - HTC370

Times Offered: 10:33am-12:03pm, 12:30pm - 2:00pm

**New Hampshire Scholars Eligible*

During year 1, students will recognize the social and political influences that contribute to law enforcement as a critical partnership between citizens and the justice system. Particular attention will focus on goals, characteristics, and on the culture of policing within the law. Students will learn and have projects dealing with different policing philosophies such as Problem Orientated Policing, Zero Tolerance Police, and Community Policing. Constitutional Law and major United States and Supreme Court cases will be studied and put into real use with mock interrogations, investigations, and court cases involving students. Students will recognize significant issues

involved in policing, including discretion, discrimination, racial profiling, use of force, pursuits, liability, corruption, and ethics. A major emphasis will be placed on police investigations and reporting techniques. Students will also have the opportunity to learn and pursue certification in several areas such as CPR, first aid, Stop the Bleed, Incident Command System Certification, defensive tactics, and traffic control. Crime scene processing and DNA collection best practice will also be an integral part of the curriculum.

Transfer Goals:

- Able to apply for a job with confidence and understanding of the process.
- Will have the skills to enter college or straight into a career upon completion.

Enduring Understandings:

- Students will show strong ethical and social responsibilities.
- Students will obtain Career Ready Skills in order to achieve success in today's workplace.
- Students will communicate clearly, effectively and with reason.

Essential Questions:

- What makes a good Police Officer?
- How do you become a master of Critical Thinker and Writer?
- Has technology changed the way we police?

Course Highlights

- Crime Scene Processing
- Mock crime scenes and trials.
- Field trips to County Corrections and local Police Department

Course Outcomes

- FEMA NIMS-ICS 100 certification
- CPR/AED certification
- Basic First Aid and Stop the Bleed certification
- Student Emergency CERT
- Accepted into year 2 of the program

Law Enforcement II - HTC470

Times Offered: 9:00am - 10:30am

**New Hampshire Scholars Eligible*

Year two students are expected to participate in an on-site internship at a local law enforcement, corrections, or social agency. Each learning experience in the internship requires students to be active participants, disciplined listeners, critical thinkers, as well as effective writers and public speakers. A weekly log will be kept on the internship and an oral presentation will be made at the conclusion in front of the Advisory Board. Year two students will also build up knowledge that is taught at level one. Advanced crime scene processing, patrol tactics, and advanced levels in the Incident Command will be taught. Conflict resolutions will be an integral part of year two with role playing exercises with actors and students. De-escalated techniques will be stressed. Students will explore the use of force situations through simulated scenarios. Self-management, time management, and goal settings will also be an integral component of the curriculum.

Transfer Goals:

- Able to apply for jobs with confidence and understanding of the process.
- Will have the skills to enter college or straight into a career upon completion.

Enduring Understandings:

- Students will have strong ethical and social responsibilities.
- Students will develop Career Ready Skills in order to achieve success in today's workplace.
- Students will communicate clearly, effectively and with reason.

Essential Questions:

- What role does ethics play in Law Enforcement?

- How important is the documentation?
- How does the evolution of Law Enforcement continue?

Course Highlights.

- Second year internships
- Advanced crime scene processing
- State Prison Tour

Course Outcomes

- NIMS-700 Incident Command Certification
- 3 Credits from Central Maine Community College- Dual Enrollment
- 3 week internship

CAREER PATHWAY PLAN OF STUDY		
Career Pathways <ul style="list-style-type: none"> • Police Officer • Social Service • Public Safety Communications 	College Pathways <ul style="list-style-type: none"> • NHTI • LRCC • Central Maine Community College • Plymouth State University 	Professional Certifications <ul style="list-style-type: none"> • FEMA NIMS-ICS 100 and 200 • FEMA NIMS-ICS 700 • CPR/AED • First Aid and Stop the Bleed • Teen CERT
Suggested Academic Preparation <ul style="list-style-type: none"> • 2 years in corrections or as a part time police officer • Complete a citizen’s police academy. • Business and Writing classes. 		

Plumbing, Heating and HVAC I - HTC395

Times Offered: 10:33am-12:03pm, 12:30pm - 2:00pm

During the 1st year of this course students will learn and demonstrate the basic skills that are essential in the plumbing, heating and HVAC field. Students will have an opportunity to work with a variety of modern tools and materials used by professionals in the field. Students will work with many different materials that are found in both residential and commercial settings. Students will be introduced to the state plumbing code and begin exploring how and why this affects the work we do and how we do it. During the 1st semester students will work toward the OSHA-10 general construction certification. Completion of this certification is a prerequisite to enter Plumbing, Heating and HVAC Technologies II. In the spring students will have the opportunity to work offsite on various Parks and Recreation buildings, as we open them for use in the spring.

Transfer Goals:

- Students will use their learning to work in a safe and efficient manner protecting themselves and other members of the community.
- Students will use their learning to become better problem solvers and to work creatively to find solutions to problems from a technical trade standpoint.
- Students will use their learning to help decide on what career path they plan to pursue upon the completion of high school.

Enduring Understandings:

- Students will understand that working safely is a priority.
- Students will understand Plumbing, Heating and HVAC is a licensed trade that requires further education and continuing education to keep up with changing technology and the needs of society.
- Students will understand they are the future of the trade and there is great opportunity for those will to work for it.

Essential Questions:

- What are the skills required to successfully enter the plumbing and heating trade as a new apprentice?
- How can students prepare to continue their journey into Plumbing, Heating and HVAC II and beyond?
- Why is it important for students to continue entering the trade and becoming the next generation of craftsmen?

Course Highlights

- Hands-on projects, using tools and applying the knowledge learned in class.
- Field Sites, going off school property to work on real job sites.
- Nationally recognized OSHA-10 certification
- Learn skills that will last a lifetime.

Course Outcomes

- State of NH Plumbing Apprentice Program- Begin as a 2nd year apprentice (Must complete both levels of Plumbing and Heating)
- OSHA-10 certification
- 3 Credits from Manchester Community College possible for HVAC-101(during P-HVAC II)

Plumbing, Heating and HVAC II - HTC495

Times Offered: 9:00am - 10:30am

During the Plumbing, Heating and HVAC Technologies II students will continue to add to their knowledge and skills of this diverse field. Students will learn advanced piping techniques for various types of systems. Students will continue to look deeper into the state plumbing code and working more in-depth with blueprints and equipment documents. Students will spend more time working in the field on jobsites installing and maintaining many different types of plumbing and heating systems. In the fall the students will be responsible for winterizing many Parks and Recreation sites and doing any repairs these facilities require. We will begin to explore different types of heating systems, including oil, propane and natural gas. Students will have the opportunity to work with various types of hydronic heating equipment and pipe in boiler systems. Students will be introduced to the basic HVAC concepts including A/C and refrigeration. Students will have the opportunity to work on different types of oil burners, they will learn about the components of the burner and how they work. Students will learn how to install and service various commercial and residential plumbing fixtures.

Transfer Goals:

- Students will use their learning to pursue a lifelong career in the Plumbing, Heating and HVAC trades.
- Students will use their learning to become the next generation of Plumbers and HVAC technicians, eventually taking on the training role for the generation of apprentices and trainees to follow.

Enduring Understandings:

- Students will understand the Plumbing, Heating and HVAC field is always changing and improving with technology and it is a lifelong pursuit learning new techniques, materials and best practices.
- Students will understand the importance of the Plumbing and Heating trades to the health of a community, protecting the health and wellness while providing comfort for its citizens.
- Students will understand the importance of the code and how it protects licensed trades and the technicians of the trade.

Essential Questions:

- What can students do to improve their network and industry connections to help prepare to enter the trade upon graduation of high school?
- Why is it important for students to continue pursuing the trade and becoming the next generation of craftsmen?

Course Highlights

- Hands-on projects, using tools and applying the knowledge learned in class.
- Field Sites, going off school property to work on real jobsites.
- Job Shadowing opportunities
- Compete in the SkillsUSA State Plumbing competition
- Interact with Licensed plumbers and contractors

Course Outcomes

- State of NH Plumbing Apprentice Program- Begin as a 2nd year apprentice (Must complete both levels of Plumbing and Heating)
- OSHA-10 certification
- 3 Credits from Manchester Community College possible for HVAC-101(during P-HVAC II)

CAREER PATHWAY PLAN OF STUDY		
<p>Career Pathways</p> <ul style="list-style-type: none"> ● Plumber ● HVAC Technician ● Gas Fitter ● Oil Technician ● Well Installer ● Water Treatment ● Drain Cleaning ● Duct and Sheetmetal fabricator ● Welder ● Sprinkler Fitter ● Municipal Works 	<p>College Pathway</p> <ul style="list-style-type: none"> ● NH Plumbing Apprenticeship ● Manchester Community College – A.S. or certificate in HVAC ● Gas Fitter’s trainee and classes ● Oil Burner Technician training (NORA and company sponsored) 	<p>Professional Certifications</p> <ul style="list-style-type: none"> ● NH Plumbing License ● NH Gas Fitter’s License ● Various Oil Burner Technician certifications ● A.S. or Certification in HVAC ● Well Pump Installer’s License ● OSHA 10*/OSHA 30 <p><i>*Certification may be earned through the CTE program</i></p>
<p>Suggested Academic Preparation</p> <ul style="list-style-type: none"> ● 2 years CTE Plumbing and Heating ● Complete OSHA 10 ● Math courses through Algebra I and Geometry ● Personal or Business Finance/Accounting 		

Teacher Prep I - HTC350

Times Offered: 10:33am-12:03pm, 12:30pm - 2:00pm

**NH Scholars Eligible*

Teacher Prep I provides students with opportunities to explore the skills and knowledge necessary for careers in education including teaching, social work, child psychology, school counseling, speech or occupational therapy, and other professions which focus on children. Teacher Prep I introduces students to the fundamentals of learning and the foundations necessary for a successful career in education. Units of study include growth and development; learning theory and psychology; health and safety; social emotional learning; lesson planning; classroom and behavior management; and a range of topics related to the ethical, legal, and professional responsibilities of working in the education field. Teacher Prep I students also learn to apply career and college readiness skills through job shadows, field trips, engaging with guest speakers, and hands-on projects. Students have the opportunity to work directly with children on a weekly basis in the Elm Street Preschool. Credits and credentials that may be earned in this course include First Aid/CPR/AED and Running Start college credit from NHTI (Foundations of Education, 3 credits).

Transfer Goals:

- Students will clearly communicate content and information in a manner that is appropriate to the audience and setting.
- Students will apply and model a growth mindset in a variety of settings, especially when working with children and young people.
- Students will thoughtfully reflect on their work and interactions in order to adapt and improve their methods and practices, as necessary.

Enduring Understandings:

- Education is a process of human growth by which one gains greater understanding and control over one’s self and one’s world.
- Education is complex, multi-faceted, and involves continuous development and change.

Essential Questions:

- What is education?
- How does one develop and learn?
- What is school for?
- What are the characteristics of an effective educator?
- What are the fundamentals of education?

Course Highlights

- Working directly with children to enhance skills and apply learning
- Hands-on practical experiences reinforce classroom learning
- Community partners, guest speakers and field trips complement the learning experience
- Participation in Educators Rising events provides opportunities to network with peers and learn from experts in the field

Course Outcomes

- American Heart Association - CPR, First Aid, AED Certification
- NHTI – Foundations of Education – 3 credits

Teacher Prep II - HTC450

Times Offered: 9:00am - 10:30am

**New Hampshire Scholars Eligible*

Students who successfully complete Teacher Prep I with a grade of C+ or better are eligible for acceptance into Teacher Prep II. The second year of the Teacher Prep programs focuses on deepening the skills, knowledge, and experience necessary to prepare for a career in the education field. Teacher Prep II students create a “toolbox” of strategies and procedures for engaging with and supporting diverse populations of students. Units of study include positive behavioral interventions and supports (PBIS); working with exceptional learners; equity in education; student engagement; literacy-based instruction; and community resources. Teacher Prep II students engage with field trips, projects, guest speakers, mock meetings, and mock interviews to apply their college and career readiness skills. Students have the opportunity to participate in an extensive internship related to their chosen career, as well as continuing their engagement with the Elm Street School Pre-K classroom. Other opportunities include participating in the NH Educators Rising state competition and completing a digital professional portfolio that highlights the skills and competencies gained during the two years in Teacher Prep. Students may elect to earn Running Start college credits from NHTI in Introduction to Exceptionalities (3 credits). The Parapro exam is offered in the spring of year II and provides students who earn a passing score the opportunity to qualify for paraprofessional positions in public schools.

Transfer Goals:

- Students will clearly communicate content and information in a manner that is appropriate for diverse audiences.
- Students will effectively engage with diverse learners.
- Students will thoughtfully reflect on their work and interactions in order to adapt and improve their methods and practices, as necessary.

Enduring Understandings:

- All students are capable of learning if provided with appropriate tools and instruction.
- Effective education provides students with opportunities to engage with relevant and rigorous material and build positive relationships.

Essential Questions:

- How can educators enhance student engagement?
- What constitutes an equitable educational experience?
- What are the characteristics of an effective educator?
- How does one build and sustain a career in education?

Course Highlights

- Internships at local schools or social service agencies
- Learn how to plan and implement a lesson plan in a real-world situation
- Teamwork, leadership skills, collaboration and self-management are practiced, and lifelong friendships are made with students and staff from across the Lakes Region.

Course Outcomes

- NHTI – Intro to Exceptionalities – 3 credits
- Parapro exam

CAREER PATHWAY PLAN OF STUDY		
<p>Career Pathways</p> <ul style="list-style-type: none"> ● Preschool Teacher ● Elementary Teacher ● High School Teacher ● Guidance Counselor ● School Social Worker ● School Psychologist ● Child and Youth Programs ● School Administration 	<p>College Pathways</p> <ul style="list-style-type: none"> ● NHTI - Associate of Science in Education* ● Keene State College* <p><i>*Credits transferable to other undergraduate programs, including credits that may be earned through CTE program</i></p>	<p>Professional Certifications</p> <ul style="list-style-type: none"> ● NHTI course credit in Foundations of Education and Introduction to Exceptionalities (6 credits total)* ● First Aid/CPR/AED certification* ● Parapro certification* <p><i>*Certification may be earned through CTE program</i></p>
<p>Suggested Academic Preparation</p> <ul style="list-style-type: none"> ● English and writing courses <p>Other Suggested Activities:</p> <ul style="list-style-type: none"> ● Complete internship through CTE program* ● Membership in Educators Rising* ● Attend Educators Rising professional development conferences and competitions* ● Summer and extracurricular work in the field of education, including camps, afterschool programs, etc. ● Volunteer to work with school and community youth activities. <p><i>*Opportunities provided through CTE program</i></p>		