

PATRICIA A. HANNAFORD CAREER CENTER COURSE DESCRIPTIONS 2024-2025

For more information on these programs and the Patricia A. Hannaford Career Center, visit our website
<http://hannafordcareercenter.org>

The Patricia A. Hannaford Career Center ensures equal employment and educational opportunities regardless of race, color, creed, gender, age, handicapping condition/disability, national origin, or sexual orientation, in compliance with federal and state law.

Career and Technical Programs (designed for 11th and 12th grade students) (Please see grade level Entrance Proficiency Expectations)

AGRICULTURE ACADEMY PROGRAMS

DIESEL POWER TECHNOLOGY

This two-year program, located on the north campus, covers diesel engines, fuel systems, preventive maintenance, electrical/electronics, hydraulics, and power trains on agricultural and medium/heavy duty diesel equipment and trucks. Students learn skills needed for the field as an entry-level agricultural or truck technician. Other topics covered: equipment set-up, precision measuring and tools, adjustment and maintenance, and customer relations. Job shadows are an integral component of the program. Leadership training through FFA and SKILLS USA is part of the course as well as the possibility of participating in the competitions. Students are encouraged to bring in equipment/trucks for repairs. Cooperative work placements may be available for qualified students. Collaboration, safety, attendance, patience, and a positive work ethic are required skills. Students will complete a career portfolio during the two-year program which will assist them in employability and/or post-secondary education.

To check out a typical day: Facebook page - Diesel Power Technology at PAHCC

Credentials: Entry-Level ASE Certifications in Medium/Heavy Truck

Prerequisites: Mechanical Science is encouraged. Proficiency in fractions, decimals, and reading a ruler. Students will be using precision measuring tools. Proficient reading and writing skills are also expected.

Credits: 6 credits (1 science, 5 electives) upon completion of the two-year program. **Qualifying students can earn up to 4 college credits from Vermont State University in Vehicle Electronics (DSL 1040).**

NATURAL RESOURCE MANAGEMENT

Two-Year Revolving Program

Forest Science (2024-2025 - alternating years)

Students learn how forest ecosystems play an essential role in the preservation of biodiversity, mitigate the effects of climate change, and learn how to manage forests as resources for the economies of today and future generations. Harvesting trees, skidding logs, operating a sawmill, producing maple syrup, and developing forest management plans are all cornerstones of the curriculum that encourages students to step beyond their comfort zones.

Land Use and Wildlife Conservation (2025-2026 - alternating years)

Students study the relationships between water quality, soil science, and wildlife conservation efforts. They learn how to operate heavy equipment, utilize GIS mapping software, and work closely with industry professionals to design and execute comprehensive projects for wildlife restoration and agricultural activities.

Credentials: Qualifying students may earn credentials through the Vermont Center for Geographic Information (VCGI), OSHA 10, and NCCER that can lead to employment in high demand and high wage jobs throughout Vermont. Participation in FFA (ffa.org) with students in other agriculture programs is part of the NRM program.

Prerequisites: Entrance Proficiency Expectations, equivalency of 10 credits on transcript, successful completion of Introduction to Agricultural Sciences or another high school science course, strong critical reading skills, and an interest in field work.

Credits: 6 credits (1 math, 1 science, 4 electives) upon completion of the two-year program. **Qualifying students who complete Forest Science may earn 3 college credits in Burls to Boards (AGR 1061) from Vermont State University. Qualifying students may earn college credits from Paul Smith's College, Vermont State University and/or the University of Maine.**

SUSTAINABLE AGRICULTURE

This two-year revolving program provides students with the skills and knowledge to pursue careers and college studies related to today's northeastern diversified agriculture setting. Students assist in the operation of the PAHCC Deep Roots farm and the Garden Patch greenhouse. Visits to local farms and agricultural businesses help develop an understanding of this important economic sector in our community. Participation in the FFA (ffa.org) organization (ffa.org) is an integral part of this course.

Livestock Anatomy/Physiology and Soil/Water/Nutrient Management (2024-2025- alternating years)

Tractor and Farm Safety, Soil/Water/Nutrient Management, Anatomy/Physiology of Livestock Digestion, Reproduction, Lactation; Livestock Nutrition/Feeds and Feeding, Dairy Products, Meat Goat Production, Greenhouse Production & Management, Employment Skills, FFA.

Northeast Livestock Production and Sustainable Diversified Agriculture (2025-2026 - alternating years)

Animal Behavior/Welfare, Meat Science, Ecology of Agriculture, Organic and Conventional Farming Practices, Livestock Evaluation, Greenhouse Production & Management, Poultry Production, Employment Skills, FFA.

Credentials: Greenhouse Worker Protection Standards.

Prerequisites: Entrance Proficiency Expectations, equivalency of 10 credits on transcript, successful completion of Introduction to Agricultural Sciences or a life sciences course and another science course and strong critical reading skills.

Credits: 6 credits (2 science, 4 electives) upon completion of the two-year program.

INTRODUCTION TO AGRICULTURAL SCIENCES (Pre-Technical Foundation program available to 9-12th grades. Meets prerequisite for Sustainable Agriculture and Natural Resource Management.)

This is a year-long course, meeting on alternating days, where students learn about plant and animal sciences, including forestry, food production, livestock management, and soil/water conservation practices. Students will participate in the operation of the "Deep Roots Farm" and the "HCC Sugarworks" facilities, where a deep understanding of food production and land management practices will be developed. Although emphasis is placed on field work, students are required to apply critical reading and writing skills throughout the curriculum as well as foundational principles of science and math.

Students will have the opportunity to participate in the FFA Horse/Dairy Judging Career Development Event. Leadership training through FFA (ffa.org) is an integral part of this course. Students will have the opportunity to be an FFA officer and learn how to run meetings and develop public speaking skills.

Prerequisite: Entrance Proficiency Expectations and expectation in reading: I can independently read informational text for understanding and apply it in a lab setting.

Credits: 120-minute class: 1 science, .5 elective. 80-minute class: .5 science, .5 elective.

ARTS & HUMANITIES ACADEMY PROGRAMS

ADDISON REPERTORY THEATER (A.R.T.)

Take a role in this student-run theater company! Members are responsible for all aspects of production: technical, management, performance, research, and writing. Under the guidance of theater professionals and visiting artists, students produce a full year of shows for presentation in schools and venues throughout the county (typical years include two shows in the fall, one in the winter, and one in the spring). The English portion of A.R.T. explores classical and modern dramaturgical literature, as well as related fiction and non-fiction writings. Students are required to write journals, plays, and non-fiction, conduct research, and complete a professional portfolio.

Stage Technology/Technical Theater

Students explore costuming, special effects makeup, lighting, sound, and scenic design and construction. Students in the second year program assume leadership roles and focus on a capstone project in one area of design/production.

Performance

Students explore auditioning for the stage and screen, career paths in performance, and a variety of acting techniques, with attention paid to movement, voice, and improvisation. Second year students take on leadership roles and complete a capstone project in performance, direction, or theater education.

Credentials: Vermont Arts Portfolio - Theatre Arts

Prerequisites: Entrance Proficiency Expectations, equivalency of 10 credits on transcript, successful completion of two English courses, submission of A.R.T. program application and a meeting with the program instructor. **Students must agree to participate in three productions held after school hours (one in the fall, two in the spring).**

Credits: 3 credits per year (.5 fine arts, 1 English and 1.5 elective). **Qualifying students can earn 3 college credits in Effective Public Speaking (ENG1070) from CCV and may be eligible for membership in either the United States Institute of Theatre Technology or the International Thespians Society.**

Students wishing to continue for a second year may enroll in Level II of A.R.T. with instructor recommendation.

DESIGN & ILLUSTRATION

Are you interested in art, graphic design, or computer art technologies? Spend a year (or two!) exploring physical and virtual art materials and processes. Each D & I student receives an individual Adobe Creative Cloud account with access to the latest software such as Photoshop and Illustrator. A wide range of art materials from spray paint to digital drawing tablets are investigated. Students are encouraged to pursue their own artistic styles on their way to solving real design problems. Each student produces both a physical and digital art portfolio that can be used with applications to colleges, internships, entry level jobs, or gap year opportunities. In this year-long course, emphasis is placed on learning the creative process and exploring personal expression. **For more information and examples of past projects, visit: <https://sites.google.com/pahcc.org/d-i/>**

Credentials: Vermont Arts Portfolio - Graphic Design/Illustration

Prerequisites: Entrance Proficiency Expectations, equivalency of 10 credits on transcript, including a basic art or drawing class or Visual Communications (See below). An interest in and comfort with art and computers is a must.

Credits: 3 credits (1 Fine Art, 2 Electives). VUHS students can receive .5 technology credit as part of the 3 credits. **Qualifying students can earn 3 college credits in Two-Dimensional Design (ART-1060) through Community College of Vermont.**

Second year of D & I acceptance is contingent upon:

1. Space availability. If there are open seats in the program by August 1st, seats will be offered to second year students.
2. Grades. Students must have a 2.5 in both Academic Mastery and Habits of Work in their first year of Design & Illustration to advance to a second year in D & I.
3. Application Supplements. Students must submit 5-8 images of their best work with their application, along with a 3-5 sentence statement indicating why and how they would like to advance their studies in Design & Illustration.

TECHNICAL COMMUNICATIONS – NEW OFFERING!

Technical Communications is an English class which counts toward a student's required 4 credits of English for graduation. Course topics will be personalized based on student's CTE Career Pathway and will ensure student proficiency in required English standards. Students work will focus on career specific topics and preparation for a career path in a technical trade.

Technical students in grades 11 & 12 are eligible to take this class if taking a CTE course at the Hannaford Center does not allow room in the student's schedule to take an English class at their home school. This course may be repeated for credit.

Prerequisites: Students must be in 11th or 12th grade and must be taking a Technical Course at the Patricia A. Hannaford Center.

Credits: 1 English credit.

VISUAL COMMUNICATIONS (Pre-Technical Foundation program which meets the prerequisite for Design and Illustration, available for grades 9 - 12)

VisCom is a year-long course, meeting on alternating days, where students learn how to communicate through creating eye-catching visuals. They learn the fundamentals of art and graphic design, as well as some basic approaches for communicating through the media arts. They use traditional art materials in combination with the latest computer art technologies, including: Adobe Photoshop, Adobe Illustrator, apps, and digital drawing tablets.

Emphasis is placed on learning how to be expressive and creative through experimentation. Careers in the arts are explored and investigated. For more information and examples of past projects, visit:

<https://sites.google.com/pahcc.org/viscom/>

Desirable Qualifications: Interest in art, comfortable with computers, willingness to try new things, interest in digital and new technologies, creative spirit. Also see Entrance Proficiency Expectations for Grades 9-10.

Credits: 120-minute class: 1 fine art, .5 elective. 80-minute class: .5 fine art, .5 elective.

STEM ACADEMY PROGRAMS

AUTOMOTIVE TECHNOLOGY

Located at north campus, students in Automotive Technology gain experience in the day-to-day operations of a working auto repair shop with real customers in conjunction with a systems-based classroom component. The content is broken into the following courses:

Year One

Automotive Technology 101: Introduction to Automotive Technology

- Careers in the Automotive Service Industry
- Shop, Tool, and Industry Safety
- Automotive Tools and Equipment: (Welding, Cutting, Automotive Specialty Tools)
- General Vehicle Maintenance (Oil Change Service, Multi-Point Inspections, and Tires)
- Basic Electronics
- Engine Cooling Systems
- Internal Combustion Engine Operation and Diagnosis

Automotive Technology 102: Science of Automotive Ride and Brake Performance

- Brakes (Disc, Drum, Hydraulics, ABS)
- Steering
- Suspension
- Power Train and Drive Axles
- Alignments

Year Two

Automotive Technology 103: Automotive Electronics

- Vehicle Electronics (Vermont Technical College dual enrollment)
- Hybrids and Electric Vehicles (EV)
- ASE Testing (Review & Certification)

Automotive Technology 104: Science of the Internal Combustion Engine

- Air Condition MAC 609 Certification
- Engine Performance (Air Induction, Fuel Systems, Ignition Systems, Combustion)
- Emissions (EVAP, Sec Air)
- Vermont State Inspection Certification
- ASE Testing (Review & Certification)

Credentials: Student Automotive ASE Certifications

Prerequisites: Auto 101: Entrance Proficiency Expectations, equivalency of 10 credits on transcript. Proficiency in algebra and geometry concepts. Auto 102, 103, 104: Successful completion of Auto 101

Credits: 1 science, 5 electives for completion of all four courses. **Qualifying students can earn 4 college credits from VTC in Vehicle Electronics (GTS 1120).**

CONSTRUCTION TECHNOLOGY

Construction Technology I

The mission of Construction Technology I is to teach students academic, technical, and transferable skills within the construction trades industry, preparing students for multiple career and post-secondary educational opportunities. This year-long course introduces students to the construction trades industry through dynamic projects and real world applications. Major topics begin with jobsite, shop, and industry safety and credentialing, hand and power tool use, familiarization with building materials and their application, and introductions to residential building. The basics of residential carpentry and construction covers framing and wall systems, floor and roof construction, exterior finishing and interior detailing. Basic introductions to plumbing and electrical, fine woodworking techniques and the CNC wood router are covered. Major assignments and projects include: shop/workstation improvements, building of sheds and outbuildings, fine furniture fabrication, and a final culminating project of construction of a mock kitchen and bathroom.

Construction Technology II

The mission of Construction Technology II is to advance students' academic, technical, and transferable skills within the construction trades industry, preparing the student for multiple career, post-secondary, and future educational opportunities. **Major topics include:** introduction to basic construction drawings, site layout and foundations, advanced carpentry and trades accreditation, fine carpentry such as cabinet making, practical applications of electrical, plumbing, and hvac trades as well as window and door installation. This course is centered around a seminal project of **building a Tiny House**. This project takes the student from start to finish on a residential construction project that simulates a real world jobsite from advanced building and design to finishing stages of a small modular home. Beyond this project, there is a high emphasis on cooperative learning placement and experiential learning. This course strongly encourages students to explore working opportunities and actively supports independent inquiry. There is an active emphasis on post-secondary opportunities with local employers as well as training towards the SkillsUSA competition.

Prerequisites: Entrance Proficiency Expectations, equivalency of 10 credits on transcript. Demonstrated proficiency in the use of ratio and rate reasoning to solve real-world and mathematical problems (CCSS Math Content 6.RP.A.3). Demonstrated proficiency in solving real-world and mathematical problems involving area, surface area, and volume. (CCSS Math Content 6.G.A.1) This program heavily utilizes geometry skills. Successful completion of Construction Technology I is the prerequisite for Construction Technology II.

Credits: 3 credits per year (1 math, 2 electives), 6 credits upon completion of two-year program.

ENGINEERING & ARCHITECTURE

This is a two-year, revolving program intended for students who are preparing for college studies in engineering or architecture, planning to enter industry training programs in engineering/architecture, or seeking work in computer-aided drafting and modeling or as an engineering technician. The program is affiliated with Project Lead the Way, a nationally-recognized and academically-rigorous high school engineering curriculum. Students planning to apply to college engineering or architecture programs should continue to take the normal sequence of high school math and science courses in addition to the PAHCC program in order to meet the prerequisites for the college programs.

Principles of Engineering (offered 2024-2025)

This course provides a broad survey of the engineering sciences typically encountered in the first two years of college engineering programs including mechanical systems, statics, kinematics, strength of materials, energy and power, electrical circuits, thermodynamics, hydraulics, robotics, and programming/controls systems. Also covered are technical drawing/drafting/3D computer modeling and methods of production in the manufacturing industry. In each subject area, students progress through hands-on activities that build conceptual understanding, use calculations to assess and predict behavior, and then apply these skills to a design project. Emphasis is on using the Engineering Design Process as a formal method to creatively solve open-ended and complex design problems. There is strong emphasis on building the soft skills essential to engineering practice, such as professional communication, creative problem-solving, teamwork, time management, and project management. Opportunities for technical competitions, job shadows and/or cooperative work experiences may be available for eligible students.. Most math used is at Algebra I level (with some trigonometry that will be taught).

Prerequisites: Proficient in solving Algebra 1 equations for a single unknown, calculating area, and calculating volume. Able to work in a team-based environment. Able to work independently for at least 20 minutes.

Credits: 3 credits (1 math, 2 electives). Students who successfully complete the Project Lead the Way end-of-course examination for Principles of Engineering can earn 3 transferable college credits.

Engineering & Architecture (offered 2025-2026)

This course teaches professional skills in engineering and architecture needed for careers in the design of buildings, infrastructure, and landscapes. The course is suitable for both students with an engineering focus and those primarily interested in architecture (college studies for architecture include engineering coursework). The course starts with drawing skills: free-hand sketching, hand-drafting, computer drafting (AutoCAD), and building information modeling (REVIT). Technical content includes architectural history, architectural design, building technology, the construction process, and the branches of engineering that support building design: civil engineering/land development, structural, mechanical, and electrical. Design projects progress from a simple shed to a single-family residence to more complex commercial projects; specific design projects vary by year but at least some will include hands-on design/build experience and working with real clients. Soft skills essential to professional design practice are emphasized throughout, including communication, creative problem-solving, teamwork, time management, and project management. Opportunities for technical competitions, job shadows and/or cooperative work experiences may be available for eligible students. Most math used is at Algebra I level (with some trigonometry that will be taught).

Prerequisites: Proficient in solving Algebra 1 equations for a single unknown, calculating area, and calculating volume. Able to work in a team-based environment. Able to work independently for at least 20 minutes.

Credits: 3 credits (1 math, 2 electives). Students who successfully complete the Project Lead the Way end-of-course examination in “Civil Engineering & Architecture” can earn 3 transferable college credits.

INDUSTRIAL DESIGN & FABRICATION

Precision Measurement, CNC Programming, Precision Machining

Industrial Design & Fabrication

Level I:

Students will learn the basic skills of machining by having the opportunity to build a variety of projects. We start with basic parts and prints for students to begin an understanding of how to build to print and will progress to more complex projects during the year. Students will also have the ability to do personal projects having input into each aspect of fabrication/build. They will be responsible for designing, purchasing, machining, and measurement verification. Students will have the opportunity to gain exposure in areas of design, machining, and programming.

Students will be tasked with finding measurements based on prints using trigonometric functions and geometry

during the course of the year which is covered in the coursework linking the application of math to practical uses. There will also be some opportunity to get some exposure and hands-on experience in (SMAW and/or MIG) welding techniques in the second half of the year. First year students start with learning the basics and can earn nationally recognized credentials with NIMS (National Institute for Metalworking Standards) for Manual Mill and Manual Lathe operations, along with certificates for completion of precision measurement, drill press operations, and precision grinding.

Level II:

Returning students will focus on more industry preparatory tasks. Students will be using CAD/CAM to design and create programs for CNC machinery. A more focused look at inspection methods will also be practiced during the second year as well with tolerances getting tighter for students with more background understanding of the trade. Students will get some exposure to welding, and soldering, as well during the year to understand additive processes in manufacturing. Students will also have the opportunity to work on individual projects that are approved by the instructor that may grow their depth of knowledge. During this class students will be asked to learn Trigonometry and Geometric functions as they are applied in this trade. The goal after the second year is not to be an expert in design and programming but to have an understanding of what is going on in the machine. The student should also understand good manufacturing practices around fixturing for high volume production. Second year students can earn nationally recognized credentials from NIMS (National Institute for Metalworking Standards) for CNC programming, CNC Mill, CNC Lathe. Additionally students can earn credentials from HAAS machine group for operations of CNC Mill and CNC Lathe.

Prerequisites: Students should be able to add, subtract, multiply, and divide decimals to three places; understand and work with fractions; employ basic customary and metric measuring skills; be able to read a tape measure; be able to perform physical labor in the classroom; and have strong fine and gross motor skills. Students must complete level I before advancing to Level II.

Credits: 3 credits per year (1 math, 2 electives), 6 credits upon completion of two-year program.

PLUMBING & ELECTRICAL - NEW PROGRAM!

Level I (Level II will be offered in the 2025-2026 school year)

Students will learn electrical and plumbing skills through technical study and hands-on skill labs. Students will gain on-site experience at both residential and commercial projects in the area. In addition, students will learn about solar and wind renewable energy, energy conservation, HVAC, blueprint reading, and electrical/plumbing/HVAC system design.

Credentials: American Heart Association Heartsaver® CPR/AED, OSHA Construction Safety, EPA Refrigeration Certificate

Prerequisites: Students should be able to add, subtract, multiply, and divide whole numbers; understand and work with fractions; employ basic customary and metric measuring skills; be able to read a tape measure; be able to perform physical labor on the job site and in the classroom; and have strong fine and gross motor skills.

Credits: 3 credits per year (1 science, 2 electives), 6 credits upon completion of two-year program.

WELDING - NEW PROGRAM!

Level I (Level II will be offered in the 2025-2026 school year)

This two-year program will help participants acquire skills in identifying and utilizing hand tools, power tools, and general equipment found in welding shops.

The course covers the setup and operation of SMAW welding equipment, electrode selection, and welding techniques in various positions. The training encompasses welding tasks such as creating bead pads, fillet welds, and groove welds -- ultimately leading to AWS welding certifications. Additionally, students will be introduced to sheet metal fabrication and light structural fabrication through hands-on projects. Returning students in their second year can delve into advanced welding and metal fabrication, with curriculum and lab exercises designed for heightened preparation for the workforce. The program also offers opportunities for additional certifications through related courses to augment participants' portfolios. Work-study experiences may be available.

Credentials:

American Welding Society Certification (AWS), American Heart Association HeartSaver® First Aid/CPR with AED, OSHA 10 hour Construction Certification.

Prerequisites: Entrance Proficiency Expectations. Proficiency in basic math (addition, subtraction, multiplication, and division) with whole numbers, fractions, and decimals, as well as fundamental customary and metric measuring skills. Students should be capable of physical labor in both job site and classroom settings, possess fine and gross motor skills, and be able to read and comprehend course materials at a 10th-12th grade reading level.

Credits: 3 credits per year (1 science, 2 electives), 6 credits for full 2-year program.

BUSINESS AND SERVICES PROGRAMS

CULINARY ARTS

This is a full-day program requiring two semesters to complete. The hands-on curriculum is driven by the operation of the Glass Onion Restaurant. The course is a real-world introduction to the food service industry focusing on sustainable practices, local ingredients, and supporting our community through food. Through costing projects, executing student-run weeks and independently plated meals, students will be prepared for their next step into post-secondary education or direct-to-industry career paths. Students enrolled in the related Technical Communications (English) course will complete Culinary-specific reading & writing topics and a digital portfolio to pursue employment and education opportunities.

Culinary Arts I (Fall)

Students begin their Culinary Arts journey with safety and sanitation using the industry-recognized credential (IRC) ServSafe Manager curriculum. Upon completion of Safety and Sanitation credentials, we introduce the Tools of the Trade: professionalism, basic cooking techniques, basic baking techniques, and dining room management. Embedded math- and science-related activities allow students to build a foundation of knowledge and skills essential to career success. Students participate in field trips, welcome guest speakers, and gain experience being entrepreneurs.

Culinary Arts II (Spring)

Students build upon Culinary Arts I learning and experience by being intrinsically involved in food business management, nutritional menu planning, food science, and applied food studies.

Personalization of curriculum content and differentiated instruction allows the instructor to guide students toward a successful path for their future. The opportunity to compete in a career and technical student organization (CTSO), SkillsUSA, work shoulder-to-shoulder with industry professionals, and earn college credit is part of the Culinary Arts II experience.

Credentials: ServSafe Food Handler; ServSafe Manager

Prerequisite: Entrance Proficiency Expectations, the equivalency of 10 credits on transcript, successful completion of one math class. Culinary Arts II: successful completion of Culinary Arts I and instructor recommendation.

Credits: 6 credits (1 science, 5 electives) upon completion of both semesters. Students enrolled in Technical Communications earn .5 English credits per semester.

HUMAN SERVICES

Fundamentals of Early Childhood Education (ECE) - Birth through Age Eight

This course offers a comprehensive examination and exploration of the ECE setting, preparing students for professional roles working with children: classroom teacher, occupational or physical therapist, speech-language pathologist, school counselor, child center director, etc. Areas of concentration include safety, child development, developmentally appropriate practice, nutrition, health, observation, guiding behaviors, curriculum, working with families, professionalism, and examination of national/state child care regulations. Application of learning and skills in high-quality ECE centers and schools is a key component of the course, as is the attainment of several industry recognized credentials (IRCs). Dual-enrollment, taught by the PAHCC Human Services Instructor, over the course of the entire year, is available to those who demonstrate competency in all areas through the Community College of Vermont: [EDU 1030 - Introduction to Early Childhood Education](#) or [PSY-2010 - Child Development](#).

Helping Professions

Health

Education

Lifespan Development

Psychology/People

Inclusive Environments

Necessary Services

Giving Back to the Community

This course builds a foundation of knowledge and skills that supports career paths in a variety of helping professions: Educator, School Counselor, Social Worker, Healthcare/Mental Health Professional, Geriatrics, Occupational/Physical Therapist, Speech-Language Pathologist, etc. Key components of human development from conception through end of life are explored, in addition to related areas: safety, nutrition, health, unique populations, and workplace readiness skills. Participation in community-based organizations allows students to apply their learning in authentic environments. Students who demonstrate competency in all areas are recommended for dual-enrollment: [PSY 2070 - Lifespan Developmental Psychology](#) is offered through Vermont State University and taught by the PAHCC Human Services Instructor over the course of the entire year.

Industry-Recognized Credentials:

American Heart Association CPR / AED & First Aid Training

VT Online Mandated Reporter Training

Penn State Better Kid Care Program Certification - Health & Safety

Prevent Child Abuse Vermont Abusive Head Trauma Training

Northern Lights @ CCV *Fundamentals* Training to include:

- Basic Specialized Care Training
- VT Center-Based Child Care and Preschool Program Regulations Training
- Observation of the Practitioner

Prerequisites: Entrance Proficiency Expectations, equivalency of 10 credits on transcript, successful completion of two English courses.

Credits: 6 credits total (2 English or 1 English and 1 Social Studies, 4 electives) upon completion of 2 years in the program, (1 academic and 2 elective credits per year).

MEDICAL PROFESSIONS

This two-year program is designed to prepare students for careers in a wide variety of health professions. Students are introduced to diverse options in health careers, professional standards in health care, college level medical terminology & human biology and scholarly writing. During the second year of the program, students complete the required training to become eligible to test for the Licensed Nursing Assistant credential, which is preparation to work in a variety of settings including residential care, home health and hospitals. Learning is a unique combination of classroom experience, shadowing healthcare professionals in hospital and office settings, clinical experiences, guest lecturers, and related field trips.

Medical Professions I

Through a cooperative agreement with Porter Medical Center, students will have extensive exposure to clinical areas such as emergency care, operating room, laboratory, respiratory therapy, medical/surgical nursing, radiology, cardiology and several other health occupations. Students focus on building a foundation of medical terminology and understanding of human body systems. Students receive First Aid/CPR for the Healthcare Provider training.

Medical Professions II

Porter shadow experiences continue during year two. Advanced training opportunities include Emergency Medical Responder (EMR) training as well as preparation for the Vermont Licensed Nursing Assistant (LNA) licensing exam. Year two introduces students to college-level curriculum; both Medical Terminology and Human Biology are embedded in the course. Students should anticipate regular reading and writing assignments.

Credentials: First Aid & CPR, Emergency Medical Responder, Licensed Nursing Assistant

Prerequisites: Entrance Proficiency Expectations, equivalency of 10 credits on transcript, successful completion of two English courses, two math courses, and two science courses including a lab-based Biology course. Completion of high school chemistry prior to the second year of the program is recommended. Successful completion of year one is required to enroll in year two.

Credits: 6 credits (1 science, 5 electives) upon completion of the two-year program. **Qualifying students can earn up to 6 college credits: 3 credits in Medical Terminology (AHS 1205) and 3 credits in Human Biology (BIO 1140) from CCV.**

PRE-TECH FOUNDATIONAL COURSES

(Available to all students, but designed for 9th & 10th grades. See Entrance Proficiency Expectations.)

AGRICULTURE ACADEMY

INTRODUCTION TO AGRICULTURAL SCIENCES

This is a year-long course, meeting on alternating days, where students learn about plant and animal sciences, including forestry, food production, livestock management, and soil/water conservation practices. Students will participate in the operation of the “Deep Roots Farm” and the “HCC Sugarworks” facilities, where a deep understanding of food production and land management practices will be developed. Although emphasis is placed on field work, students are required to apply critical reading and writing skills throughout the curriculum as well as foundational principles of science and math. Students will have the opportunity to participate in the FFA Horse/Dairy Judging Career Development Event. Leadership training through FFA (ffa.org) is an integral part of this course. Students will have the opportunity to be an FFA officer and learn how to run meetings and develop public speaking skills.

Prerequisite: Entrance Proficiency Expectation in reading: I can independently read informational text for understanding and apply it in a lab setting.

Credits: 120-minute class: 1 science, .5 elective. 80-minute class: .5 science, .5 elective.

MECHANICAL SCIENCE

In this year-long course, meeting on alternating days, students study a variety of mechanical topics related to agriculture, home maintenance, construction, and vehicle maintenance with an eye towards further study at the Career Center in Automotive, Diesel, Industrial Design and/or Construction.

Tractor Safety: Students have the opportunity to obtain an industry certification through the Penn State Extension in safe tractor and equipment operation.

Residential Mechanical: Students study residential branch electrical circuits as well as general pressurized and drainage plumbing. Students practice wiring roughed in construction as well as plumbing with copper, PEX and PVC.

Agricultural Maintenance: Students study DC electrical including 12/24V vehicle and equipment wiring practices. Students learn about small engine principles and systems: fuel, ignition, compression, the four stroke cycle and precision measurement of parts and reading specification charts to determine engine wear. Students use small power equipment to learn different engine systems and how to perform preventative maintenance.

Fabrication: Basic metal fabrication tools including plasma cutting (CNC and Manual), stick welding (SMAW) and wire feed welding (MIG).

Residential Construction: Focus on building tools, measurement, and basic skills applicable to the trade. The course culminates in the opportunity to compete in the FFA (ffa.org) Mechanical Career Development Event.

Credits: 120-minute class: 1 science, .5 elective. 80-minute class: .5 science, .5 elective.

STEM ACADEMY

INTRODUCTION TO STEM

This year-long course, meeting on alternating days, provides an introductory investigation into engineering design, industrial design, introduction to the machining processes, welding and construction through immersive lab rotations, each emphasizing team building, defining the STEM Design Process, applying introductory scientific inquiry, technology, Engineering by Design scenarios, and the mathematics behind them.

Successful students will apply and execute the STEM Design Process to design, fabricate, and solve a final semester project which requires the application of all four content areas.

Credits: 120-minute class: 1 math, .5 elective. 80-minute class: .5 math, .5 elective.

ARTS & HUMANITIES ACADEMY

VISUAL COMMUNICATIONS

VisCom is a year-long course, meeting on alternating days, where students learn how to communicate through creating eye-catching visuals. They learn the fundamentals of art and graphic design, as well as some basic approaches for communicating through the media arts. They use traditional art materials in combination with the latest computer art technologies, including: Adobe Photoshop, Adobe Illustrator, apps, and digital drawing tablets. Emphasis is placed on learning how to be expressive and creative through experimentation. Careers in the arts are explored and investigated. For more information and examples of past projects, visit:

<https://sites.google.com/pahcc.org/viscom/>

Desirable Qualifications: Interest in art, comfortable with computers, willingness to try new things, interest in digital and new technologies, creative spirit.

Credits: 120-minute class: 1 fine art, .5 elective. 80-minute class: .5 fine art, .5 elective.

Entrance Proficiency Expectations

Purpose: Career and technical education courses at the Hannaford Career Center are designed to be rigorous so that exiting students can enter the workforce or go on for further training/education. To this end, it is important for entering students to have certain skills and abilities to realize success at the career center.

Why:

- As we move away from prerequisites in the form of transcribed credits, this is an effort to create a common language and expectations of prospective student ability and interest.
- Additionally, as students and parents “shop” their resources for fulfilling Act 77 Personal Learning Plans, such entrance proficiencies will define skills prospective students will possess in order for them to be successful in HCC programs.

What:

- Resources which were used in creating the center-wide anchor entrance proficiencies include program learning targets, HCC Habits of Work, Common Core State Standards, Next Generation Science Standards, and the Common Career Technical Core.

Who:

- Developed by instructors and administration at Hannaford Career Center.
- Revisions made with input from teachers, school counselors, and administration from Middlebury Union High School, Mount Abraham Union High School, Otter Valley Union High School, and Vergennes Union High School.

For Students in Grades 10-12 Entering Career Center Upper Level Courses

We utilized CCSS for grade 10 and CCTC Career Ready Practices

Problem Solving: I can make sense of problems and persevere in solving them. I can reason abstractly and quantitatively. I can construct viable arguments and critique the reasoning of others. I can use appropriate tools strategically. I can attend to precision. I can look for and express regularity in repeated reasoning. I can use an informed process (scientific method, design or creative process, etc.) to test new ideas, information and practices. (CCTC) (<http://www.corestandards.org/Math/Practice/>)

Reading: I can determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text. CCSS.ELA LITERACY.RST.9-10.2

I can read and comprehend complex literary and informational texts independently and proficiently. CCSS.ELA LITERACY.CCRA.R.10

Writing: I can translate quantitative or technical information expressed in words in a text into visual form (e.g., a table or chart) and translate information expressed visually or mathematically (e.g., in an equation) into words. CCSS.ELA-LITERACY.RST.9-10.7

Research: I can cite sources to avoid plagiarism. I can write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences. CCSS.ELA-LITERACY.CCRA.W.10

Technology: I can demonstrate the ability to use technology for research, critical thinking, decision making, communication, collaboration, creativity and innovation. I can demonstrate the responsible use of technology and an understanding of ethics and safety issues in using electronic media at home, in school and in society. (www.fresnou.org/dept/curr/tech/PublishingImages/K12_Technology_Scope_and_Sequence.pdf)

Citizenship: I can act as a responsible and contributing citizen and employee by being conscientious of the impacts of my decisions on others and the environment around me. I can understand and articulate near-term and long-term consequences of my actions and seek to act in ways that contribute to the betterment of my teams, families, community, and workplace. (CCTC)

Math: I can reason, describe and analyze quantitatively, using units and numbers to solve problems. (VT Math in CTE Standards)

Communication: I can communicate clearly, effectively and with reason. I can use effective tone and presentation skills to articulate ideas. (CCTC)

For Students in Grades 9-10 Entering Career Center Pre-Tech/Foundations Courses

We utilized CCSS for grade 7 and CCTC Career Ready Practices

Problem Solving: I can make sense of problems and persevere in solving them. I can reason abstractly and quantitatively. (CCSS.Math) I can use a process to test new ideas, information and practices. (CCTC)

Reading: I can read informational text for understanding. I can read nonfiction texts for understanding, determining the definitions of symbols and key terms.

Writing: I can communicate using clear and coherent written language. I can write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. CCSS.ELA-LITERACY.W.7.2

Research: I can conduct research using multiple and reliable sources. I can construct viable arguments and critique the reasoning of others. I can evaluate the validity of sources when considering the use and adoption of external information or practices. (CCTC)

I can gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism. CCSS.ELA-LITERACY.CCRA.W.8

Technology: I can demonstrate appropriate use of and utilize technology (word processing, researching, presenting) to convey my ideas and enhance productivity. (CCTC)

Citizenship: I can appropriately conduct myself in a group setting, contributing to my greater learning community. I can act as a responsible and contributing citizen by being conscientious of the impacts of my decisions on others and the environment around me. I think about the near-term and long-term consequences of my actions. I can demonstrate active listening and I can speak with purpose. (CCTC)

Math: I can understand and apply proportional relationships, operations with rational numbers, and linear equations. I can make sense of problems and persevere in solving them. CCSS.MATH.PRACTICE.MP1

Communication: I can use effective tone and presentation skills to articulate ideas to a variety of audiences.

Online Resources:

https://cte.careertech.org/sites/default/files/CCTC_Standards_Formatted_2014.pdf (Common Career Technical Core Career Ready Practices)

<http://www.corestandards.org/>

[http://education.vermont.gov/student-learning/flexible-pathways/career-technical-education/initiatives Math-in CTE](http://education.vermont.gov/student-learning/flexible-pathways/career-technical-education/initiatives/Math-in-CTE)