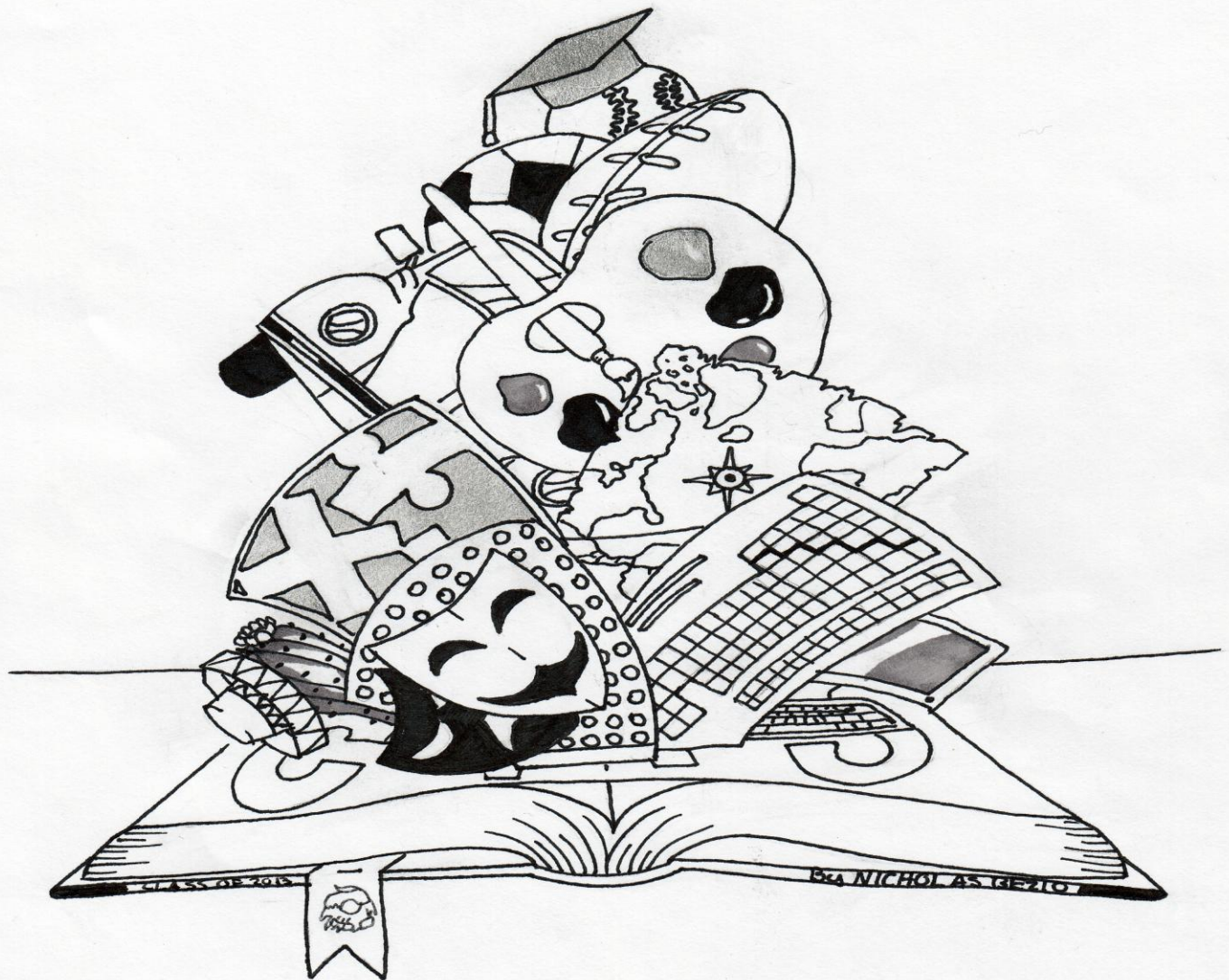


COLCHESTER HIGH SCHOOL



PROGRAM OF STUDIES 2012/2013

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LEADERSHIP AND GOVERNANCE

Colchester High School Leadership Team

Principal, Amy Minor

Athletics, Business, CAP, Health, Leadership Team, Mathematics, NEASC, Professional Development Committee, Science, Tel-T Committee, and Wellness Committee

Assistant Principal, Timothy Emery

Athletics, Alternative Education (Colchester Alternative Program: CAP, and Target Graduation), Attendance, Humanities, Library, Planning Room

Assistant Principal, Peter Memoli

Attendance, CAP, Co-curriculars, Fine Arts, Music, Physical Education, Planning Room, SAP Program, Smart Start, Teacher Advisory, Technology, and World Languages

Director of Student Support Services, Jean Shea

504, CAP, Education Support Team, English Language Learners, Guidance, Nurses, Social Workers, Special Education

Team Leaders

Vito Cannizzaro

Fine Arts, Music, World Languages

Wayland Cole

Humanities (English and Social Studies)

Bob Hall

Guidance and Physical Education

Tara Sharkey

Business and Mathematics

Melissa Vilmont

CAP and Special Education

Will Warren

Health and Science



COLCHESTER HIGH SCHOOL

Amy J. Minor, Principal
Timothy Emery, Assistant Principal
Peter Memoli, Assistant Principal
Jean Shea, Director of Student Support Services
Bernie Cieplicki, Athletic Director
Internet Address: www.csdvt.org/chs

131 Laker Lane • P.O. Box 900, Colchester, VT 05446 • Phone (802) 264-5700 • Fax (802) 264-5757

Dear Parents,

This CHS *Program of Studies* represents the sustained effort of the faculty, administrators, and team leaders to develop the most appropriate programs for our student body. The Green House/Blue House model recognizes that, in many cases, freshmen and sophomores have different needs than juniors and seniors. Green House students are challenged by a common and integrated curriculum. Both ninth and tenth grade years introduce students to the rigor of high school work within a supportive, collaborative, differentiated setting, while preparing students for the independence they'll encounter in the Blue House.

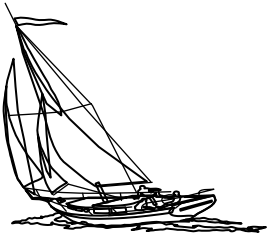
In the Blue House students choose from a variety of courses designed to meet their personal and career goals. Over the last three years we have expanded our advanced placement program as more and more students seek rigorous and specialized courses in their junior and senior year. CHS is also expanding the number of elective offerings in the Blue House to prepare students for the 21st Century and to provide more opportunities for them to explore future careers.

I encourage you to examine the courses offered and how they will fit into your student's long range plans. Every Colchester High School student is required to earn 24.5 credits in order to graduate. I urge you and your student to review the specific requirements year by year and make long-range plans accordingly. Furthermore, for many students course selection is already in place because they have made decisions based on the admission requirements of competitive colleges. It is imperative that students begin in grade nine to examine their post-secondary plans in their classes and with their guidance counselor. Your student will develop a personal learning plan with their counselor that is designed to meet their individual needs as learners and a citizen in the school and beyond.

Do not hesitate to discuss your child's personal learning plan and individual interests with their guidance counselor, teachers, and administration. We very much want to know your child well and support you in making good decisions about the academic, social, and emotional needs of your child. We hope that your student's experience at CHS helps them become a life-long learner that is embedded in rigor, relevance, and relationships.

Sincerely,

Amy Minor
Principal



COLCHESTER SCHOOL DISTRICT

OUR MISSION

The mission of the Colchester School District – *proud of its respect for individual needs and its commitment to integrated learning* - is to ensure that all students will develop the academic proficiency, social skill, and character to be fulfilled, responsible, and involved citizens; we will accomplish this by providing diverse, challenging educational experiences in partnership with families and the community.

COLCHESTER HIGH SCHOOL BELIEF STATEMENTS

We believe that...

All students are capable of learning and succeeding when their developmental needs and learning styles are addressed.

Students need to be exposed to a variety of learning opportunities—among them constructivist, multicultural, integrated, and differentiated instruction.

All individuals in the school have a responsibility to contribute to the improvement of the school and the community.

Teaching and learning prosper in a resource-rich environment characterized by respect, responsibility, and pride.

Students thrive in a safe and secure school environment that honors diversity and tolerance.

Team-work and collaboration are essential to the well-being of the school.

Excellence in teaching and learning require ongoing and targeted professional development for the faculty, staff and administration.

Students must engage actively in planning their education and make connections to the larger world.

Student participation in school governance, through an active and engaged student government, is essential to the success of the school.

Shared leadership and encouragement of teacher involvement are essential to the success of the school.

Schools work well when they are supported by their community.

COLCHESTER HIGH SCHOOL'S ESSENTIAL EXPECTATIONS FOR STUDENT LEARNING

1.0: READING: CHS graduates comprehend, interpret, and evaluate a wide range of written material.

2.0: WRITING: CHS graduates write using standard English for a variety of purposes and audiences.

3.0: PROBLEM SOLVING: CHS graduates are able to problem-solve in a variety of contexts and content areas.

4.0: LEARNING HABITS: CHS graduates practice learning habits that promote their learning and the learning of others.

The Honors Distinction Program at Colchester High School

Essential Expectation: Learning Habits

Honors Distinction:

Students at Colchester High School have an opportunity to earn honors distinction in their academic core classes. The honors distinction relies primarily on a student's adoption and practice of excellent learning habits. The process should motivate students to work hard while rewarding them not only with "honors" noted on their transcripts, but also with the satisfaction of knowing that they choose to do their very best. All students have the opportunity to apply for honors distinction. Honors work will be relevant, meaningful, and show evidence of a deeper understanding of the course curriculum. Students who earn honors distinctions will also be leaders and role models for other students in their classes.

Green House (First-Years & Sophomores): Core Classes (Humanities, Math, and Science)

Students can earn honors distinctions to be reflected on their transcripts by demonstrating superb learning habits throughout the year. Learning habits refer to the way people behave when faced with challenges. Throughout the year students will be required to document their learning habits, and teachers will periodically review this collection of work and give feedback to students. Although all students will document their learning habits throughout the year, only students who have demonstrated *superb* learning habits throughout the year and have demonstrated steady progress will earn honors credit.

Students obtain honors distinction through a portfolio process that is consistent in grades 9 and 10. The process will have some slight developmental adjustments from grade 9 to grade 10.

In grade nine students will have the opportunity to complete a portfolio for Earth Systems Science, Thinkers and Revolutionaries (English and Social Studies), and their mathematics course. The portfolio process is clearly connected to the Essential Expectations. The portfolio is one measure of the student's growth during the course. The portfolio is assessed by both the student and the teacher.

In grade ten students may opt into the portfolio process. The portfolio process is designed to move students out of their comfort level and to ensure that students are appropriately challenged in the classroom. Students apply to have their portfolio reviewed; parents are informed and are a part of the process. Determination of honors distinction occurs during fourth quarter.

All other content area teachers, Special Educators, and Guidance Counselors have an important role in the honors distinction process by supporting students through the process. All teachers at CHS should incorporate the learning habits into their curriculum.

**COLCHESTER HIGH SCHOOL
GRADUATION REQUIREMENTS 2011**

English	4.0 (Essential Writings)
Social Studies	3.5 (American History, Senior Seminar)
Science	3.5 (Earth Systems Science, Biology, Physical Science, Essential Topics)
Mathematics	3.0 (Algebra, Geometry)
Business and Technology I	0.5
Business and Technology II	0.5
Fine Arts	1.0
Health	0.5
Physical Education	1.5
Electives	<u>6.5</u>
Total	24.5

NOTE: The courses listed in the Program of Studies are proposed offerings. Enrollment and staffing may result in changes and deletions. We are committed to offering a broad range of courses that enable all students to meet the graduation requirements.

**Recommended Course of Study for Admission to
Four Year Colleges**

- 4 Years of English
- 2-3 Years of Laboratory Science
- 4 Years of Mathematics (Including Algebra II/Trig)
- 3.5 Years of Social Studies
- 3 Years of the same World Language

**Recommended Course of Study for Admission to
Highly Competitive Colleges**

- 4 Years of English
- 3-4 Years of Laboratory Science
- 4 Years of Mathematics (Including Calculus)
- 4 Years of Social Studies
- 4 Years of the same World Language

ADVANCED PLACEMENT PROGRAM

Every year more than 1,400 colleges and universities award sophomore status to incoming first year students based on their performance on the College Board's advanced placement examinations. High school students may earn an Advanced Placement International Diploma through successful performance (score of 3 or better out of 5) on advance placement examinations in four or more full year courses. The examinations must be distributed among three of the five areas noted below. Two examinations must be taken in area I, one in areas II or III, and one from any area not already used. The five areas are the following:

- Area I Languages (English, French, Spanish, Latin, German)
- Area II Sciences
- Area III Mathematics
- Area IV History & Social Sciences
- Area V Art, Music Theory

Whether students pursue the Advanced Placement International Diploma or not, there are a number of advantages inherent in enrolling in advanced placement courses and successfully completing the examinations. Competitive colleges and universities place considerable weight on the rigor of the student's high school program. Students in advanced placement courses have chosen the most rigorous program we offer. Each college and university has a standard for determining the number of credits offered for examinations completed and the grade required to earn that credit. You may obtain specific information about the college or university of your choice by contacting the institution directly. A course credit conversion table for the University of Vermont is available in the Guidance Office.

In recognition of the advantages advanced placement courses offer our students, we have developed a recommended planning process and enrollment guidelines for students who wish to pursue this level of academic work at Colchester High School. **Please note that all students enrolled in AP courses must take the AP examination.** At this time we recommend the following:

- Middle School Students pursue world language study (grades 7 and 8 with B+ or better) and Algebra (with B+ or better).
- Grades 9 Students enroll in the course of study for highly competitive colleges: Geometry.
- Grade 10 or 11 Students continue recommended course of study for highly competitive colleges and enroll in at least one AP course.
- Grade 12 Students continue recommended course of study for highly competitive colleges and enroll in AP English, AP European History, and/or art, mathematics, and science AP courses provided that they meet the prerequisites. Note that colleges do consider the student's academic performance (letter grade) in AP courses. Students should not enroll in AP courses for which they are not prepared.

2012-2013 Advanced Placement Offerings

Area	AP Examination	CHS Course Title
Area I Languages	English Language and Composition English Literature and Composition	AP English: Language and Composition AP English: Literature and Composition
Area II Sciences	Biology Physics C: Mechanics Chemistry	AP Biology AP Physics AP Chemistry
Area III Mathematics	Calculus AB Statistics	AP Calculus AP Statistics
Area IV History & Social Sciences	U.S. History European History	AP U.S. History AP European History
Area V Other	Studio Art – General	AP Art

OPTIONS PROGRAM

➤ **What Is It?**

The Options Program is designed to provide students “options” in and outside the school setting. Students are required to develop an individual plan outlining goals and methods of assessment. A student is not accepted into the program until the plan has been approved.

➤ **Who Can Enroll?**

Students entering grades 11 and 12 may apply for work study credit. Students in grades 9-12 may explore any of the other options depending on their individual needs.

➤ **How Can This Help Your Student?**

The Options Program is useful in helping students define career goals. It may be used to test career choices and begin to make employment connections. These experiences are assets in the college admissions process and represent genuine experience on the student’s resume. The Options Program is especially suited for students who need skills not provided by the traditional curriculum at Colchester High School. However, students may decide not to apply for credit. Students may earn up to two (2.0) options credits during high school which may be applied toward elective graduation credit. Students may not use options credit to fulfill core graduation requirements. Students must apply for options credit during the academic year in which they are earning it. If a student seeks to earn credit for summer activities, they must apply before the end of the following academic year.

Options:

Community Service: Students may receive credit for their volunteer community service projects in the school and in the community.

School Aide: Students may receive credit for working as an assistant under the guidance and supervision of a CHS staff member.

Work Study: Juniors and seniors may receive credit for career exploration, job shadowing, apprenticeships, internships, and monitored work experience.

External Credits: Consult guidance, or the administration for guidelines regarding credit for college courses, summer school and night school. Students are not permitted to use summer school credit to complete their graduation requirements.

Independent Study: Students may propose an independent study if the content is not available in the regular CHS curriculum. Students may not, however, propose an independent study to fulfill a graduation requirement. The process for pursuing an independent is outlined in the student handbook.

ADDING OR WITHDRAWING FROM A COURSE PROCEDURES

ANY STUDENT SEEKING TO MAKE A CLASS CHANGE MUST DO SO DURING THE DESIGNATED ADD/DROP PERIOD IN JUNE, AUGUST, AND JANUARY.

No student may drop or add a class after the designated time. If dropping a course would result in a student carrying fewer than 6.0 credits the change will not be approved. An appropriate course must be added or an administrative waiver obtained.

In limited circumstances a student may be permitted to withdraw from a class after the designated add/drop period. They will receive the notation below on their transcript. Please note that receiving any of the following will affect honor roll for the quarter in which the student has elected to withdraw from a class. In addition, it may affect athletic eligibility as well. Students are strongly encouraged to meet individually with their guidance counselor and the athletic director (if applicable) prior to requesting permission to withdraw from a course.

WP student is passing the course at the time of withdrawal

WF student is failing the course at time of withdrawal

ALL STUDENTS MUST CARRY 6.0 CREDITS (6 out of 8 mods of academic classes each semester). Students must be enrolled in six (6) classes both semesters in grades 9-11 and five (5) classes both semesters in grade 12.

The student is expected to remain in the original class until the change is made. Failure in the class is not considered just reason to drop the course. The fact that the class is not needed to graduate is not sufficient reason to drop the class either. CHS believes that under most circumstances, the student will benefit from remaining in an academic setting. Appropriate accommodations might include converting to pass/fail or developing a contract to improve the student's academic/behavioral performance. No change will be made based on teacher preference.

TARGET GRADUATION

Contact your guidance counselor regarding alternative programs and the admission criteria.

NCAA ELIGIBILITY

Many college athletic programs are regulated by the National Collegiate Athletic Association (NCAA), an organization founded in 1906 that has established rules on eligibility, recruiting, and financial aid. The NCAA has three membership divisions—Division I, Division II, and Division III. Institutions are members of one or another division according to the size and scope of their athletic programs and whether they provide athletic scholarships.

If you are planning to enroll in college as a freshman and you wish to participate in Division I or Division II athletics, **you must be certified** by the NCAA Initial-Eligibility Clearinghouse. The Clearinghouse was established as a separate organization by the NCAA member institutions in January 1993. The Clearinghouse ensures consistent interpretation of NCAA initial-eligibility requirements for all prospective student athletes at all member institutions.

Your Responsibility as a Prospective Student Athlete

It is your responsibility to make sure the Clearinghouse has the documents it needs to certify you. These documents are:	Your completed and signed Student Release Form and fee	Your official transcript from every high school you have attended	Your ACT or SAT scores
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When to Start the Process

If you want to participate in Division I or Division II athletics, plan to start the certification process early—usually the end of your junior year in high school. You must meet certain course requirements. They include successfully completing a core curriculum of at least 16 academic courses for Division I or 14 academic courses for Division II in the following categories: **English, Mathematics, Social Studies, and Science**. You must also meet minimum requirements for GPA and SAT, ACT test scores. Students should obtain a copy of the *NCAA Guide for the College Bound Student-Athlete* in the guidance office.

The following symbols are used to identify acceptable courses.

- ◆ Approved course
- √ Under review for approval

ACADEMIC COURSE OFFERINGS

Business

For graduation, students must have completed Business & Technology Skills I and II. Parents and students are urged to review the criteria that must be met.

#570 Business & Technology Skills I:

Business and Technology Skills I is a two-part course designed to teach students essential skills in keyboarding and electronic research. In the first quarter, students will use the computer programs Applied Microtype Pro and Key Champ to learn how to type using proper technique. The program aims to improve a student's gross words per minute and accuracy. In the second quarter, students will improve their information literacy skills, learning how to better find relevant information on the Internet and evaluate it. Students will learn how to perform database searches, use Boolean operators, RSS feeds, custom search engines, and online citation guides. This course emphasizes acceptable use and academic integrity.

Prerequisite: None. Duration: Semester. Credit: 0.5 Technology

#573 Business & Technology Skills II:

Business and Technology Skills II is a two-part course designed to teach essential skills in computer applications and business writing. In the first quarter, students will use the Microsoft Office Suite to learn Word, Excel, PowerPoint and Access. Integration of these programs will be practiced through a variety of projects in the second quarter. Students will be introduced to proper format and tone for all forms of business communication. Resumes, cover letters, memos, business letters, reports, presentations, e-mail, executive summaries, proposals, and employment skills will be included to teach students to communicate in a clear, courteous, and concise manner.

Prerequisite: None. Duration: Semester. Credit: 0.5 Technology

#581 Accounting I:

Accounting is frequently referred to as "the language of business." The study of accounting will provide students with the opportunity to develop an understanding of accounting principles as they relate to both the service and merchandising businesses. Simulations and computer applications are used to help the student apply and reinforce concepts learned. This course is useful for the college bound or business oriented student.

Prerequisite: B or better in general math skills and in grades 11-12. Duration: Full Year. Credit: 1.0 Elective

#653 Yearbook Publishing:

Students enrolled in this course are involved in all aspects of the production, sale, and distribution of the CHS yearbook. Students must be both self-motivated and team-oriented. Activities include, but are not limited to: gathering content (text and photos), formatting content using our web-based yearbook program, organizing content and maintaining accurate files (hard copies and digital), and fundraising efforts. Due to the high-level of independent work involved in this course, an application is required. This is a project-based course offered as pass/fail.

Prerequisite: None. Duration: Full year. Credit: 1.0 Elective, graded Pass/Fail

Fine Arts

The arts are not only a means of expression, but have been proven to be a way to improve literacy, thinking skills and creative problem solving. Study of visual art or music is an important part of a student's complete educational experience at Colchester High School. Students must complete one fine arts credit for graduation, in either visual art or music.

Art

In visual art, all students are required to take our foundation level art course called Art 1. Art 1 is a prerequisite for all other classes offered in the Art department. Art 1 prepares students for taking more advanced courses, such as Pottery 1, 2-D Art, or 3-D Art. All Art classes offered are one semester classes earning ½ credit per class. Juniors and seniors can sign up for Photography provided they have taken Art 1, and one other art class offered in the department. Juniors and seniors can also sign up for Advanced Placement art provided they have taken Art 1, and two other classes offered by the department.

#644 Art I:

Art I is a foundation course in basic art and design. The student will be introduced to the Elements of Design and Principles of Composition, and learn about different art materials and techniques in a variety of media in the major art areas, including drawing, painting, graphic design, and sculpture. Students will be exposed to art history through many projects and a research unit. Students will also learn about art criticism and evaluating and presenting their own work in the annual Colchester School District Art Show. Emphasis is on the process of skill development and awareness of aesthetic choices in art. Art I is prerequisite for all other courses in the department.

Prerequisite: None. Duration: Semester. Credit: 0.5 Fine Arts. This course is a foundation course required for all other art classes.

#660 Pottery I:

Students enrolled in Pottery will have the opportunity to create dynamic, and thought provoking works of art in Clay, incorporating The Elements of Design and Principles of Composition learned in Art 1. Students will create both functional and sculptural works of art in clay. This hands-on course allows students to construct pottery using a variety of methods, including: pinching, coiling, slab construction, and pressing (surface texture). Glazing application and other finishing techniques will be explored as an integral part of the course. Students will explore the historical and modern aspects of the art as a way to develop and express their own interests, ideas, and feelings. Participation in studio maintenance and cleaning is required. Students also learn to critically analyze their work and professionally prepare it for exhibition in the annual CSD Art Show.

Prerequisite: Art I. Duration: Semester. Credit: 0.5 Fine Arts

#612 2D-Art:

2-D Art explores the Elements of Design and the Principles of Composition as they are applied to a variety of 2-dimensional techniques, including drawing, painting, printmaking, graphic design, illustration, and collage. A wide range of media are explored including charcoal, pen and ink, pastels, acrylics, digital media, and watercolors. Projects are connected to world cultures and art history through research and presentations. Students also learn to critically analyze their work and professionally prepare it for exhibition in the annual CSD Art Show.

Prerequisite: Art I. Duration: Semester. Credit: 0.5 Fine Arts

#608 3D-Art:

3-D Art explores the Elements of Design and the Principles of Composition as they are applied to a variety of 3-dimensional techniques including low relief, high relief, and sculpture in the round. A wide range of media are explored including paper, clay, wood, metal, plaster, and recycled materials. Projects are connected to world cultures and art history through research and presentations. Students also learn to critically analyze their work and professionally prepare it for exhibition in the annual CSD Art Show.

Prerequisite: Art I. Duration: Semester. Credit: 0.5 Fine Arts

#659 Pottery II:

Students enrolled in Pottery II will have the opportunity to create dynamic, complex, interesting, and thought provoking works of art in clay incorporating the use of the Elements of Design and Principles of Composition. All previously learned methods of working with clay will be used and enhanced. Project guidelines/objectives will be designed by the instructor to help students learn to express their own interests, feelings, and ideas. Students will also have the opportunity to design and create their own works from beginning to end. Participation in studio maintenance and cleaning is required. Students also learn to critically analyze their work and professionally prepare it for exhibition in the annual CSD Art Show.

Prerequisite: Art I and C or above in Pottery I. **Duration:** Semester. **Credit:** 0.5 Fine Arts

#685 Photography:

This introduction to 35-mm black and white photography and digital photography is designed to help students develop the technical skills and artistic vision necessary to create quality prints. The first half of the course focuses on understanding and learning the processes of film exposure, development and darkroom printing. The second half of the course focuses on digital photography, including the use of digital SLR cameras and computer manipulation of images. An emphasis is placed on encouraging students to find their own way of seeing the world through the lens of a camera. Students will also be introduced to possible career opportunities in the field of photography. Students also learn to critically analyze their work and professionally prepare it for exhibition in the annual CSD Art Show.

Prerequisite: Art I, one additional art class, and Grades 11-12. **Duration:** Semester. **Credit:** 0.5 Fine Arts

#650 Advanced Placement Studio Art:

Advanced Placement Studio Art is designed for students with a strong foundation in art and an interest in completing a comprehensive portfolio for college application or the Advanced Placement Studio Art exam. Students should have a working knowledge of the Elements of Design and Principles of Composition. Students are required to submit their portfolio for the AP exam, which will include the following College Board criteria: Breadth - showing a mastery of a variety of media; Concentration - representing a theme or focus of artistic intent; and Quality - displaying a group of works of the best possible quality. AP Students also critically analyze their work and professionally prepare it for exhibition in the annual CSD Art Show. *This course is not offered annually. It will be offered as enrollment and staffing allow.*

Prerequisite: Art 1, two additional art classes, and Grades 11-12. **Duration:** Full Year. **Credit:** 1.0 Fine Arts. Students will be required to provide some of their own portfolio supplies.

Music

#639 Chorus:

Students enrolled in CHS Chorus will rehearse and perform music from many cultures, time periods and styles. Students will learn music fundamentals (rhythm, music notation, vocabulary), improve their understanding and control of basic vocal production (breath support, vowels, technique, etc.), and the art and skill of performing individually and in an ensemble. This class allows the opportunity for involvement in such activities as the CHS Concert Choir, CHS Chamber Singers, District III Choral Festival, All-State Music Festival and the New England Music Festival.

Prerequisite: None. **Duration:** Full Year. **Credit:** 1.0 Fine Arts

#622 Concert Choir:

This class will offer intermediate to advanced level singers the opportunity to learn and perform choral music of various time periods, styles and cultures. Students will *continue* to learn music fundamentals (rhythm, music notation, vocabulary), improve their basic understanding and control of **excellent** vocal production (breath support, vowels, technique, etc.), and the art and skill of performing in an ensemble of more experienced singers, and individually. This class allows the opportunity for involvement in such activities as the CHS Chamber Singers, District III Choral Festival, All-State Music Festival and the New England Music Festival. *This course is not offered annually. It will be offered as enrollment and staffing allow.*

Prerequisite: B or better in high school chorus, and ability to match pitch and hold harmony, or teacher's recommendation.

Duration: Full Year. **Credit:** 1 Fine Arts

#618 Chamber Singers:

This ensemble is made up of advanced singers who have successfully **auditioned the previous spring**. The group meets outside of the regular school day to rehearse and learn challenging repertoire, most of it performed a cappella. A diversity of choral styles ranging from tight jazz harmonies to traditional Renaissance madrigals will be performed several times per year. A strong commitment to learning assigned parts, working in a small group and reading music are requirements for this class.

Prerequisite: Successful audition. Duration: Full Year. Credit: 1.0 Fine Arts. This class meets after school.

#922 Basic Guitar:

Basic Guitar is a semester course geared towards first time and beginning level guitar players. Students will become familiar with guitar vocabulary, building and playing basic chords, strumming patterns and tuning by ear. Student directed projects will be used to apply the fundamentals learned in class. No previous experience necessary. Guitars provided by the school. *This course is not offered annually. It will be offered as enrollment and staffing allow.*

Prerequisites: None Duration: Semester. Credit: 0.5 Fine Arts

#621 Beginner Piano:

This class will offer students the opportunity to learn how to play the piano. Students will learn the basics of music fundamentals (rhythm, music notation, vocabulary), master one and two handed playing, the skill of performing in an ensemble (with other students), and individual performance. Students will play many different styles of music including folk, pop, and classical. If you've always wanted to learn how to play the piano, this is the class for you!

Prerequisite: None Duration: Semester. Credit: 0.5 Fine Arts

#620 Music Technology:

Music Technology is a course designed as an introduction to modern music software. Through Pro Tools SE, students will have the opportunity to create and record music through use of digital loops, MIDI input, and live instrument recording. Students will explore many different styles of music, such as blues, techno, commercial jingles, and film scoring.

Prerequisite: None Duration: Semester Credit: 0.5 Fine Arts

#635 Colchester Concert Band:

The Colchester High School Band builds on the foundation students have developed in the middle school program. Students will have the opportunity to perform in various settings, including solo and chamber group performances, honors festivals, concerts (both within and outside of the school district) and travel experiences. Band students are also eligible to perform with the CHS Pep Band and register for the CHS Jazz Ensemble. Students without instruments can contact the director for information rearing the use of a school owned instrument.

Prerequisite: Previous band experience or instructor approval. Duration: Full Year. Credit: 1.0 Fine Arts

#619 Colchester Jazz Orchestra:

The Colchester High School Jazz Orchestra strives to replicate the big band sound through the rehearsal and performance of traditional and contemporary jazz ensemble literature. Improvisation is a key element to this course, however no prior improve experience is necessary. This ensemble performs at all school instrumental concerts, and is regularly asked to perform outside of the school setting. The CJO rehearses Monday evenings from 6:30-8:30 pm.

Prerequisite: Previous band experience or instructor approval. Duration: Full Year. Credit: 1.0 Fine Arts. This class meets after school.

Guidance/Health

Students are required to complete one semester of health for graduation. Normally students enroll in Human Ecology in the Green House. Students may fulfill the health requirement in the Blue House through Life 101. In addition, Life 101 is a very valuable elective.

#750 Human Ecology:

The purpose of this course is to give students an introduction to the information necessary in making educated decisions concerning their physical, mental, emotional, and social well being. Topics covered will include personal health, stress management, communication and refusal skills, disease prevention, human sexuality and alcohol/drug education.

Prerequisite: Grades 9-10. Duration: Semester. Credit: 0.5 Health

#716 Life 101:

This is a junior/senior elective course designed to prepare students for transitioning into life after high school. Topics will include personal health, healthy relationships and communication, self image and esteem, human sexuality and drugs/alcohol. Each topic will be covered with an emphasis on hands-on activities and personal applications.

Prerequisite: Grades 11-12. Duration: Semester. Credit: 0.5 Health

#717 Food! From Soil to Stomach:

Do you like to eat? But wait, what are you eating? Where did it come from? What's in it? This course is for the student who wants to explore the many facets of food including growing, cooking, and EATING. Topics to be covered include nutrition, "conventional" versus "organic" agriculture, and food miles.

Prerequisites: Hunger (for knowledge and food), Grades 9-12. Duration: Semester. Credit: 0.5 Elective

Humanities

Green House English and Social Studies

The Humanities offerings attend to the developmental differences between students in the Green and Blue houses. The freshmen curriculum focuses on Asian studies; second year students complete a full year of American studies. In order to move on to the Blue House English offerings, students must pass their humanities Green House courses and complete their Green House essential writings to standard.

Upon successful completion of the Green House courses, students enter the Blue House, which offers some required courses in English and social studies, as well as a variety of semester-long courses that allow students to pursue their interests. With the exception of the Advanced Placement courses in the Blue House, there are no exclusively advanced level courses. Instead, students may choose to earn honors credit by committing to perform at an honors level, which requires them to complete an honors contract at the course's outset that indicates the students' willingness to work independently and meet raised standards, as well as their ability to demonstrate the habits of mind necessary for success.

Grade Nine

#314 Thinkers and Revolutionaries is a team-taught, two-credit course that integrates the study of English and social studies. All students will be challenged by a common, concept-based curriculum that steeps students in the study of the Eastern and Western traditions. Students will be asked to explore how, throughout history, the world's greatest thinkers and most legendary revolutionaries have shaped cultures and societies in the East and in the West. They will study ancient and modern cultures in China and its neighbors in order to gain a perspective of the Eastern tradition, and will study crucial moments from the history of Ancient Greece to gain a perspective of their own modern Western tradition. By studying both cultures — through the lenses of history, political systems, religious traditions, philosophies, literature, and art — students will be given ample opportunity to compare and contrast cultural developments within both Eastern and Western traditions. Students will also cultivate their own abilities to pose meaningful questions and think critically as they study the types of questions and responses that emerged from the *Thinkers and Revolutionaries* of the East and West.

Students will be grouped with intention so that each class includes the diverse range of students present in the entire ninth grade class. The defining element of the course is the approach to instruction known as differentiated instruction. Teachers of *Thinkers and Revolutionaries* are skilled practitioners of this pedagogy, which adjusts the course's process, products, and content, according to students' readiness, interests, and learner profiles. Differentiated instruction requires that teachers know their students well so they can meet them where they are and take them as far as they can go. Parents, teachers and students work together to make sure that all students are actively engaged in their learning.

Prerequisite: Successful completion of CMS English and Social Studies requirements. **Duration:** Full Year. **Credit:** 2.0.; 1.0 English, 1.0 Social Studies

#334 Strategic Reader: (Grade 9):

The Strategic Reader is a year-long course committed to helping first-year students become more competent and comfortable readers. Students will practice and master a repertoire of strategies for recognizing and making sense of narrative, informational, and poetic texts. Additionally, students will be supported as they read core readings in their grade-nine humanities class, *Thinkers and Revolutionaries*. This course seeks students who struggle with reading who are also eager to take advantage of an extended learning opportunity designed to help them handle the increased reading expectations at the high school. Students are selected for this course based on data from the middle school.

Prerequisite: Teacher recommendation. **Duration:** Semester. **Credit:** 0.5 Elective

Grade Ten

363 The American Experience: ♦

This course integrates the study of American Literature and the history of the United States. Students examine three historical periods in depth through three thematic lenses. Students in *The American Experience* are grouped with intention so that each class includes the diverse range of learners present in the sophomore class.

The defining element of this course is the style of instruction, known as differentiated instruction. Teachers of *The American Experience* are well-trained in this powerful approach to teaching, which adjusts the course's content, process, and products according to students' different readiness levels, interests, and learning styles. They understand the key to differentiating instruction: knowing their students well so they can meet them where they are and take them as far as they can go. In a differentiated classroom, parents play an active role helping the teachers with this process. Parents, teachers, and students are partners who work together to ensure that all students work hard and experience success.

Prerequisite: Grade 10. **Duration:** Full Year. **Credit:** 2.0.; 1.0 English, 1.0 Social Studies

Blue House English

Requirements

The humanities Blue House English courses are designed to empower students to develop their individual interests related to literature and writing. In order to fulfill this objective, students must enroll in some required courses, but are also encouraged to select from a variety of offerings based on their interests and readiness. All juniors who are not enrolled in Advanced Placement English must enroll in *The Human Experience: English*, which is a full-year, concept-based English course that is fully differentiated to meet the varying needs of a diverse group of learners. Because students must be enrolled in an English course for each of their four Blue House semesters, seniors may select from a variety of English offerings, based on their own interests and readiness. Also, if they so choose, juniors may enroll in any one of these English offerings for **elective credit** --in addition to their enrollment in *The Human Experience: English*.

With the exception of Advanced Placement courses, there are no exclusively accelerated courses in the Blue House. Instead, students may choose to earn honors credit by committing to perform at an honors level, which requires them to complete an honors contract at the course's outset that indicates the students' willingness to work independently and meet raised standards, as well as their ability to demonstrate the habits of mind necessary for success.

Junior Year Requirement

#306 The Human Experience: ENGLISH (THEE) ♦

THEE is a full-year, concept-based English course for juniors that explores literary perspectives from writers of the Western World. Through an in-depth study of what it means to be *human* in our Western culture, students gain a core knowledge and understanding of voices from this literary tradition, and in the process, cultivate their own perspectives of literature—and life. As students read, write, and think, they will grapple with universal questions that were posed centuries ago and are still asked today, such as: *Who are we?* And, *what purpose(s) do we serve?* Students are expected to complete the essential writing task to standard. Required for all juniors not enrolled in Advanced Placement English.

Required for all juniors not enrolled in AP English. Duration: Full Year. Credit: 1.0 English

Additional English Offerings

#359 Creative Writing: ♦

Students in this course will explore both fiction writing and creative non-fiction writing (which includes memoir and personal essay.) In addition to learning techniques to create dialogue, plot, characters, setting, and dramatic tension, students will learn to write from their own experiences. This approach to writing – “start with your own life” – will show students how to begin a story from a character or an incident, real or imagined. All students will write on a consistent basis, as well as keep a “writing book” to record impressions, conversations, ideas, and possible topics for writing. Each student will be encouraged to find his or her own “voice” as a writer. Readings of students' work or pieces by other writers they have chosen will allow students to learn the art of oral interpretation. In addition to developing their own writing, students will read what writers have to say about writing. Students are expected to complete the Blue House writing.

Pre-requisite: Successful completion of Green House humanities classes. Duration: Semester. Credit: 0.5 English

#360 Film as Dramatic Literature: ♦

Film and Dramatic Literature approaches the study of movies in four ways. We will analyze films in order to understand filmmaking. For example, we will think about why filmmakers choose certain camera angles, sound techniques, and editing processes to exercise their art. We will also look at films from a historical perspective; we will watch silent films through to modern movies. Additionally, we will consider various genres of film: comedies, westerns, musicals, mysteries, etc. Finally, we will consider classic books that have been made into films. Written analyses of various films are a significant component of our work together. Film is a form of text. Students in Film and Dramatic Literature will employ many of the same strategies that all scholars use when reading, i.e., predicting, interpreting, and questioning the “text”. Film is also literature, and as such, we will consider those elements of character, theme and narrative strategies that film shares with traditional literature, as well as those that are unique to film.

Sometimes when students enroll in a film class, they expect to see movies that are current - or very recent offerings. This is not the case in Film and Dramatic Literature. The films we see, for the most part, have stood the test of time and therefore are considered classic. Ideally, students who enroll in this class should be interested in the art of films - as well as their entertainment qualities. We will watch movies, as well as think, talk and write about them.

Pre-requisite: Successful completion of Green House humanities classes. Duration: Semester. Credit: 0.5 English

#362 Journalism:

This course will offer students an in-depth study of most aspects related to the media field highlighting print journalism, with secondary emphasis on radio and television journalism. A major part of the course will center on the practice of writing through pre-writing/conferencing/editing, emphasizing different journalistic styles including news, feature, sports, editorials, and reviews. Students will read extensively. They will also study journalism philosophy, interview skills, desktop publishing, advertising, headlining, layout and design, and current events. Students are expected to complete the Blue House writing. Additionally, students in this course write and publish the school newspaper, *The Lakeside Voice*.

Pre-requisite: Successful completion of Green House humanities classes. Duration: Semester. Credit: 0.5 English. NOT NCAA approved.

#369 Modern American Literature

Students enrolled in this course will explore themes and patterns that are emerging from American literature of the 21st century. As this course serves as an introduction to many strands of critical theory, the texts and level of discussion are rigorous and require students to actively engage with reading. Topics include, but are not limited to: archetypes, deconstruction, magical realism, narrative theory, and reader-response theory. Students produce both analytical and creative writing pieces.

Pre-requisite: Successful completion of Green House humanities classes. Duration: Semester. Credit: 0.5 English. NOT NCAA approved.

#417 Modern Media Impact:

Modern Media Impact provides the motivated student an understanding of the influence modern media has on an individual’s personal, social, political, and economic life. Media literacy units are structured to develop one’s critical viewing, thinking, and reading skills through the study of current trends in various modern mediums. It is designed to enhance the student’s understanding of the power media has in the 21st century digital world. Major units emphasize a study in modern media advertising, the influence of music in media; cultural influence of violence in the media, impact of the Internet, and Web 2.0. Secondary units include instruction in video camera/editing, storyboarding, a study of print, radio, and television news; a study of modern prime-time television influences, and frequent media timed writes. Students are expected to complete major assessments using a variety of mediums and to engage their learning based on individual learning styles.

Pre-requisite: Successful completion of Green House humanities classes. Duration: Semester. Credit: 0.5 English. NOT NCAA approved.

#318 Popular Literature: ♦

Popular literature has given the literary community a wealth of well-written and intelligent books. This course will explore some of these works, question their literary value, and explore why they were/are so popular. Students will develop reading skills, practice writing literary criticism, and learn to understand the value of literature in the time and place it was written. Students are expected to complete the Blue House writing.

Pre-requisite: Successful completion of Green House humanities classes. Duration: Semester. Credit: 0.5 English

#337 Public Speaking: ♦

“All the great speakers were bad speakers at first.”
– Ralph Waldo Emerson.

Most of us dread speaking in front of groups. Yet, regardless of our career choices, we all need to speak up in front of others in our daily lives. Wouldn't it be nice to develop the skills to face those moments with confidence? This course will expose students to a wide variety of strategies in speaking for a variety of purposes in order to face any audience with more confidence. By the end of the semester, successful students will have cleared the hurdle of that 'speaking phobia' and be well on their way to refining their newfound speaking/listening skills. Students will prepare, deliver and respond to a wide variety of speeches and write and revise a final speech for a capstone performance.

Pre-requisite: Successful completion of Green House humanities classes. Duration: Semester. Credit: 0.5 English

#995 English Language Learners (ELL): √

Foreign exchange students and students new to this country are provided with support in learning the English language and adapting to American culture. ELL instruction is a special method for developing English proficiency for social and academic purposes. Beginning level students need to develop sociolinguistic proficiency. This means that they must internalize the sound and grammar systems of English. ELL students do this by using them in social, survival, or life skill situations. Students are provided meaningful learning experiences with the constant use of visual, phonetic, and oral instruction. ELL instruction for intermediate and advanced students emphasizes thinking skills and strategy-based activities that include gathering information, summarizing reading for information and content, and problem solving. Instruction also puts emphasis on oral reading, comprehension, verbal skills, and study skills necessary for successful participation in English language classrooms.

Duration: Full Year. Credit: 1.0 Up to 2 credits of ELL may be applied to the graduation requirement in English.

BLUE HOUSE ADVANCED PLACEMENT COURSES

Colchester High School offers two Advanced Placement English courses: *Language and Composition* and *Literature and Composition*. Each course is a full-year introductory college course that prepares students for the respective advanced placement exams. Each exam offers students the opportunity to earn three college/university credits; therefore, it is possible for industrious students to earn six English college credits before graduating from Colchester. Candidates should have strong English skills, a love of language, and a willingness to work hard. Students in AP English will encounter a rigorous curriculum that requires tenacity and resourcefulness. Because of the nature of these courses, students must satisfy several prerequisites. All AP students are required to take the AP exam.

387 Junior Year AP English: Language and Composition: ♦

AP English Language and Composition allows students to write and study the literature of various forms and genres while examining the rhetorical strategies used by diverse authors. Students will study complex texts while writing rich and complex prose. To succeed in this course students must, to a high standard, study literature and write

independently. Texts and writings are grouped by theme and form. Students will become skilled readers of prose written in a variety of periods, disciplines, and rhetorical contexts while becoming skilled writers who compose for a variety of purposes. Subjects for writing run from personal experiences to public policies and from imaginative literature to popular culture. The theme for the year will be The Strategic Pen. Throughout the year, students will heighten their awareness of how stylistic effects are achieved by writers' linguistic choices, in addition to examining the forces which influence these choices themselves (i.e. ethnicity, gender, region, and era). We will also examine the way audience expectations, subjects, and linguistic conventions contribute to effectiveness in writing. While studying the work of prominent authors, students will hone their own authorial skills, refining and expanding upon the care with which they write. All AP students are required to take the AP exam.

Prerequisites: Successful completion of Green House Humanities courses; completion of summer reading and writing requirements.
Duration: Full Year. **Credit:** 1.0 English

#382 Senior Year AP English: Literature and Composition: ♦

This course engages students in the careful reading and critical analysis of imaginative literature. Through the close reading of selected texts, students will deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. Students will consider a work's structure, style, and themes, as well as such smaller-scale elements as the use of figurative language, imagery, symbolism, and tone. All AP students are required to take the AP exam. **Prerequisites:** Successful completion of Green House Humanities courses; completion of summer reading and writing requirements. **Duration:** Full Year. **Credit:** 1.0 English

Blue House Social Studies

Requirements

The Humanities Blue House social studies courses are designed to empower students to develop their individual interests related to the study of history and the social sciences. In order to fulfill this objective, students must enroll in some required courses, but are also encouraged to select from a variety of offerings based on their interests and readiness. All juniors who are not enrolled in Advanced Placement history must enroll in *The Human Experience: Legacies of the Past*, which is a full-year, concept-based social studies course that is fully differentiated to meet the varying needs of a diverse group of learners.

Students must be enrolled in a social studies course for three of their four Blue House semesters, and earn a total of at least 1.5 social studies credits in the Blue House in order to graduate. Additionally, seniors are required to enroll in *Senior Seminar: Civics*, a .5 social studies credit. *Senior Seminar: Civics* is a graduation requirement (only seniors are allowed to enroll in this course).

Above and beyond the social studies requirements, both junior and senior students are highly encouraged to select from the variety of social studies offerings, and elect to enroll in any one of them based on their interests and readiness; the credits earned would be in *addition* to required course credit fulfilled through *The Human Experience: Legacies of the Past* and *Senior Seminar: Civics*. Also, if they so choose, juniors may enroll in any one of the Blue House social studies offerings for **elective credit** -in addition to their enrollment in *The Human Experience: Legacies of the Past*.

With the exception of Advanced Placement courses, there are no exclusively accelerated courses in the Blue House. Instead, students may choose to earn honors credit by committing to perform at an honors level. With the exception of Advanced Placement courses, there are no exclusively accelerated courses in the Blue House. Instead, students may choose to earn honors credit by committing to perform at an honors level, which requires them to complete an honors contract at the course's outset that indicates the students' willingness to work independently and meet raised standards, as well as their ability to demonstrate the habits of mind necessary for success.

Junior Year Requirement

#402 The Human Experience: Legacies of the Past (*Legacies*): ♦

The Human Experience: Legacies of the Past is full-year, concept-based social studies course for juniors that investigates historical perspectives of Western civilization. Students will make connections about social and political aspects of their own society and culture as they examine events in the history of Western civilization that have impacted the human experience over time. Students will explore important eras of this civilization such as ancient Rome, the Renaissance, and events leading up to World War I. They will be expected to analyze selected events through social, political, and historical lenses such as economic systems, religions and philosophies, power and government, and environmental history. As students delve into the story of western civilization, they will form their own perspectives about a past which continues to influence the modern human experience.

Duration: Full Year. Credit: 1.0 Social Studies. Required for all students not enrolled in AP History.

Social Sciences

#459 Geography: ♦

Geography is an integrated social studies discipline that brings physical and human systems together in a study of people, places, and environments. The course focuses on the investigation of the physical as well as the cultural, political, and economic horizons of our world. Throughout the semester, students will study current and past events to discover how human and physical geography shapes the environments in which people live. Students will also develop an understanding of how geography impacts the relationships between countries. The course fosters students' mapping, graphing, reading and writing skills. Students are expected to complete a Blue House writing to standard.

Duration: Semester. Credit: 0.5 Social Studies

#465 Psychology: ♦

This course is designed to increase understanding of one's own personality and the conscious and unconscious factors that influence behavior. The content addresses normal and abnormal development from infancy to maturity. Students will read extensively and complete an individual project or research paper. Films are presented, but most class time is spent in discussion. Students are expected to complete a Blue House writing to standard.

Duration: Semester. Credit: 0.5 Social Studies

#468 Philosophy: ♦

Philosophy is the rational seeking of answers to life's most basic questions, such as "Who am I?" or "What is true?" Myths and religions also answer these questions, but Western philosophy, beginning with the ancient Greeks, persists in using reason and logic to come by the answers to these fundamental questions. This course will begin with a brief history of philosophy and then study some of the writings of the Greek philosophers Plato and Aristotle, particularly focusing on Plato's Republic. Selections from more modern philosophers such as Descartes and Locke will also be read. Finally, students will consider how non-Western thought relates to philosophy and about the Chinese tradition of Taoism. The reading in this course will be challenging, and students should be prepared to research, discuss, and write about a philosophical writer of their own choosing. Students are expected to complete a Blue House writing to standard.

Duration: Semester. Credit: 0.5 Social Studies

#469 International Politics and the United Nations: ♦

This content of this course covers the military, political and diplomatic history of the 20th Century Wars with an emphasis on the Post World War II era. Students will study international conflicts, politics, and law while considering the role the United Nations has in resolving conflicts around the world. Students will expand their understanding of international relations by studying current issues facing various bodies of the U.N., including the General Assembly, Security Council and International Court of Justice. A major focus of the course is to develop a student leadership team responsible for planning, coordinating and implementing and attending a regional Model United Nations. Students participating in this class will master the essential elements of Model United Nations, which will include resolution writing, parliamentary procedure (Roberts Rules of Order) and legal procedure in order to gain a deeper understanding of the complex world we live in.

Duration: Semester. Credit: 0.5 Social Studies

#495 Sports and Society: ♦

How have sports changed during the twentieth and twenty-first centuries? How have these changes reflected and shaped our changing society? These are the types of questions that students will explore in *Sports and Society*. Students will look closely at the evolution of sports during the last one-hundred years or so before considering how these changes have coincided with broad cultural shifts in our society. We'll begin with the history of various eras before examining the evolution of several issues, such as the integration of minorities and women into sports, the role of economics in sports, and the ethical expectations of athletes. Students will gather information representing both sides of these issues and others to help inform their understanding and analyses of the relationship between these issues and society. Students will deliver oral presentations and write formal papers. Students are expected to complete a Blue House writing to standard.

Duration: Semester. Credit: 0.5 Social Studies

Senior Graduation Requirement

#471 Senior Seminar: Civics ♦

This course prepares seniors for the responsibilities of participating in a democratic society. Only seniors may take this course. *Senior Seminar: Civics* ensures that all students who graduate from CHS possess a firm understanding of how our local, state, and national government works. As part of this course, students will study the philosophical underpinnings of our democracy as well as the ways that our democracy works. Additionally, students will be familiarized with current issues facing our nation and the international community, so that when they leave Colchester High School they will be informed citizens. Finally, in order to earn credit for the course and graduate from CHS, all students are required to design and implement a community-based learning project.

Prerequisite: Required of all seniors for graduation. Duration: Semester. Credit: 0.5 Social Studies

BLUE HOUSE ADVANCED PLACEMENT COURSES

Colchester High School offers two advanced placement history courses: *AP American History* and *AP European History*. Each is a full-year introductory college course that prepares students for the respective advanced placement exams. Each exam offers students the opportunity to earn three college/university credits; therefore, it is possible for industrious students to earn six college credits in history before graduating from Colchester. All AP students are required to take the AP exam.

Students must have strong reading and writing skills, a love of history, and a willingness to work hard. Students in AP History will encounter a rigorous curriculum that requires tenacity and resourcefulness. Because of the nature of these courses, students must satisfy several prerequisites: which include teacher recommendation, and completion of summer reading program. It is recommended that students pursue AP American History in the junior year and AP European History in the senior year.

#462 Junior Year AP American History: ♦

Advanced Placement American History is designed to provide students with the analytical skills and factual knowledge necessary to deal with problems and issues in American history. The program prepares students for college level course work by making demands upon them equivalent to an introductory college class. This course develops the skills necessary to arrive at conclusions on the basis of an informed judgment and to present ideas clearly and persuasively. Students enrolled in this course are required to take the advanced placement examination in American History. All AP students are required to take the AP exam.

Prerequisite: Successful completion of Green House Humanities courses; completion of summer reading and writing requirements.
Duration: Full Year. **Credit:** 1.0 Social Studies

#447 Senior Year AP European History: ♦

This course is designed to provide students with a basic understanding of events in European History from the early Renaissance to the Twentieth Century. The goal of this course is to prepare students to take the AP European History test in the spring. This is a high level course and the workload is more typical of a college course. Students are expected to read and understand a college level textbook, and the instructor gives lectures weekly. Students are expected to write weekly essays, participate in seminar discussions, do research, and complete oral presentations. Tests are given every two to three weeks. All AP students are required to take the AP exam.

Prerequisites: Successful completion of Green House Humanities courses; completion of summer reading and writing requirements.
Duration: Full Year. **Credit:** 1.0 Social Studies

Mathematics

Students are required to complete three credits of mathematics, including the mastery of the concepts of algebra and geometry. It is also strongly encouraged for students to go on in their study of mathematics by continuing the progression into Algebra II. Most students transition from the middle school into Algebra I at the high school. At this time students who have successfully pursued algebra at the middle school may choose geometry at the high school. Middle school students, who successfully complete algebra, will be granted a total of one elective credit (pass) for the class upon entering the high school. All students, regardless of which math classes they completed at the middle school level, must complete three credits of mathematics at the high school.

The Math Department recognizes that, in many cases, freshman and sophomores have different needs than juniors and seniors. The Math offerings attend to these differences. All students will be challenged in courses and by teachers that use differentiated instruction to teach their classes. Teachers of ninth grade math courses are well trained in this approach which adjusts the course's content, process and products according to student's different readiness levels, interests, and learning styles. It is the goal of every teacher in the math department to know each student well so that they can meet students where they are and then take them as far as they can go. The Math Department will continue to encourage students to pursue their interests through math electives and/or the advanced level offerings.

#203 Strategic Math:

This course is available to ninth grade students enrolled in Algebra I. This course will give students an elective credit and is designed for those students who may find that they need more time and opportunities to master the algebra concepts and skills. It is a piggyback course which follows the same curriculum as the algebra I course. This course is adapted to the pace of each individual learner. Enrollment is by recommendation only.

Prerequisite: Teacher and guidance recommendation. **Duration:** Full Year. **Credit:** 1.0 Elective. Algebra enrolled students.

#204 Math Mentoring:

Math Mentors work as teachers' aides in Strategic Math classes. Students in Strategic Math receive additional support in the area of mathematics beyond their regular math course. Math Mentors work one-on-one as well as with small groups of students, assist students with math homework, review basic math concepts, assist with math review software, or help with class projects. As a Math Mentor, it is important you are comfortable with basic number, computation, Algebra I, and Geometry skills. Math Mentors will occasionally meet with the Strategic Math teacher outside of class time to discuss class, learn effective mentoring strategies, and check in about roles and responsibilities. You must complete an application to be a Math Mentor.

Prerequisite: 11-12 grade students in Pre-Calculus or above. **Duration:** Full Year. **Credit:** 1.0 Elective or earn Community Service hours in lieu of credit.

#261 Strategic Geometry:

This course is available to tenth grade students enrolled in Geometry. This course will give students an elective credit and is designed for those students who may find that they need more time and opportunities to master the geometry concepts and skills. It is a piggyback course, which follows the same curriculum as the geometry course. This course is adapted to the pace of each individual learner. Enrollment is by recommendation only.

Prerequisite: Teacher and guidance recommendation. **Duration:** Full Year. **Credit:** 1.0 Elective. **Geometry enrolled students.**

#245 Algebra I: ♦

This course introduces students to mathematical concepts that serve as the foundation for future high school courses and beyond. Major topics include: solving equations and inequalities, graphing lines and systems of equations, analyzing functions, probability, and data analysis. Considerable emphasis is placed on the process of problem solving rather than memorization of procedures.

Prerequisite: Open to grades 9-10. **Duration:** Full Year. **Credit:** 1.0 Math

#260 Geometry: ♦

This course is the study of Euclidean Geometry using an investigative approach. Through these investigations students will define geometric terms and discover conjectures about geometric figures. Major topics covered include: constructions, properties of polygons, congruence and similarity of figures, area and volume, and flowchart proofs.

Prerequisite: Passing grade in Algebra 1 or teacher recommendation. **Duration:** Full Year. **Credit:** 1.0 Math

#223 Consumer Mathematics I-Personal Finance:

This is a semester course designed to help students learn how to best handle their personal finances. Areas of study will include earning money, personal banking, creating a budget, consumer credit and investing. This course is available to all seniors regardless of career objectives.

Prerequisite: Teacher recommendation. **Duration:** Semester. **Credit:** 0.5 Math. **Recommended for seniors only. Students taking this course should have already earned two math credits.**

#226 Consumer Mathematics II-Economics in the Marketplace:

This is an economics based course designed to help students with different mathematical situations. Students will study taxes, the stock market, buying a car, renting an apartment, purchasing a home and obtaining insurance. Students will participate in an online simulation stock market game. All students can benefit from this course to become better prepared citizens.

Prerequisite: Teacher recommendation. **Duration:** Semester. **Credit:** 0.5 Math. **Recommended for seniors only. Students taking this course should have already earned two math credits.**

#250 Algebra II: ♦

This year long course focuses on Algebra II concepts such as solving linear, quadratic and higher order equations. Other topics include probability, systems of equations, exponents, and an in depth study of functions and their transformations.

Prerequisite: Teacher recommendation and passing grades in Algebra I and Geometry. **Duration:** Full Year. **Credit:** 1 Math

#255 Algebra II/ Trigonometry: ♦

This course begins with a study of right triangle trigonometry, followed by a general study of trigonometric functions. Other topics stressed include linear relationships, quadratic functions and their graphs, real and complex number systems, graphing and finding equations of higher order equations, systems of equations including matrices, and introductory probability and statistics. Graphing calculators are used extensively in order to view and solve functions.

Prerequisite: B+ in Algebra I and Geometry and teacher recommendation. Duration: Full Year. Credit: 1.0 Math

#252 Algebra III: ♦

This course is designed for students who wish to continue their study of mathematics beyond Algebra II. The major topic of the course is the study of functions (polynomial, rational, exponential, and logarithmic) and relations (conics). The final topic, sequences and series, provides the basics needed for pre-calculus.

Prerequisite: C or better in Algebra II and teacher recommendation. Duration: First Semester. Credit: 0.5 Math

#253 Trigonometry: ♦

The first part of this semester course focuses on the use of trigonometry in understanding the relationships among the sides and angles of triangles. This is followed by the study of the trigonometric functions and their graphs, and their applications to science.

Prerequisite: C or better in Algebra II and teacher recommendation. Duration: Second Semester. Credit: 0.5 Math

#279 Pre-Calculus: ♦

This course is designed to prepare the student for Calculus. The concern of this course is the student's mastery of the skills of manipulative algebra and a thorough familiarity with the concepts of function with emphasis on the elementary functions. In analytic geometry the student develops the dialogue between algebra and geometry, allowing each to illuminate and extend the other.

Prerequisite: B+ or better in Algebra II/Trigonometry or Algebra II and Trig. or Algebra III and Trig. and teacher recommendation. Duration: Full Year. Credit: 1.0 Math

#264 Probability and Statistics: ♦

This course will build upon each student's experiences in statistical thinking in earlier math courses. Emphasis will be placed on concepts and statistical reasoning rather than a "cookbook" approach to applying formulas. Topics will include sampling strategies, statistical significance, experimental design, the normal distribution, and confidence intervals. Students will also learn to analyze a situation and determine the probability of an event taking place through a variety of methods.

Prerequisite: C or better in Algebra I and teacher recommendation. This course should be taken as an elective and not as a replacement for Algebra II. Duration: Semester. Credit: 0.5 Math

BLUE HOUSE ADVANCED PLACEMENT COURSES

#280 AP Calculus: ♦

The four main concepts covered in this college level calculus course are derivatives, limits, definite integrals, and indefinite integrals. All topics are looked at graphically, numerically, algebraically, and verbally. Graphing calculators are used daily. Students will take the Calculus (AB) AP exam.

Prerequisite: Teacher recommendation and B+ or better in Pre-Calculus. Duration: Full Year. Credit: 1.0 Math

#283 AP Statistics:

The purpose of the AP course in statistics is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four broad conceptual themes. Students will take the AP exam.

- Exploring Data: Describing patterns and departures from patterns.
- Sampling and Experimentation: Planning and conducting a survey.
- Anticipating Patterns: Exploring random phenomena using probability and simulations.
- Statistical Inference: Estimating population parameters and testing hypotheses.

Prerequisite: Juniors and seniors who have successfully completed Algebra II or equivalent and teacher recommendation.

Duration: Full Year. **Credit:** 1.0 Math

Physical Education

#735/740 Physical Education:

The major emphasis of the physical education department is to promote lifetime fitness through instruction in a broad range of activities. The department offers many different activities (units), with the majority being in the areas of individual sports and outdoor recreation. Units last approximately three weeks, or six to eight classes. Below is a list of possible activities offered throughout the year:

Lifetime Sports: Students must take at least four different units

Aerobics	Pickleball
Archery	In-line Skating
Badminton	Racquetball
Dance	Table Tennis
Fencing	

Outdoor Recreation Activities: Students must take at least two different units

Canoeing	Mountain Biking
Climbing Wall	Orienteering
Cross Country Skiing/Snowshoeing	
Ropes Course	

Teambuilding Unit:

All students must take the 3-week *Team Building* unit which focuses on the elements of teamwork, self confidence, trust, and cooperation.

Fitness Programs: (All students must take the *Personal Fitness* unit)

Personal Fitness and Nutrition (required 5 week program)
CORE Training
Strength Training and Conditioning

Team Sports:

Softball
Mini Unit of Team Sports (Basketball, Floor Hockey, Indoor Soccer, and European Team Handball)
Volleyball
Flag Football

Alternative Credit Options: It is possible for students to earn partial credit for participation in one of the following programs during the semester in which they are enrolled in PE:

Interscholastic Sports
Independent Study

All Athletic Credit Request and Independent Studies Must be Approved in Advance by The Physical Education Department.

Prerequisite: None. **Duration:** Semester. **Credit:** 0.5 Physical Education

Science

Vision and Goals

Through the study of Science, at Colchester High School, students will develop a lifelong interest in science. Students will practice the skills necessary to research scientific problems they encounter and come up with solutions on their own.

The primary goal of the Science Department is to facilitate the intellectual growth of students through scientific problem solving. An understanding of science, its purposes, principles, concepts and methods, must be an essential part of the science education of students. In order to live in a world of science and technology, students must attain a degree of scientific literacy. Consequently, each portion of the scientific program has a specific role to play appropriate to the academic level of instruction and related to other subjects in the curriculum. The Science Department provides students with the necessary course work for admittance to colleges and universities. The curriculum also provides scientific experiences for the non-college bound student.

Note: For students with a high interest in science, we are prepared to develop a four-year plan upon request. Please contact a guidance counselor or the science team leader for more information.

Requirements

For graduation, students are required to complete three and a half credits in science including Earth Systems Science, Biology, one full year of physical science (Chemistry or Physics), and one semester long Essential Topics class. If students take one full year of Chemistry AND Physics then students are exempt from the Essential Topics requirement.

Core Science Classes are 1 credit and include:

Earth Systems Science
Biology (*Lab Biology, Experimental Biology*)
Chemistry (*Lab Chemistry, Experimental Chemistry*)
Physics (*Action Physics, Principles of Physics*)

Essential Topics Classes are .5 credits and include:

Essential Topics: Physics
Essential Topics: Chemistry

Science Electives are .5 credits and include:

Anatomy and Physiology
Environmental Science
Forensic Science
Engineering Lab

AP Science Blue House Offerings are 2 credits and include:

AP Biology
AP Physics
AP Chemistry

#110 Earth Systems Science: ♦

This course is designed to serve as an introduction to earth and environmental science. Students will explore the science of our Earth and the role that humans play in shaping the natural world. Students will investigate the science of our Earth through the following units of study:

- Science as Inquiry
- Water: an essential chemical resource
- Energy: fuel for thought
- Atmosphere and Climate
- Geosphere: Earth's changing geology

Each of the topics taught in this course will help students to understand how science is being used to solve problems or improve the quality of life in the world today. The primary goals of this course are to increase scientific literacy, develop students' abilities to obtain and apply scientific knowledge to real-life situations, and explore the naturally occurring human-influenced changes taking place in our natural world.

All students will be challenged by a common hands-on, inquiry-based curriculum that uses differentiated instruction to teach science. Students will be encouraged to set and meet their own goals and achieve their highest potential. Differentiated instruction consists of adjusting the course's content, process, and products according to students' different readiness levels, interests, and learning styles.

ESS will be a heterogeneous class: students will be grouped with intention so that each class includes the diverse range of students present in the entire freshman class.

Prerequisite: None. Duration: Full Year. Credit: 1.0 Science

#130 Biology (lab): ♦

In this full year, lab class, students will explore several major themes in depth while focusing on a few unifying concepts. Topics covered include: the basis of life, genetics, evolution, and classification of living things, plants, human biology, and organism's interactions with the environment. Students will engage in independent work, lab based experiments, and assignments from texts and other media of several types. During the course of the year students will build their familiarity with the scientific method. Careers related to biology are discussed and used to illustrate the real world applications of the topics covered. This course meets the science requirement for college admission. This is a course with a heterogeneous mix of students and is consistently and deliberately differentiated.

Prerequisite: None. Duration: Full Year. Credit: 1.0 Science

#135 Experimental Biology (lab): ♦

This fast-paced course is for highly motivated students interested in pursuing careers in the sciences. It approaches biology from a human perspective and will challenge and expand a student's work ethic. The topics covered in-depth are evolution, homeostasis, energy and matter in organisms, reproduction, inheritance, development, and ecology. The goals of the course also include learning some of what the life of a scientist is like and making connections between biological concepts and everyday life. Various in-depth research/presentation projects are completed throughout the year. Successful completion of the course should leave the student with a sense of academic confidence about studying independently and applying scientific and biological concepts to their life.

Prerequisite: Teacher recommendation. Duration: Full Year. Credit: 1.0 Science

#145 Lab Chemistry: ♦

This lab-based course is structured around building an understanding of the basic concepts of chemistry. Students investigate these concepts in a variety of contexts including problem solving, projects, direct instruction, classroom discussions and laboratory activities. Students are expected to be familiar with and able to use algebraic and mathematical skills as they relate to chemical concepts. Learning activities are routinely differentiated based on student learning style and interest. Topics covered in this course include the nature of matter and the periodic table, atomic theory, chemical nomenclature, gas behavior, chemical reactions, and stoichiometry. Students are frequently engaged in laboratory work. This work is essential to the development

of in-depth understanding. In the lab, students are engaged in authentic experiments which further develop and enhance essential concepts. Computer software applications, online simulations and calculator-based experiments are used at various times throughout the year.

Prerequisite: C or better in Biology or Earth Systems Science, C or better in Algebra I and recommendation of previous science teacher. **Duration:** Full Year. **Credit:** 1.0 Science

#150 Experimental Chemistry: ♦

This is a college preparatory lab course that is designed for students who plan to attend a four-year college and who have a strong interest in pursuing a career in a scientific field. Students are expected to have strong math skills, as this is an integral part of a good science background. Students are expected to demonstrate exemplary habits of mind. The course includes extensive college level laboratory work and individual research on chemistry-related societal issues. Students will be using a variety of technological applications throughout the year. The first half of the year will focus on general concepts of chemistry (naming compounds, stoichiometry, atomic structure, and periodic properties). The second half of the year focuses on physical chemistry including: thermodynamics, equilibrium, acid-base chemistry and redox reactions.

Prerequisite: B or better in Biology or Earth Systems Science, B or better in Algebra I, concurrent or previous enrollment in Algebra II, and recommendation of previous science teacher. **Duration:** Full Year. **Credit:** 1.0 Science

#161 Action Physics:♦

Action Physics is a concept-based course for those students who are curious about the world (and the universe) around them. A lab approach will be used to explore topics such as motion, force, momentum, and energy. The mechanics of simple machines, properties of matter, heat, light, sound, and electricity will also be examined and discussed. Mathematical models of physics concepts will be limited to basic Algebra unless student readiness allows for the use of more advanced functions. The use of technology is embedded in laboratory content where the Vernier LabPro system is used to collect and analyze data. The course includes a large hands-on component with student projects including balsa-wood bridges, impulse rockets and other projectiles.

Prerequisite: Open to grades 10, 11, 12. **Duration:** Full Year. **Credit:** 1.0 Science

#160 Principles of Physics: ♦

Physics is the study of matter and energy and the interrelationship between the two. This course is mathematically challenging and is designed for students who will be attending college. Principles of Physics is trigonometry-based and includes a detailed study of mechanics. Proper laboratory technique is emphasized. The use of computers and graphing calculators in physics is reinforced through their application in the areas of simulation, data and graphical analysis, and digital video analysis. Students will use probes and sensors to collect data, and they will design experiments and conduct research. This course is a required prerequisite for those students who wish to take the calculus-based AP Physics offering.

Prerequisite: Previous successful completion of a math course that includes trigonometry. This prerequisite can be met by taking Algebra II/Trigonometry or Algebra II or Algebra III along with the semester two Trigonometry course. In addition, *Principles of Physics* students should be taking a math course concurrently with Physics. **Duration:** Full Year. **Credit:** 1.0 Science

Science Essential Topics

In order to live in the 21st century world of science and technology, students must attain scientific literacy. To do so requires exposure to at least the fundamentals of both chemistry and physics. The demands of external high-stakes testing necessitates that this exposure take place by the end of a student's junior year. The following courses give students the "essentials" of each discipline in one semester.

#172 Essential Topics Physics: ♦

Physics explores the rules by which everything works. Well, everything explainable by science at least. Completion of this course in combination with the rest of a student's CHS science requirement will equip them with many of the basic physics concepts they are likely to encounter in life. Inquiry-based methods will be used to explore the physics principles of kinematics (how things move), dynamics (why things move or not), momentum, and energy.

Prerequisites: Grade 10 or 11, not enrolled in Action Physics or Principles of Physics. **Duration:** Semester. **Credit:** 0.5 Science

#173 Essential Topics Chemistry: ♦

This semester-long course is structured around building a fundamental knowledge of chemistry. Students will investigate matter and energy, atomic theory, and the periodic table in a variety of contexts. Completion of this course in combination with the rest of a student's CHS science requirements will equip the student with all of the basic chemistry concepts they are likely to encounter in life.

Prerequisites: Grade 10 or 11, not enrolled in Lab Chemistry or Experimental Chemistry. **Duration: Semester. Credit: 0.5 Science**

Science Electives

#112 Anatomy and Physiology : ♦

If you had to live without one body system, which would you choose? The circulatory, respiratory, nervous, musculoskeletal system? Or would you choose the endocrine or reproductive system? Can't decide? Consider taking Anatomy & Physiology where students have an opportunity to discover how these systems interact and work together to maintain balance in the human body. Throughout this one semester course, students will explore the structure and function of human cells, tissues, and organ systems as well as the complications that occur when these systems fail. Essential understandings and skills will be assessed through both a final exam and a science process culminating activity. This course is offered annually, but will only be taught as enrollment and staffing allow.

Prerequisites:

Green House: B or better in Earth Systems Science or concurrent enrollment in Biology and teacher recommendation.

Blue House: Completion of Earth Systems Science and Biology.

Duration: Semester. Credit: 0.5 Science

#171 Environmental Science: The Search for Solutions ♦

Hybrid cars - vegetarian eating – cruelty-free cosmetics. Air pollution - world hunger – endangered species. This course will explore the current condition of the world's environment, humanity's role in that condition, and how the environment in turn affects humans. These topics will be explored through the lens of the scientist and also give thought to the social and political factors involved. A local focus will be emphasized, but will be linked to global impacts and issues. Both a cumulative final exam and a culminating science process experience will be included. This course is offered annually, but will only be taught as enrollment and staffing allow.

Prerequisites:

Green House: B or better in Earth Systems Science **and** concurrent second semester enrollment in Biology and teacher recommendation.

Blue House: Successful completion of Earth Systems Science and Biology.

Duration: Semester. Credit: 0.5 Science

#117 Forensic Science:

From 221b Baker Street to the recent television series C.S.I., the whodunit has always been popular. The field of forensic science applies the essential processes of science to the resolution of criminal matters. This course offers students an opportunity to apply science skills to solve "real world" mysteries. This course explores the collection and analysis of hair, fiber, fingerprint, blood, DNA, and other evidence. Laboratory work utilizing skills and knowledge from chemistry, biology, physics, and more comprises a large portion of the course. Course knowledge and skills will be assessed via a science process culminating experience and a cumulative final exam. This course is offered annually, but will only be taught as enrollment and staffing allow.

Prerequisites:

Green House: B or better in Earth Systems Science and concurrent enrollment in Biology, C or better in Algebra I and teacher recommendation.

Blue House: Completion of Earth Systems Science and Biology.

Duration: Semester. Credit: 0.5 Science

#114 Engineering Lab: ♦

Engineering Lab enables students to apply their skills and knowledge in the area of research and development. Students will be involved in basic design procedures and the development of original ideas. Brainstorming in groups, and on an individual basis, will be oriented toward problem-solving and the physical development of solutions to problems. This course is offered annually, but will only be taught as enrollment and staffing allow.
Prerequisite: Any physics course taken previously or concurrently. **Duration:** Semester. **Credit:** 0.5 Science

BLUE HOUSE ADVANCED PLACEMENT COURSES

Please note that all AP science courses meet every day for the entire mod.

#175 AP Biology: ♦

This course complies with the College Board Advanced Placement guidelines in biology using an integrated concept approach. The course content is rigorous and requires extensive time outside of class. In addition to reading a college biology textbook, the students will design, perform and write up numerous experiments and labs, take several topic related field trips, and undertake many in-depth activities to enhance their learning. Students will complete an internship/job shadow experience following the AP exam to emphasize the connection between course content and the "real world". A presentation on the internship experience takes the place of a written final exam, but there is a two day comprehensive mid-term exam modeled on the AP test. The instructor will meet with students in June to discuss summer work. This course is offered annually, but will only be taught as enrollment and staffing allow.

Prerequisite: B or better in Biology, concurrent enrollment in or successful completion of lab or Experimental Chemistry, and teacher recommendation. **Duration:** Full Year. **Credit:** 2.0 Science. **Offered pending enrollment at the minimum required.**

#163 AP Physics (lab): ♦

This course is designed to meet the needs of students who have achieved a high level of success in mathematics and science. Students will conduct experiments to study physical phenomena, and research techniques will play a major role in the course. Particular emphasis will be placed on the use of computer simulation and digital video analysis software to model physics problems. Applications of technology are imbedded in the curriculum; students will use probes and sensors to collect data and graphical analysis software to develop visual displays of information. Students in Advanced Placement courses at Colchester High School are required to take the AP Examinations. This course is offered annually, but will only be taught as enrollment and staffing allow.

Prerequisite: Principles of Physics, Calculus. (Calculus may be taken concurrently with AP Physics).

Duration: Full Year. **Credit:** 2.0 Science

#152 AP Chemistry (lab): ♦

This second-year Advanced Placement Chemistry course is designed for the student with a keen mind and a strong drive to excel in the field of science or math. It is designed to prepare students for the AP examination given in May. This course will cover each of the major topics covered in a college chemistry class including: atomic structure, chemical bonding, stoichiometry, gas behavior + equilibrium, energy of reactions + chemical kinetics, acid/base chemistry, equilibrium, and electrochemistry. This course will also include each of the 22 required laboratory experiments required by the College Board. The course will include extensive time and effort both in and out of class but is well worth the experience. AP Chemistry students will be required to take the AP Chemistry Examination. This course is offered annually, but will only be taught as enrollment and staffing allow.

Prerequisite: B or better in Chemistry or Experimental Chemistry, Algebra III OR Pre-Calculus, and teacher recommendation. (Math prerequisite may be taken concurrently). **Duration:** Full Year. **Credit:** 2.0 Science

World Languages

French

#500 French I: ♦

Students will practice expressing themselves in French in practical, real-life situations as outlined by the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Communities). They will develop their listening, speaking, reading, and writing skills through functional and proficiency based activities. Students will learn to understand and manipulate the structures of the language necessary for basic communication. They will receive an overview of French culture and customs including the United States, Canada, and France.

Prerequisite: Overall average of C or better. **Duration:** Full Year. **Credit:** 1.0 Elective. One credit may be granted for two years (C or better) at CMS.

#505 French II: ♦

Students will continue language study in the five areas as outlined by the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Communities). They will continue to develop their listening, speaking, reading, and writing skills begun in French I. They will become more proficient in spontaneous use of the language and will continue to make real-life and functional applications. Audio-visual materials, the Internet, magazines and newspapers will supplement regular classroom activities. The students will study the culture of France, Canada and the former French colonies and will understand the role of Franco culture in the United States.

Prerequisite: 70% or better on all Tier 2 Assessments from Level 1, and C or better in French I. **Duration:** Full Year
Credit: 1.0 Elective

#515 French III: ♦

This course will continue language study in the five areas as outlined by the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Communities) to further develop the listening, speaking, reading and writing skills of the previous level. Students will become more proficient in the use of the language and more familiar with the French culture of France (Europe), Canada and the Francophone countries of Africa. Students will develop further the functional skills necessary to use the language for work, travel and personal goals. Emphasis is on the use and purpose of advanced grammar for writing, speaking and reading.

Prerequisite: 70% or better on all Tier 2 Assessments from Level 2, and C or better in French II. **Duration:** Full Year
Credit: 1.0 Elective

#520 French IV: ♦

Students will experience some of the literature, history, and contemporary culture of the Francophone World. This course will continue to develop the students' breadth of language structures in the target language and build upon the students' prior language skills. Audio-visual materials, the internet, magazines, and newspapers will supplement regular classroom activities. Activities focus on the five areas outlined in the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Communities). Connections with the greater community are highlighted.

Prerequisite: Commitment to speaking French is essential. 70% or better on all Tier 2 Assessments from Level 3, C or better in French III and teacher recommendation. **Duration:** Full Year **Credit:** 1.0 Elective

#519 French V: ♦

This course will have an emphasis on literature from the Francophone World, composition and speaking. The curriculum will continue to support the five areas as outlined by the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Community). The use of audio-visual, audio-reading, podcast, blogging (with classmates), internet, magazines and newspapers will support the curriculum. Students will be asked to sign speaking contracts indicating their dedication to language acquisition. The course will be differentiated to accommodate students intending to take the AP exam. *This course is not offered annually. It will be offered as enrollment and staffing allow.*

Pre-requisites: A commitment to the use of French is essential. B or better in French 4. Full Year. Credit: 1.0 Elective

Spanish

#525 Spanish I: ♦

Students will practice expressing themselves in Spanish in practical, real-life situations as outlined by the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Communities). They will develop their listening, speaking, reading, and writing skills through functional and proficiency based activities. Students will learn to understand and manipulate the structures of the language necessary for basic communication. They will receive an overview of Hispanic culture and customs.

Prerequisite: Overall average of C or better. Duration: Full Year. Credit: 1.0 Elective. One credit may be granted for two years (C or better) at CMS.

#532 Spanish II: ♦

Students will continue language study in the five areas as outlined by the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Communities). They will continue to develop their listening, speaking, reading, and writing skills begun in Spanish I. They will become more proficient in spontaneous use of the language and will continue to make real-life and functional applications. Audio-visual materials, the internet, magazines and newspapers will supplement regular classroom activities. The students will study the culture of Spain and Latin America and will understand the role of Hispanic customs and peoples in the United States.

Prerequisite: 70% or better on all Tier 2 Assessments from Level 1, and a C or better in Spanish I. Duration: Full Year. Credit: 1.0 Elective

#535 Spanish III: ♦

This course will continue language study in the five areas as outlined by the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Communities) to further develop the listening, speaking, reading and writing skills of the previous level. Students will become more proficient in the use of the language and more familiar with the Hispanic culture and civilization of Spain, Latin America and the United States. Students will develop further the functional skills necessary to use the language for work, travel and personal goals.

Prerequisite: C or better in Spanish II. Duration: Full Year. Credit: 1.0 Elective

#537 Spanish IV: ♦

Students will experience some of the literature, history, and contemporary culture of the Hispanic World. This course will continue to develop the students' breadth of language structures in the target language and build upon the students' prior language skills. Audio-visual materials, the internet, magazines, and newspapers will supplement regular classroom activities. Activities focus on the five areas outlined in the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Communities). Connections with the greater community are highlighted.

Prerequisite: Commitment to speaking Spanish is essential. C or better in Spanish III and teacher recommendation. Duration: Full Year. Credit: 1.0 Elective

#542 Spanish V: ♦

This course will have an emphasis on literature from the Spanish Speaking World, composition and speaking. The curriculum will continue to support the five areas as outlined by the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Community). The use of audio-visual, audio-reading, podcast, blogging (with classmates), internet, magazines and newspapers will support the curriculum. Students will be asked to sign speaking contracts indicating their dedication to language acquisition. The course will be differentiated to accommodate students intending to take the AP exam.

Pre-requisites: A commitment to the use of Spanish is essential. B or better in Spanish 4. Full year. Credit: 1.0 Elective

Other Driver Education

#490 Driver Education:

Driver Education is a basic course in the techniques and skills required for safe and proper motor vehicle operation. The course includes 30 hours of classroom instruction and 6 hours of “behind the wheel” road driving experience. Because enrollment in Driver Education is limited, students are selected according to their birth date, followed by their flexibility in scheduling the class. Students must be fifteen (15) years of age, possess a valid learner’s permit, and participate in the enrollment process in guidance.

Prerequisite: Students must be 15 years of age and possess a valid learner’s permit. Duration: Semester. Credit: 0.5 Elective

□ VT State Driver Education Validation Cards will be issued according to the following schedule: fall/spring semesters--last week of the semester; summer--the first week of August.

Driver Education FAQs

1. When is Driver Education offered at CHS?
 - a. Fall—two daytime sections, one after school section
 - b. Spring—two daytime sections, one after school section
 - c. Summer—one section
2. How does enrollment in Driver Education work at CHS?
 - a. Students must bring a copy of their learner’s permit to guidance in order to be placed on the Driver Education waiting list. The waiting list is organized by birth date.
 - b. Each semester every effort is made to fill daytime sections prior to filling an after school section. Remember, a student may not be able to be placed in a daytime section due to their attendance at the Essex Technical Center.
 - c. The number of students in each section of Driver Education is dependent on the number of behind-the-wheel instructors available.
3. When do students find out if they have received Driver Education on their schedule?
 - a. Just prior to the start of each course students are informed from the CHS guidance department if they have received Driver Education on their schedule for that semester. Again, we wait until just before the course begins to ensure that the oldest students will have the opportunity to enroll in Driver Education as soon as they obtain their permit.
 - i. Fall Driver Education Notification: August
 - ii. Spring Driver Education Notification: January
 - iii. Summer Driver Education Notification: June
 - b. Please be aware that each semester some students do decline Driver Education due to conflicts. For example: an after school job, a college course, a CHS course conflict, or athletics. If a student declines Driver Education they simply remain on the list and will have the opportunity to enroll in the next semester of driver education that fits in their schedule.

4. At CHS typically when will a student obtain Driver Education?
 - a. **Due to the student population at CHS, most students will not obtain Driver Education until their junior year.** Please be aware that each year a number of seniors are in Driver Education each semester and we want to ensure that all students have the opportunity to enroll in Driver Education at CHS. Many CHS families, for financial or other reasons, choose not to have their child obtain his/her permit until their senior year. At CHS we strongly believe that those students should be at the top of the Driver Education waiting list, and they should have the opportunity to enroll in Driver Education before they graduate.
5. Is it possible for younger students to get enrolled in Driver Education before older students? YES.
Examples:
 - a. Students at the Center for Technology Essex can only take Driver Education during the after school or summer sessions due to their schedules at the tech center. They will remain on the waiting list until there is a space available in a class that meets their scheduling needs. No special consideration is given to these students.
 - b. When building the semester two section of Driver Education courses during the day time; we do not MOVE year long courses so that students can enroll in Driver Education. Maintaining the integrity of the student's academic course schedule is much more important than Driver Education enrollment. Therefore, if there is not a Driver Education section for this student to enroll in, this student remains on the waiting list and the next available student, who may be younger, that can fit Driver Education in their schedule, is enrolled.
6. Does CHS allow students who do not attend CHS to enroll in CHS Driver Education classes?
 - a. Colchester residents who are home schooled or attend private school have access to Driver Education at CHS under the same terms as CHS students.
 - b. Students who attend another local high school are not allowed to enroll in CHS Driver Education.
 - c. Non-Colchester residents are not allowed to enroll in CHS Driver Education.

Dual Enrollment

Dual Enrollment offers students in grades 10-12 options for exploring post secondary education prior to graduation. Students enrolling in the program may take college courses at five of the area colleges and earn both high school and college credit for successful completion. Dual Enrollment is offered after school hours and is not intended to replace existing high school courses.

College Partners

- University of Vermont
- Community College of Vermont
- Champlain College
- Vermont Technical College
- Burlington College

Cost

Dual Enrollment has made arrangements with all of the college partners to offer classes at a reduced tuition rate. While in past years Colchester High School has secured grant money to help reduce tuition costs even further, students and parents must agree to pay the entire cost of tuition for College Connections classes.

Courses

Courses vary by college and semester.

How do I enroll?

See your counselor for an application and a list of available courses. Students need to take the Accuplacer assessment prior to enrolling in a college course.

Other College Classes

Introduction to College Studies

Community College of Vermont is offering a free, 13 week class, to all area high school students. In this class you will learn how to become a successful college student by learning how to:

- Reduce test anxiety.
- Take better notes.
- Use time and stress management techniques.
- Practice goal-setting and problem-solving.
- Expand communication skills.
- Explore college options and financial aid.
- Learn to manage your finances and budget.

Upon successful completion, you may earn a voucher to take a free college course. For more information, see you guidance counselor.

Virtual High School

Virtual High School is a global consortium of schools offering classes to each other via the internet. We've found that VHS classes offer **more time to be reflective** about discussions. Students are not bound to just the class period to discuss a topic—that's one of the benefits Virtual High School's asynchronously scheduled courses bring to education. Students have the opportunity to **work with other students** in a virtual classroom space—students (and teachers) from other states, other countries, other cultures. It is a tremendous enhancement to a student's educational experience and lots of fun! VHS classes also help **students better prepare for college** and work-force learning. VHS students tell us that they feel better prepared for college because in VHS they learned to work independently, and were responsible for managing their time and learning. In fact, many colleges are now using **online courses** to enhance face-to-face college courses, and VHS students have a head start because they are already accustomed to learning in an online environment!

Virtual High School offers a terrific way for students to broaden their educational horizons and take classes that would otherwise be unavailable to them, in an environment that is safe, challenging, and fun. **See your counselor to learn more about taking a VHS class.**



www.burlingtontech.info

The **Burlington Technical Center** offers high school juniors and seniors the opportunity to develop the technical, academic and employability skills needed to start careers either through employment after high school or by continuing on to college. BTC partners with area businesses and organizations to provide career exploration and develop technical and employability skills through job shadows, internships or paid work experiences.

Students attend the Burlington Technical Center for 2 hours and 15 minutes, either in the morning or the afternoon, and may earn a total of 3 credits each year toward graduation. They are able to return to their home schools for other academic courses. BTC programs are designed to be completed in two years, although some students attend for one year to begin an introduction to a career field. Many programs offer transcribed college credits through dual enrollment programs at Community College of Vermont and Vermont Technical College. Visit the BTC web site at www.burlingtontech.info for additional information and consult your school counselor to see how a BTC program can fit into your schedule.

BURLINGTON TECHNICAL CENTER COURSES FOR CHS STUDENTS

Auto Body Repair I	Electronic Recording Arts I
Auto Body Repair II (S)	Electronic Recording Arts II (S)
Automotive Science & Technology I	Human Services/Early Childhood Education I
Automotive Science & Technology II (S) (M)	Human Services/Early Childhood Education II (SS)
Aviation Technology I	Medical & Sports Sciences I
Aviation Technology II (S) (M)	Medical & Sports Sciences II (S)
Computer Systems I	Principles of Engineering/Architecture/Construction I (M)
Computer Systems II (S)	Principles of Engineering/Architecture/Construction II
Criminal Justice I	Welding/Metal Fabrication I
Criminal Justice II (SS)	Welding/Metal Fabrication II (M)
Culinary/Professional Foods I	
Culinary/Professional Foods II (S)	(S) Science Credit (SS) Social Studies
Design & Illustration I	(E) English Credit (A) Art Credit
Design & Illustration II (A)	(M) Math Credit

DESCRIPTIONS OF BURLINGTON TECHNICAL CENTER COURSES

AUTO BODY REPAIR I & II; three units of credit per year (Science credit after two years)

This two-year program is designed to provide the student with job-entry skills for auto body repair equipment, body repair and alignment, refinishing, welding techniques, frame and chassis repairs and estimating and management procedures. Emphasis is placed on technical knowledge as well as the manual skills associated with auto body craftsmanship. The curriculum utilizes ASE (Automobile Service Excellence) certified instructional materials, a symbol of quality in this industry. Qualified second-year students may be placed in Co-op jobs at local auto body shops upon approval of the instructor.

AUTOMOTIVE SCIENCE & TECHNOLOGY I & II; three units of credit per year (Science credit after two years)

The modern automobile has become a very technologically advanced machine with vehicle systems rapidly changing. Computers, electronic engine controls, fuel injection and antilock braking have entered the world of the automotive technician. These technology and future advancements require the development of new skills and techniques. Students in this program will receive the technical education increasingly in demand by automotive dealerships, independent repair facilities, and equipment manufacturers. The program offers in-depth theory with extensive hands-on training in the well-equipped automotive lab.

Qualified students can earn guaranteed admission status and up to six college credits in the General Motors-Automotive Associates Degree Program at New Hampshire Technical College at Laconia, six college credits at University of Northwestern Ohio, advanced standing at Nashville Auto-Diesel College and advanced standing and two credits at New England Institute of Technology.

AVIATION TECHNOLOGY I & II; three units of credit per year (Science credit and Mathematics credit after two years)

High salaries and extremely challenging jobs make Aviation Technology a very attractive career. If you enjoy subjects such as aerodynamics, are fascinated by complex machinery and love aircraft, this is an excellent choice for you. The use of specialized tools to work on aircraft components in the laboratory and observation at local aviation companies provide the opportunity to become a certified aircraft technician. All training received in this program is FAA approved and is applied to **Airframe and Powerplant (A&P) Certification**. Students who successfully complete the Aviation program at BTC may enroll for additional training in Airframe and Powerplant systems on a tuition basis, which is also available at our facility at the airport. We not only have training sites for Airframe and Powerplant, but also have a maintenance examiner on staff for complete A&P certification and written testing.

This two-year program is designed to provide instruction in a wide variety of skills and knowledge related to the aviation technology field. These areas include basic aircraft maintenance, principles of aerodynamics, flight electronics, troubleshooting, drawing, metallurgy, sheet metal fabrication, physics of flight and trends and careers in the aviation industry. This program exceeds the requirements for Federal Aviation Regulations (FAR) part 147 under certificate number VMQT049K.

Qualified students earn twelve college credits at Embry Riddle Aeronautical University through an articulated agreement or advanced placement at any other FAR part 147 school.

COMPUTER SYSTEMS I & II; three units of credit per year (Science credit after two years)

The first year of the program focuses on PC Hardware and Software Skills, which include Personal computers, Safe lab procedures, Troubleshooting, Operating systems, Laptop computers, Printers and scanners, Networks, Security, Communication skills. After successful completion of Computer Systems I, students are prepared to take the CompTIA A+ Essentials Exams. An A+ Certification candidate must pass two exams. The first exam is CompTIA A+ Essentials. The second advanced exam depends on the type of certification desired. Each advanced exam assesses specialized skills in one of the following areas: IT Technician, Remote Support Technician, or Depot Technician.

The second year of the program is the Cisco Networking Academy. Cisco Networking is designed to provide students with classroom and laboratory experience in current and emerging networking technology that will empower them to enter employment and/or further education and training in the computer-networking field. After successful completion of Computer Systems II, students are prepared to take the CCNA (Cisco Certified Network Associate) exam.

Qualified students may earn eight transcribed college credits from Community College of Vermont. Students may transfer these credits to other colleges and universities.

Prerequisite: Keyboarding or Instructor Approval.

CRIMINAL JUSTICE I & II; three units of credit per year (Social Studies credit after two years)

The Criminal Justice Program is a college preparatory program that explores careers in Criminal Justice through classroom instruction, pertinent labs, field trips and job shadows. Units of study will include the history of law enforcement, the court system, juvenile law, ethics, criminal law, criminal procedures, interview and interrogation, criminal investigation, and corrections. Practical experiences are provided that enhance classroom learning. Field trips, guest speakers, and use of industry-specific equipment and supplies are an integral part of the curriculum.

Year two focuses on forensics and investigation, to include evidence identification, collection, and analysis. Crime scene investigations involving guest experts and simulated crime scenes allow the students to study modern techniques and procedures in real world scenarios using actual equipment.

Students will have the opportunity to earn valuable certifications, embedded academic credit and college credit. Credentials may include Medical First Responder, Incident Command, CPR and AED, Boater Safety, Firearms, and Hazardous Materials Awareness. Through curriculum instruction and activities students will develop college-level skills in critical thinking, writing, articulation, problem solving and use of the scientific method.

Dual enrollment options at area colleges that provide transcribed college credits are being developed.

CULINARY/ PROFESSIONAL FOODS I & II; three units of credit per year (Science credit after two years)

Culinary/Professional Foods is designed to introduce students to all aspects of the restaurant and institutional food service industry. Emphasis is on quantity food preparation. Instruction includes sanitation, safety, use and care of equipment, basic meal preparation, and table service (i.e., waiter/waitress). Foods prepared are salads, meats, poultry, fish, soups, sandwiches, vegetables, breads and desserts. Students take part in a Career Experience Rotating Co-op program to observe and participate in varied aspects of food service in the school and community. Students are introduced to the world of work including such areas as self-appraisal, finding a job, applications, resumes, interviews, employment laws, employee benefits and responsibilities.

DESIGN AND ILLUSTRATION I & II; three units of credit per year (Fine Arts credit after two years)

If you have creative talents, like to draw and want to explore careers that will help you use these skills, this course will give you the opportunity. You will learn about the many careers associated with design and illustration and get a chance to begin building your career in the following ways: Build a portfolio of design and illustration work; discover which field of design and illustration is right for you; see the work of successful design professionals; map out an individual course to help prepare you for your chosen career; enhance your creative skills; develop a critical eye for design; organize complex jobs; build your visual vocabulary; self promote; protect yourself and your work; work with clients; and improve communication skills. You will also learn to use programs such as Adobe Creative Suite (Photoshop, Illustrator and InDesign).

In addition to the AP Studio Art credits available to all students, qualified students can earn six transcribed college credits through a dual enrollment program at Community College of Vermont.

Prerequisite: Interview and Portfolio Presentation.

ELECTRONIC RECORDING ARTS I & II; three units of credit per year (Science credit after two years)

Electronic Recording Arts has been designed to introduce students to creative careers in non-print media (television, film and multimedia presentations). Students create numerous projects using the equipment in the ERA Digital Media Lab including Apple computers; 15 digital video editing suites including Final Cut Pro; Newtek Video Toaster; Photoshop; Adobe After Effects; Lightwave 3D; Yamaha AW4416 Audio Workstation; PowerPoint; field and studio camcorders by Canon and Sony. Hardware and software upgrades occur in a timely manner so that the program will remain technologically current. Field trips and job shadows to observe and participate in local audio/video productions are available throughout the year.

The course will include the following topics: Introduction to Video Production; Ethical, Legal Implications of Video Technology; Video Equipment; Camera Techniques; Audio; Lighting; Computer Graphics; Script Writing; Interview Techniques; Producing; Editing and posting video on the web. Students will be able to develop projects in the Burlington Technical Center Video Studio using a variety of cameras, video recorders, audio processors, editing systems, computers and lighting instruments.

ERA II students will continue to have an opportunity to expand their knowledge by producing more independent projects. Internships with area producers can be arranged for second year students.

HUMAN SERVICES/ EARLY CHILDHOOD EDUCATION I & II; three units of credit per year (Social Studies credit after two years)

Human Services prepares students to pursue further education towards a career in the Human Services field or to fill entry-level jobs requiring good people, communication, teamwork and workplace skills. Students learn many valuable skills in addition to the core curriculum of human development and the exploration of careers in the Human Services field. Many of the assignments are long term and require students to be self-directed, organized and to plan time thoughtfully.

During their first year in the program, opportunities for students include teaching in our state licensed, on-site preschool program, learning direct observation techniques and digital photography, observing a preschool child and creating a comprehensive child portfolio that is shared with the parents of the child, creating materials to use in the field, including displays, books, brochures, games, power point presentations, etc. and listening to guest lecturers from the Human Services field.

During their second year of the program, students choose an area of concentration in the Human Services field. Those continuing in early childhood (birth through age 8) continue to work in the on-site preschool program. Students indicating the desire and aptitude are promoted to assistant teachers. Those wishing to explore careers working with adolescents, elderly and special needs populations participate in internships in the community.

All majors participate in a Community Work Experience their last month of the program.

Qualified students may earn nine transcribed college credits through a dual enrollment program with Community College of Vermont. Students may transfer these credits to other colleges and universities. Students completing this two-year course meet state requirements for entry-level positions in the early childhood field.

MEDICAL & SPORTS SCIENCES I & II; three units of credit per year (Science credit after two years)

The Medical and Sports Sciences Program is a two-year college preparatory program. The rigorous curriculum prepares students to pursue further education towards a career in either the medical or sports sciences.

The two years of the program correlate with a complete Anatomy and Physiology (A & P) course (i.e. Year I covers A & P I, Year II covers A & P II). As we progress through Anatomy and Physiology we will be covering the associated medical terminology, associated diseases (pathologies) as well as evaluation and treatment procedures specific to the body system being covered. Students will participate in laboratory experiences including microscopic analysis, dissection, phlebotomy (blood drawing), massage, microbiology and wound care. Students will also be orientated to medical instruments (i.e. reflex hammers, hot and cold packs, blood pressure cuffs, EKG's, and spirometers,...). Life-like, computerized manikins are used to simulate patients and introduce students to normal and abnormal patient findings. The first year curriculum also includes the study of Human Growth and Development (exploring physical, cognitive and social-emotional development through the life span). Study strategies (including note-taking, textbook reading, studying, test-taking,...) are taught in the early part of the first year and reinforced throughout the duration of the two-year program. Students spend time during the first year program exploring various medical and sports related fields in order to fully understand the details of each of these positions. Students then have the opportunity to observe different medical professionals through clinical observations, in order to identify their own area of interest. In the second year, in addition to the continued study of Anatomy and Physiology, the curriculum also includes an in-depth study of nutrition, including nutritional considerations for the athlete. Students in the second year program are placed in career work experiences in their identified area of interest, allowing them to acquire valuable hands on experience with patients as well as the chance to interact with medical/sports professionals.

Because the instructors of the Medical and Sports Sciences Program are adjunct faculty at local colleges, qualified students may earn up to fourteen transcribed college credits (seven credits in the first year and seven credits in the second year) through dual enrollment programs at Vermont Technical College and the Community College of Vermont. Former students have successfully transferred these credits to the colleges and universities they have attended.

Prerequisite: Biology or Instructor Approval.

PRINCIPLES OF ENGINEERING, ARCHITECTURE & CONSTRUCTION I & II; three units of credit per year (Mathematics credit after the first year)

PEAC is a college preparatory program designed to meet the needs of students who are interested in pursuing careers that encompass the design, engineering and construction of commercial and residential buildings. Included in the curriculum is the study of manual and computer aided drafting, surveying to include topographical and boundary details, architectural design concepts and building construction principles and practices. Students will select small projects to design and build for area nonprofit agencies. Through classroom activities students will explore career opportunities and post-secondary options. They will also develop professional portfolios to present to colleges or future employers. In this program you will: gain competency in computer aided design and drafting; work with mentors who are professionals in the engineering, architectural and construction fields; interact with area planning and zoning commissions; build a professional portfolio; produce a boundary survey map including contour drawings; learn construction practices and inspection guidelines; study the effects of natural and manmade forces on structures; and explore post secondary options.

Qualified students may earn up to five transcribed college credits through a dual enrollment programs at Community College of Vermont and Vermont Technical College. These credits may transfer to other colleges and universities.

Prerequisite: Algebra I and Geometry or Instructor Approval.

WELDING/METAL FABRICATION I & II; three units of credit per year (Mathematics credit after two years)

The welding industry today presents continually growing opportunities for skilled workers. This program trains students in the recognition of metals, as well as the proper procedures in welding. Instruction includes electric arc, oxyacetylene and gas tungsten arc welding. Instruction also includes blue print reading and the safe use of small hand and power tools used in the field of metal fabrication.



CENTER FOR TECHNOLOGY, Essex

Visit our web site www.gocte.org for more details and photos.

The Center for Technology, Essex (CTE) operates a full day, flexible block schedule. This schedule allows juniors and seniors to complete a technical program in one year. Most students attend CTE daily, from 9:40 a.m. - 2:05 p.m. Every program offers two to three academic credits (math, science, English, social studies, etc.) as well as up to four elective credits toward high school graduation. In addition, some students take separate academic courses (e.g. algebra, chemistry) at CTE, Essex High School, or a local college to meet graduation or college entry requirements. Our schedule allows flexibility for serious students.

The primary objective of our CTE programming is to provide each student with specific knowledge, skills, and theory to enable him/her to either obtain employment upon completion of the program and/or to enter college. All eligible students participate in a "Career Work Experience" (internship) related to their technical field during their program at CTE. For successful students, this may evolve into a paid work (Co-op) position. Industry credentials and/or licenses are affiliated with all programs.

College Connection: Many CTE programs qualify for dual enrollment credits that award eligible students college credit for their CTE program. These agreements include college transcripts and transferable credit. CTE students are also offered the opportunity to take other college courses for free or at a reduced rate.

Admission Requirements (visit program and attend Step-Up Day; plus the following):

- 1) visit the program
- 2) attend Step-Up Day
- 3) a minimum of 10 high school credits (including 2 credits each in math, science, social studies and English)
**our Pre Tech Exploration program has separate credit entrance requirements*
- 4) good attendance (no more than 15 absences, unless there are extenuating circumstances)
- 5) ability to work both independently and in group situations
- 6) ability and willingness to follow safety instructions
- 7) respect for self, others, the environment, the learning process, and the CTE worker traits

CENTER for TECHNOLOGY, Essex: PROGRAMS OFFERED

Full day programs

For Eleventh and Twelfth Grade Students

Automotive Technology I & II

Building Technology: Residential

Building Technology: Systems

Childhood Education/Human Services I & II

Computer Animation & Web Page Design I & II

Computer Systems Technology I & II

Cosmetology Arts and Sciences I & II

Dental Assisting

Engineering/Architectural Design I & II

Graphic Design & Digital Publishing I & II

Health Informatics

Medical Assisting Focusing on Eye Care

Natural Resources and Agri-science Technology: Mechanical Science

Natural Resources and Agri-science Technology: Forestry

Professional Food Services I & II

Apprenticeship Training

Pre-Tech Explorations (grade 10)
Pre-Tech Education: VYCC – Conservation
Leadership (grade 10)

Pre-Tech Foundations: Intro to Cosmetology (grade 9)
Pre-Tech Foundations: Intro to Engineering (grade 9)
Pre-Tech Foundations: Intro to Automotive Technology
(grade 9)

The Center for Technology, Essex is an equal opportunity agency that offers all persons the benefits of participating in each of its programs and competing in all areas of employment. This agency does not discriminate because of race, religion, color, ancestry, national origin, gender, sexual orientation, sexual identity, place of birth, or age, or against a qualified individual with a disability.

CENTER for TECHNOLOGY, Essex: PROGRAM OF STUDIES 2012-2013

Helpful Terms:

- **Embedded credits:** Core academic credits in Math, Science, Social Studies, or English that are approved by the Vermont State Board of Education and meet state required high school graduation requirements. These credits are awarded based upon the rigor and connection of content in the program area to the core academic discipline.
- **Integrated credits:** Core academic credits in Math, Science, Social Studies, or English that are taught by licensed academic instructors who teach directly in the CTE program.
- **Recommended Reading Level:** This measure is provided as a guideline to indicate the demands of the text used in our CTE programs. Many of our programs have highly technical text demands. This measure is **not** an entrance requirement. This information is included in the Program of Studies to inform students, families, and sending schools about the difficulty of typical text in our programs and to maximize the likelihood for student success. Support services are offered to all CTE students.

AUTOMOTIVE TECHNOLOGY I

The Automotive Technology Program provides training and experience in the principles of automotive diagnosis and repair. The Automotive Technology Program has been recognized nationally for its excellence; it is a NATEF (National Automotive Technicians Education Foundation) certified course. The Automotive Technology program provides students with the basic knowledge and skills to acquire entry-level jobs in many automotive areas, or to pursue a post-secondary education in the automotive field. Students have the opportunity to learn both basic and advanced technical skills, along with essential worker traits. While at CTE, students work as practicing technicians in the “live” auto shop environment operated within the center. Eligible students are placed in a two week Career Work Experience in area auto tech businesses.

Recommended Prerequisite(s): Grade Level Math, Science and English

H.S. Credits: One embedded math credit and one embedded science credit, plus four elective credits.

Certifications: VADA GST certifications, SP/2 Safety Training

College Credits: Articulation Agreements with University of Northwestern Ohio, Universal Technical Institute and Ohio Technical College

Recommended Reading Level: Grade 11-13+

AUTOMOTIVE TECHNOLOGY II

This program is available to students who successfully complete the Automotive Technology Program. It is made available for qualified students through the Automotive Youth Education System (AYES), a national program sponsored by manufacturers and dealers. The curriculum includes paid apprentice hours at local employers, on-line CDX certificate training, college classes provided at area colleges, adult training courses in our evening skill tech division and regularly scheduled individual meetings with a cooperative education placement coordinator.

Prerequisite: Successful completion of the Automotive Technology I program

H.S. Credits: One embedded math credit, one embedded science credit and four elective credits.

Certification: ASE

BUILDING TECHNOLOGY: RESIDENTIAL

In the Building Technology: Residential program, students will work in the shop as well as on a larger construction project such as a custom home being built in a local neighborhood development near CTE or a commercial building project off-site. Successful students have the potential to find well-paid jobs in the field, or to go on to further education in architecture and design, civil engineering, or construction management. Curriculum components include basic safety, construction industry math, hand tool use and identification, power tool safety, use and maintenance, blueprint reading, basic rigging, construction materials and adhesives, and framing methods and planning. In addition, some students may enroll in a licensed apprenticeship program for electricians or plumbers which are accredited by the State of Vermont.

H.S. Credits: One embedded math credit, one integrated science credit and four elective credits.

Co-Op Offered: Qualified students may apply to participate in a second year co-op.

Recommended Reading Level: Grade 11-13+

BUILDING TECHNOLOGY: SYSTEMS

In the Building Technology: Systems program, students will have instruction and gain practical experience in electrical, plumbing/HVAC systems, timber framing and historic preservation, excavation and site layout, cabinet making and woodshop machines, and concrete. Successful students have the potential to find well-paid jobs in the field, or to go on to further education in architecture and design, civil engineering, or construction management. In addition, some students may enroll in a licensed apprenticeship program for electricians or plumbers which are accredited by the State of Vermont.

H.S. Credits: One embedded math credit, one integrated science credit and four elective credits.

Co-Op Offered: Qualified students may apply to participate in a second year co-op.

Recommended Reading Level: Grade 11-13+

CHILDHOOD EDUCATION AND HUMAN SERVICES I

This program is designed to prepare students to work with infants, toddlers, preschoolers and school age children. Students are introduced to careers in education and instructed in the steps they need to take to pursue a teaching career or social work. The program introduces students to elementary school math, science, reading, and social studies instruction. Students are also trained to work with the handicapped and the elderly. The CTE

Preschool is operated by the students enrolled in this program. The program is recognized by the State of Vermont Day Care Licensing Unit as a training program for assistant teachers and caregivers in state licensed child care facilities. Students who become employed and complete all the requirements receive certification as assistant teachers. In cooperation with the Community College of Vermont students are able to earn six college credits in Early Childhood Education while participating in this program. Students are also able to attend Champlain College or Community College of Vermont for additional credits.

Special Requirement of All Students: *Due to the professional requirements in this field, all applicants must be able to satisfy the criminal records check required by the state Child Care Services Division.*

Prerequisites: 2 credits English, 2 credits Math, 1 credit Science, 1 credit Social Studies

HS Credits: One integrated English credit, one embedded social studies credit and four elective credits.

Certification(s): *Assistant Child Care Teacher, First Aid and CPR*

College Credits: Up to six credits awarded by CCV; six additional credits available to qualified students.

Recommended Reading Level: Grade 9-11+

CHILDHOOD EDUCATION AND HUMAN SERVICES II

Qualified students are invited to apply to our apprenticeship program. Students involved in this program work at area schools, pre-schools or child care facilities. This is a supervised work experience and students are expected to fulfill the planned course work at the center as well as complete a college level course each semester and any required high school academic classes. Students are paid by the employers for their time at the centers. Students are required to complete three rotations in school settings: one rotation in an alternative school, one rotation in an elementary school classroom, and a rotation observing elementary school math, music, and art classrooms. In cooperation with CCV, eligible students can earn three additional college credits for a psychology course.

Prerequisites: Successful completion of Childhood Education and Human Services I program.

HS Credits: One integrated English credit, one embedded social studies credit and, four elective credits.

College Credits: Additional courses at CCV and VTC earn three to nine additional credits.

COMPUTER ANIMATION AND WEB PAGE DESIGN I

The Computer Animation and Web Page Design Program is designed for students interested in the combination of art and technology. Through the program students acquire media skills for 21st century careers. The Computer Animation component takes advantage of state-of-the-art 2D and 3D digital computer hardware and software used in media such as Pixar films and games. Learn how to bring your ideas to reality, from characters to landscapes, to animation and special effects. This CTE program also offers specific elements of game design. In the web design component students study a number of different design mediums including XHTML, HTML5 and CSS: students add interactivity, image manipulation, logo and layout creation using Photoshop and Illustrator and create streaming/interactive content in Flash. Upon completion of the program, students have created an interactive online portfolio of their best work for application to higher education, internships or the work force.

Recommended Prerequisite(s): Students must demonstrate creativity and interest in the combination of art and technology and the ability to work independently.

H.S. Credits: One integrated English credit, one embedded fine art credit, and four elective credits.

Certification(s): World Organization of Webmasters

College Credits: Dual enrollment agreement with CCV for up to six college credits. In addition, qualified students can earn up to nine more college credits at area colleges.

Recommended Reading Level: *Grade 9-11+*

COMPUTER ANIMATION AND WEB PAGE DESIGN II

Students who successfully complete the Computer Animation and Web Design Page 1 program may apply to the second year program. Second year students will expand their knowledge of new media skills and work with clients on projects. The Computer Animation component of the second year consists of using 3D software to learn advanced poly modeling techniques, character development and modeling, unwrapping models to texture,

and using digital painting to normal map. The Web design curriculum includes creating complex websites using HTML5 / CSS, employing JavaScript to develop web 2.0 technologies, and creating a content management system for clients using PHP and MySQL. Along with creating websites, students in the second year program will use state of the art cameras to take photographs for their web projects and create high definition videos to be hosted on the web. During the year, students work on developing a professional online portfolio, which can be used to apply to college or a job after graduation. In addition to the curriculum all students access a career work experience where they expand their skills while working with actual clients.

Prerequisite: Successful completion of Computer Animation and Web Design I program.

H.S. Credits: One integrated English, one integrated Science credit, one embedded fine art credit, and three elective credits.

Certification(s): World Organization of Webmasters

College Credits: Dual enrollment agreement with CCV for up to six college credits. In addition, qualified students can earn up to four VTC credits in Honors English Composition and three credits at CCV in 2-D Design.

COMPUTER SYSTEMS TECHNOLOGY

The Computer Systems Technology Program prepares students to enter a career in computer support services as part of an information technology team. Students learn how to diagnose and solve computer problems, upgrade computer systems, properly install internal computer components, set up networks, operate network servers, and maintain computers in a Windows or network environment. Students gain necessary skills to become support/service/bench or help desk technicians. The program is excellent preparation for students considering computer engineering in college, and eight transferable college credits are awarded to successful students.

HS Credits: One embedded math credit, one embedded science credit, plus four elective credits.

Certification(s): A+

College Credits: Dual Enrollment agreement with CCV for up to eight credits.

Recommended Reading Level: Grade 11-13+

COMPUTER SYSTEMS TECHNOLOGY II

Successful students who earn required certifications may apply to return to CTE for an advanced/second year to work on Network and Cisco Certified Network Associate (CCNA) certification. Study, in combination with co-op placement, assists students qualify for this challenging license required by information technology support staff.

Prerequisites: Successful completion of Computer Systems Technology I program.

HS Credits: One embedded math, one embedded science credit, plus four elective credits.

Certification(s): Network +, CCNA

College Credits: Four credits for CISCO Networking, plus the opportunity for four credits College English Composition from VTC.

COSMETOLOGY ARTS AND SCIENCES I

Approved by the State Board of Cosmetology and Barbering as a licensed school of cosmetology, this full-time program prepares students for employment and further education in the field of cosmetology. Students can complete up to 750 hours toward their required 1500 hours for a state cosmetology license. Students learn through theory and practice the foundational skills including: hair structure and chemistry, hair shaping and design decisions, color and lightening application and scientific process, and chemical restructuring of the hair. Additionally, level one anatomy and physiology, skin and nail diseases and disorders are important topics

covered in this program. The introduction of interpersonal and workplace readiness skills are an integral part of this program of study.

HS Credits: One embedded science credit, one integrated English credit, and one integrated math credit, plus three elective credits.

Certification(s): OPI certification (nail system)

Recommended Reading Level: Grade 11-13+

COSMETOLOGY ARTS AND SCIENCES II: SALON MANAGEMENT

Students who successfully complete Cosmetology I may be accepted into the client-oriented second year program. Cosmetology II students can complete up to an additional 750 clock hours toward the required 1500 hours for a state cosmetology license. Students in this program focus on applying fundamental skills learned in the first year while practicing on clients in a business setting. In preparation for licensure, all competencies introduced in Cosmetology I are revisited in a theoretical manner. Cosmetology II Salon Practices Management emphasizes the day to day operation of the salon. This year-long program reinforces and enhances salon management, scientific application of chemical services and interpersonal communications.

Prerequisite: Successful completion of Cosmetology I program.

HS Credits: One embedded science credit, one integrated English credit, and one integrated math credit, plus three elective credits.

Certification(s): State Cosmetology License for qualified students

College Credits: Students can earn up to nine college credits at area colleges (CCV, VTC, and UVM).

DENTAL ASSISTING

Accredited by the American Dental Association, this program is designed for students who have a strong background in science and want to work with people. Students become familiar with all aspects of dental assisting in the general dental practice. The curriculum is designed to prepare motivated individuals to become competent and knowledgeable in professional orientation, dental materials, dental radiology, tooth morphology, head and neck anatomy, infection control, clinical assisting, and medical emergencies/CPR. Instruction takes place in our in-school classroom, dental laboratory and clinic. For eligible students, clinical training is completed at area dental offices. Students who successfully complete the program and meet eligibility requirements are prepared to challenge the Dental Assisting National Board examination to become Certified Dental Assistants and to become certified in dental radiology. All successful students are eligible for employment as dental assistants in a variety of dental practices.

Recommended Prerequisite(s): *General or biological science.*

HS Credits: One embedded science credit and one integrated math credit, plus four elective credits.

Certifications: *American Red Cross CPR and AED (defibrillator) certification; dental radiology certification.*

Recommended Reading Level: *Grade 10-12+*

ENGINEERING / ARCHITETURAL DESIGN

The Engineering and Architectural Design Program is an excellent hands-on preparation for students interested in architecture or mechanical engineering. Students learn the graphic language basic to all forms of engineering, architecture and design. The program provides an essential background and early opportunity for students to explore the field prior to college. College credit may be awarded to eligible students who complete this program. Students also complete a portfolio valuable for college application. This course has been recommended by UVM and VTC to all students considering engineering careers.

The program utilizes an individualized approach. A student may enter the program on a one or two year basis; flex scheduling is accommodated. Students must be enrolled in both math and science courses while taking this program (Algebra II, Pre-Calc, Chemistry, Conceptual Physics or Physics). By graduation, students should plan to have successfully completed Algebra I, Geometry, Algebra II, Pre-Calculus or Algebra, Trigonometry, Probability and Statistics (ATPS), Chemistry and Physics as minimum requirements for any two or four year college.

Year I: TECHNICAL DRAFTING

In this course, students progress through a series of drafting problems, providing them with a sound foundation in the methods and techniques used in various drafting and design applications. Orthographic, isometric, sectioning, perspectives, schematics, developments and many other types of graphics will be covered. Computers with AUTOCAD and SOLIDWORKS software are used to solve and draw many of these problems. Multimedia portfolios are produced using Microsoft Office applications.

Recommended Prerequisite: Algebra I, Geometry (80% or better in each)

HS Credits: One embedded fine arts credit, one embedded math credit, plus four elective credits

Recommended Reading Level: Grade 10-12+

Year II: DESIGN

After completion of technical drafting, the student may enter the design area in which he/she wishes to concentrate - Mechanical Design or Architectural Design.

MECHANICAL DESIGN provides students with experiences in advanced detail drafting, assembled mechanisms, precision measuring, fixture design, CNC computer numerical control and programming. . The design, building and testing of structural models are covered through involvement with engineering competitions. Work in this course is completed entirely on computer with SOLIDWORKS and other software. Students chosen to participate in the VTC course *MEC-1011* receive two (2) transcribed college credits.

ARCHITECTURAL DESIGN covers residential buildings. Topics include styles, construction, design floor plans, elevations, foundations, electrical, plumbing, heating, kitchens, lot and plot plans. Students are involved in the actual design of buildings to be constructed in the surrounding community. Work in this course is completed entirely on computer with AUTOCAD and other software. Students chosen to participate in the VTC course *ARC-1021* will receive two (2) transcribed college credits.

HS Credits: One embedded fine arts credit, one embedded math plus four elective credits

College Credits: In addition to the VTC MEC-1011 or ARC-1021 transcribed credits, some colleges have waived courses for work demonstrated in students' portfolios. Eligible students may also take VTC English Composition and other college classes.

GRAPHIC DESIGN AND DIGITAL PUBLISHING I

Look at the logo on your T-shirt or ball cap, or the package you opened this morning that your breakfast burrito came in? How about the images in iTunes that direct you to download a certain song or the graphic icons on your cell phone? What do all these seemingly unrelated examples have in common? All were designed by a graphic designer. This creative/technical design-based hands-on program is for students who thrive on technology, a challenge, and love computers; for students who are curious about color, imagery, photography, how design interacts with people on a daily basis; for students who want to explore careers in communication and creative media while learning graphic design for print and new media. This program mirrors a graphic design studio. Students take a design project from concept creation through digital production and preparation for output to various media. Students learn the Adobe creative suite (Illustrator, Photoshop, InDesign, etc)

software on a Mac computer. Through a combination of project work, site visits, field trips and career work experience, students will gain experience in many aspects of the industry that touch our lives in so many ways. For completion of the program students create a portfolio and earn the Graphic Design & Digital Publishing Certification awarded by the *Regional Graphic Design & Digital Publishing Advisory Council*. Students can apply for the second year program where a career-based client driven design studio is managed by the students.

HS Credits: One embedded math credit, one integrated art credit, one integrated English credit, plus three elective credits.

College Credits: Students can also earn credits from CCV in graphic design through a dual enrollment initiative and articulate up to 15 credits at Lyndon State College in their Visual Arts department.

Recommended Reading Level: Grade 11-13+

GRAPHIC DESIGN AND DIGITAL PUBLISHING II

Students who successfully complete the Graphic Design and Digital Publishing 1 program may apply to the second year program. Second year students have a choice between two program models. Qualified students can complete program requirements by participating in an apprenticeship in which they go directly into the workforce and expand their skills through employer based programs. Other students may wish to complete their second year in our in-house design and print studio, *Next Generation Design & Print*. In both instances, students engage in software certification and learn to manage the design and print studio. Second year students also develop concepts for client jobs, produce and prepare the digital job files, and print/finish the live client jobs.

Prerequisite: Successful completion of Graphic Design and Digital Publishing I program.

HS Credits: One embedded math credit, one integrated art credit, one integrated English credit, plus three elective credits.

College Credits: Student portfolios can earn up to nine credits from Lyndon State and nine credits from the Vermont State College system. Dual enrollment credits in Graphic Design II (three credits) available to qualified students.

HEALTH INFORMATICS

This program focuses on training for diverse medical administrative positions and as an introduction to health professions. Health care increasingly relies upon the expertise of staff trained in both interpersonal communications and technical skills. Course topics include: medical terminology, human biology, career development, medical office management, computer science, electronic health records, medical insurance reimbursement and diagnostic/procedural medical coding. Students also discuss the ethical and legal issues regarding work in medicine as well as personnel management, insurance issues, the specific skills involved in working from home, and other information management topics.

Eligible students in this program participate in a 30-hour career work experience in the health care industry, with placements in private physicians' offices, hospitals, clinics or insurance companies. Possible career fields include but are not limited to: Health care supervision, medical coding and insurance reimbursement, medical office secretary and patient scheduling. Students could qualify for clinical health related careers with additional training.

HS Credits: One integrated science credit, one embedded math credit, one integrated English credit and four elective credits.

Certifications: CPR, First Aid

College Credits: Up to six college credits for eligible students through dual enrollment at CCV. Additional three - nine credits are available through classes at area colleges.

Recommended Reading Level: Grade 11-13+

MEDICAL ASSISTING FOCUSING ON EYE CARE

Medical Assisting prepares high school students and adults for immediate employment (medical assistant) or for further study in medical professions. The program requires proficient academic achievement and strong communication skills. Following four months of intensive classroom, lab, and clinical skill instruction, qualified students participate in supervised externships in their area of interest with medical practitioners and technicians in up to three medical specialty areas. Career work experience may include placements in health clinics and hospital departments, specialty physician offices such as ophthalmology, pediatrics, or general practitioners). Certification in Ophthalmic Medical Assisting is available to interested students and has been approved by the American Board of Education. Program curriculum includes: General Anatomy and Physiology and associated disease, Medical terminology, Medical Law and Ethics, patient services, Pharmacology, Surgical Assisting and patient history taking. In addition, students interested in Ophthalmic Assistant certification receive instruction in diseases of the eye, measurement of spectacle power, measurement of eye pressure, and measurement of the refractive needs of the eye. The supervising medical director for this program is Dr. Michele Young, Fletcher Allen Health Care.

Recommended Prerequisites: Algebra I and a biological science

HS Credits: one science credit, one math credit and four elective credits.

Certifications: CPR/AED

Recommended Reading Level: Grade 11-13+

NATURAL RESOURCES AND AGRISCIENCE TECHNOLOGY FORESTRY AND MECHANICAL SCIENCE

Students are offered a unique opportunity to experience the science, technology, and management of a "living laboratory" in this award winning, fast paced program. The program is organized into two one-year options. Students select either Forestry (Environmental Science/Horticulture) or Mechanical Science after completing an introductory unit featuring core skills during Step-Up Day. ***Forestry (Environmental Science/Horticulture)*** curriculum includes: Timber Harvesting, Forest Management, Landscaping, Greenhouse Management, Plant & Soil Science, Hydroponics/Aquaculture and Hand and Power Tools. ***Mechanical Science*** curriculum includes: Heavy Equipment Operation, Welding Fabrication, Small Engine Repair, Electrical Systems, Water Systems, Hydraulic Systems and Hand and Power Tools. In both concentrations, students have the opportunity to develop leadership and entrepreneurial skills as they produce a variety of seasonal food products. Several traditional food products include maple syrup, honey, rainbow trout, and hydroponic vegetables. Students interested in attending college to major in mechanical engineering, natural resources and environmental fields will benefit from this program. Students preparing for careers relating to industrial mechanics, or the management, use and preservation of land, soil, and water will find this course tailored to meet their needs.

Recommended Prerequisite(s): Qualified applicants must demonstrate maturity with respect to safe equipment operation such as chainsaws and heavy machinery, the ability to work effectively in teams; maintain a high level of respect for classmates, and instructors; and act in a manner congruent with authorized ambassadorship of a highly visible program. Mastery of basic mathematical operations, measurement, fractional and metric conversions, and logical manipulative skills is required. Preference will be given to students with math and science backgrounds.

HS Credits: One embedded math credit and one embedded science credit, plus four elective credits.

Certifications: Games of Logging I-IV, Outdoor power equipment certification in small engines (OPE).

College Credits: Articulation agreement in place with SUNY Cobleskill, NY (Agricultural Engineering and the Department of Plant Sciences) and Paul Smith's College. Eligible students can earn four college credits in English Composition or up to six credits at area colleges.

Co-Op Offered: Qualified students who have completed one year of Natural Resources may apply to participate in a second year co-op.

Recommended Reading Level: Grade 10-12+

PROFESSIONAL FOOD SERVICES I

The Professional Food Services Program is designed to offer training in all areas of the food service industry. Students in this program learn food preparation, baking, and restaurant operation and management. Teamwork, professionalism and positive worker traits are stressed as well as technical skills in order to give students a chance to secure and retain employment in the food service field.

Students work and learn in a commercial kitchen and use professional equipment as part of their training. Part of the instruction involves operating the Center's restaurant "The Colonial Room". Students learn basic weights and measures, food service safety and sanitation, product identification and use, time management, nutrition, use and care of equipment and mastering food service competencies. There is a close working relationship with area businesses which allows students to spend two weeks with a participating employer on a Career Work Experience.

Recommended Prerequisite(s): Good basic math and writing skills.

HS Credits: One embedded math credit and one integrated science credit, plus four elective credits.

Certifications: ServSafe

Recommended Reading Level: Grade 10-12+

PROFESSIONAL FOOD SERVICES II

Students who complete the Professional Food Services I program can apply to this second year program. The curriculum focuses on menu design, marketing, and sales in an entrepreneurial food production setting. Students learn to work more independently and assume responsibility for food production management decisions. Students produce and market healthy meals to be sold in the school's cafeteria. There is a close working relationship with area businesses which allows students to spend two to three weeks with a participating employer on a Career Work Experience. Students may qualify for an extended Apprenticeship placement in the second semester.

Recommended Prerequisite(s): Good basic math and writing skills.

HS Credits: One embedded math credit and one integrated science credit, plus four elective credits.

Certifications: ServSafe

College Credit: An exciting dual enrollment program with New England Culinary Institute (NECI) is an option for eligible seniors. This program awards three credits and provides a five day residential session at NECI in Montpelier. Additionally, CTE has an articulation agreement with Paul Smith's College

APPRENTICESHIP TRAINING

The Center for Technology, Essex (CTE) offers those students who have successfully completed one year at CTE and are highly motivated, focused, and highly skilled a second year option of student apprenticeship in certain career areas. This workplace, competency delivered curriculum, combines both non-paid and paid training, vital for students to achieve advanced job placement or acceptance in a post-secondary institution in their selected career area. Successful first year students must interview for these placements.

Programs and Classes for Ninth and Tenth Graders

PRE-TECHNICAL EXPLORATION (Full Day Program)

Pre-Technical Education is a one-year, six-period program for **sophomores** who thrive in project-oriented experiences that emphasize applied academics. Students are involved in a wide variety of cutting-edge technical activities where they learn science, mathematics, social studies, and communication skills while building personal development assets. Much of the learning takes place outside a traditional classroom and instead uses authentic locations to engage reluctant students and to provide experiences for deeper and more relevant learning. The teaching strategy employed by the program's instructors is to create "teachable moments" frequently by giving students new and challenging experiences by exploring curriculum content from the many various programs offered at the center including Allied Health Careers, Building Technology, Engineering, Graphic Arts, and Information Technology. Any student would find this program a refreshing alternative to conventional classroom instruction and it is particularly valuable to students who may be frustrated academically.

Students succeeding in this program are likely to experience success in their future and are encouraged to enroll in CTE programs to further develop their skills and advance their learning.

Prerequisites: Applicants must have a ninth grade transcript that shows an award of five full credits including:

1 Math, 1 English, 1 Social Studies, 1 Science and 1 elective.

HS Credits: One integrated credit each in English, math, science, fine arts, physical education and elective.

PRE TECHNICAL EDUCATION: VYCC - CONSERVATION LEADERSHIP INSTITUTE (Full Day Program)

The model of the Conservation Leadership Institute is similar to many VYCC programs: a group of 10-12 **sophomore** students led by well-trained and talented Instructors work together to complete outdoor conservation projects that improve the working landscape.

The High School Leadership Program has four curricular themes: **Watershed**, **Forestry**, **Design/Build**, and **Agriculture**. The crew focuses on two themes per quarter and students earn full credit in a range of academic disciplines. Instructors collaborate closely with community members and VYCC staff to identify work projects that align with the four themes. Recent projects include building a hoop house on a local organic farm, raising chickens for slaughter, repairing trails damaged by Irene, felling trees to build a retaining wall, and planting an apple orchard.

In addition to the four aforementioned curricular themes, students focus on achieving outcomes in three categories: academics, leadership, and mastery of technical skills – all three are central components of the VYCC mission and essential to success during and after high school. In this learning environment, the contributions of all students are essential to the success of the group. Students quickly recognize that community members and project sponsors appreciate their efforts. In short, completing “real” projects raises the stakes and inspires students to produce high-quality academic and conservation work.

Prerequisites: Tenth grade applicants must have a ninth grade transcript showing an award of five full credits including: 1 Math, 1 English, 1 Social Studies, 1 Science, and 1 Elective. Students applying to attend in their eleventh or twelfth grade must have a minimum of 10 credits and be “on-track” to graduate.

HS Credits: Each semester students can earn .5 credits in Math, English, Social Studies, Science and Physical Education

PRE TECH FOUNDATIONS: INTRO TO ENGINEERING

Do you like to design and create? Is a career in engineering or architecture for you? This course was developed for ninth and tenth graders to give them a taste of how designers, engineers and architects create and design products, like buildings or machines, for our society. Students learn the elements and principles of art and how

they are used in the design process by practicing the skills of drawing, sketching, 2-D computer aided design, 3-D computer aided design and problem solving to complete projects. Students will also learn about career paths in engineering and architecture and what colleges/universities require for entrance. Hands-on projects and field trips to industry sites are a regular part of this curriculum. This class is limited to 18 students.

Note: This class meets the first block of the morning every other day

HS Credits: One half fine art credit and one half elective credit.

PRE TECH FOUNDATIONS: INTRO TO COSMETOLOGY

This foundational course is designed for ninth and tenth grade students interested in Cosmetology based careers. Students are introduced to the basic skills and knowledge that will help them better plan for continued exploration in the Cosmetology industry, including Theory Essentials, Hair Services, Nail and Skin Services. This course features instruction and hands-on activities in all areas of the career cluster. Students considering application to the center's full day Cosmetology 1 program are encouraged to take this course.

Note: This class meets the first block of the morning every other day

HS Credits: One elective credit.

PRE TECH FOUNDATIONS: INTRO TO AUTOMOTIVE TECH AND TRANSPORTATION

This course is designed for ninth and tenth grade students interested in automotive and transportation-based careers. Students are introduced to the basic skills and knowledge that will help them better plan for continued exploration in the Automotive Technology industry. In addition to hands-on activities using the tools and equipment in the Automotive Technology lab, students complete career plans to better understand what is required to be successful in this industry. Students considering application to the center's full day Automotive Technology program are encouraged to take this course.

Recommended Prerequisite: Intro to Algebra or a similar math course.

Note: This class meets the first block of the morning every other day

HS Credits: One half elective credit and one half practical art credit.

ACADEMIC COURSE OFFERINGS

EHS/CTE/VERMONT TECHNICAL COLLEGE ENGLISH COMPOSITION 1060

This Honors English dual enrollment course offers qualified seniors the opportunity to earn both a high school English credit and four college credits in English Composition. This course introduces students to four literary genres – the short story, poetry, the novel and drama – and to research writing. The course aims to 1) master the techniques of essay writing, 2) educate students about the rewards inherent in reading, analyzing and reflecting upon literature, 3) communicate effectively, both orally as well as in exposition, and 4) increase their awareness of their responsibilities as global citizens who have both technological and academic skills.” A student must have acceptable Accuplacer scores and recommendation from an English teacher. All students earn one high school English; students must meet additional requirement to earn college credit. Enrollment is limited to 20 students.

SENIOR ENGLISH

This course is for juniors and seniors interested in going to college. Students learn to read beyond comprehension and recall and for meaning and interpretation. They learn to write about abstract concepts using effective essay writing formulas.

TECHNICAL ENGLISH

Looking for relevance in your English class? Look no further. A major goal of this English class is to link aspects of this course to your life, your needs, and your experience at CTE. Much of the reading, writing, and

communication skills in this course focus on helping students prepare for further success in the job search, in the workplace, and in life. Projects throughout the year allow students to make a direct link between academic and technical training.

LANGUAGE ARTS

This course provides an English class to a wide variety of technical center students. Working with the teacher, students develop individualized plans that integrate reading, writing, grammar practice and technology into topic areas that are relevant and interesting to each student.

ALGEBRA 1

This course provides students with a foundation in algebra to prepare for further mathematics courses. Topics covered are: the real number system, a study of first-degree equations and inequalities, operations with algebraic expressions, factoring, polynomials, radicals, and a brief introduction to quadratic equations. Some lessons include the use of a graphing calculator.

ALGEBRA 2A

Algebra 2A is intended as a bridging course to help students prepare for Algebra 2. Principles of Algebra 1 are reviewed and additional background is introduced to help students feel comfortable before moving into new topics in algebra. Topics include factoring, graphing, fractional equations, exponents, radicals, and inequalities. The class is paced as a mix between Algebra 1 and Algebra 2 topics.

ALGEBRA 2B

Algebra 2 gives students more practice with basic algebraic operations and concepts. It then presents deeper concepts and more difficult operations for them to analyze and perform. Some of the topics covered are real numbers, equations and inequalities, polynomials, fractions, exponents, radicals, logarithms, sequences and series, complex numbers, graphing and analysis of functional relationships. Some lessons include the use of the graphing calculator.

MATH of PERSONAL FINANCE

This course provides students with the knowledge and skills to manage their finances effectively. Students learn how to use math in everyday business and personal situations. Topics include managing money, managing expenses and making financial decisions.

MATH LAB – SENIOR REVIEW

With a focus on basic math computation skills, this refresher course will review concepts in algebra and geometry. The course is intended for senior students who have taken these topics and need to refresh their skills for college entry and achievement on placement tests. Topics would include: fractions, decimals, percentages, algebra and patterns, methods with algebraic equations and expressions, patterns, functions, and systems of equations. This course is a single semester senior math elective awarding one half credit using a combination of class activities, web based math review, and small group topical help.

GEOMETRY

Students are introduced to geometry principles they apply to the world of work. Topics include points, lines, circles, properties of polygons, constructions with compass and straight edge, congruency, angle bisector, special projects and related vocabulary. Students maintain a computer-based log of activities with "Geogebra", a web based system that allows students to manipulate geometric concepts, focus on learning, and work at their own pace. Specific applications with graphic design, computer/internet web design, and building construction provide day-to-day discussion points.

PRE-TECHNICAL MATH

As an integral component of our Pre-Tech Exploration program, students work through a series of application-based concepts of mathematics, geometry, measurement, algebra and related topics. Word problems, fractions, fractional equations, graphing, unit conversions, ratio and proportion are central to several real-world content applications. Geometric applications of vectors, plane movement, measurement, right triangle, circles, prisms, pyramids, and spheres are central to real-world examples of GPS mapping, orienteering, and others.

APPLIED SCIENCE

This course is designed to provide students with scientific literacy in Chemistry and Life Sciences. Topics are explored through inquiry, discussion, projects, lab investigations, research and technology. Basic concepts in biology and chemistry are woven into the curriculum. It provides an excellent foundation in the basic topics of general chemistry and biology, always placing an emphasis on how each topic relates to daily life. Lecture, demonstrations, videos, computer simulations and traditional hands-on lab activities are used throughout this course. This course has been designed to meet Vermont Science Grade Expectations. Topics include Scientific Method and Experimentation, Biochemistry, Ecology, Human Body Systems, Classifying Matter Liquids, Solids, gases and Mixtures, Properties of Water, Acids and Bases, Chemical Bonds, and an Introduction to Chemical Reactions.

PHYSICAL EDUCATION

CTE offers physical education classes in two different formats. One class is offered every day and includes a variety of lifetime activities/ sports with an emphasis on fitness components and stress management. The other PE option is an independent study course where class meets once per week and includes a health club atmosphere, fitness components, stress management, and a variety of lifetime sports/ activities and independent workouts consisting of 240 minutes per week. Students in this class are required to complete a final personal fitness plan according to their interests and needs as a way to promote lifetime physical activity. Information learned in this course is applied to the students' CTE programs to promote fitness and health in the workplace. Examples of units of study for both courses may include; ice skating, weight training, yoga, Pilates, power walking, golf, biking, climbing wall, Frisbee, tennis, badminton, and ping pong.

ELL – ENGLISH FOR ACADEMIC AND PROFESSIONAL PURPOSES

This course is for non-native English language speakers who need to improve their English skills in order to participate in CTE programs with confidence. The course is tailored to the specific needs of each program and the focus is on developing academic vocabulary relevant to the student's field of study and their future workplace. Students work on research, presentation, and reading academic text skills needed in class as well as on building confidence and fluency for effective communication needed in their job search and professional working environment.

ELL – INDEPENDENT STUDY

A major goal of this course is to meet particular language needs of every English language learner studying at CTE. Students work one-on-one with an ELL teacher to fill in any gaps in their English language learning, whether it is their pronunciation, grammar, or communication skills. This Independent Study also offers a high degree of flexibility and personalization. Students design an individual study plan together with the teacher and follow it through to prepare themselves for success in a chosen CTE program.

DIGITAL PHOTOGRAPHY

The Digital Photography class at CTE focuses on learning the technology and skill behind taking great photographs. Students will earn a fine arts credit while exploring the use of digital cameras and photo editing software. We will go in depth into the workings of the camera and study compositional and lighting techniques. This class will greatly enhance your ability to use cameras and technology in your current trade.

DRIVER EDUCATION

This curriculum is designed to develop good driving skills, knowledge, and attitudes with an emphasis on safety. Classroom, simulation, range, and road experience will be included. Those students registering for Driver Education must obtain a Vermont Learner's Permit prior to the first day of class each semester.

PUBLIC ISSUES

Public Issues is a Social Studies course that examines current events, public policy and civics. Students explore the foundations of American government, the principles of the Constitution, rights and responsibilities as citizens, as well as current public policy challenges for local communities, Vermont, the United States and the world. The course utilizes a variety of instructional methods including: lecture, individual and cooperative assignments, simulations, discussion, research and student presentations. Throughout the semester students use current publications, media, and technology to stay informed about the issues facing us today at a local, state, national, and global level. Emphasis will be made on the importance of being an involved and informed citizen.