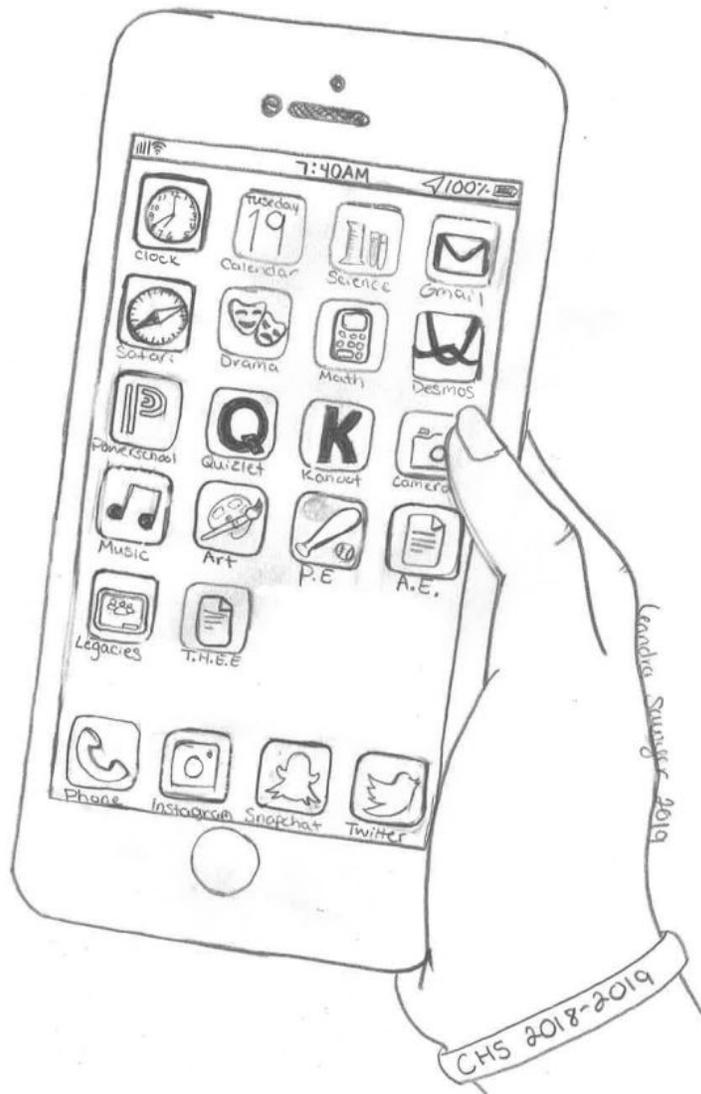


# COLCHESTER HIGH SCHOOL



## PROGRAM OF STUDIES 2018-2019

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# **Colchester High School Leadership Team**

## **Principal, Heather Baron**

Athletics, Business, CAP, Leadership Team, Mathematics, NEASC,  
Professional Development Committee, Science, Technology, and Wellness Committee

## **Assistant Principal, Timothy Emery**

Athletics, Alternative Education: Target Graduation, Attendance, Colchester Alternative Program (CAP),  
Health, Humanities, Library, Physical Education, Planning Room, Project Checkpoint, Changes and Tel-T  
Committee

## **Assistant Principal, Erica LeClair**

AT Program, Attendance, Co-Curriculars, Fine Arts, Music,  
Planning Room, Project Checkpoint, Smart Start, Technology, and World Languages

## **Director of Student Support Services, Jean Shea**

504, Colchester Alternative Program (CAP), Education Support Team, English Language Learners, Guidance,  
Nurses, Social Workers,  
Special Education

## **Team Leaders**

### **Vito Cannizzaro**

Fine Arts, Music, and World Languages

### **Wayland Cole**

Humanities (English and Social Studies)

### **Bob Hall**

Guidance

### **Amber Keep**

Special Education

### **Marijke Reilly**

Science

### **Tara Sharkey**

Business and Mathematics

# COLCHESTER HIGH SCHOOL

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Heather Baron, Principal  
Jean Shea, Dir. of Student Support Services  
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Timothy Emery, Assistant Principal  
Erica LeClair, Assistant Principal  
Bernie Cieplicki, Athletic Director

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. Students at CHS develop a personalized learning plan to help guide and inform the academic class selections and post high school plan.

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 and elective offerings. This serves to meet the needs of students as more and more students seek rigorous and specialized courses in order to prepare students for life beyond CHS. CHS also offers Flexible Pathways for those students who are interested in demonstrating proficiency and earning CHS credit for educational experiences beyond the walls of CHS. Flexible Pathway opportunities include internships, job shadows, employment opportunities, college courses, courses through Virtual High School, options credit and more!

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's personalized learning plan is designed to meet their individual needs as learners and a citizen in the school and beyond.

Please 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 student well and support you in making good decisions about the academic, social, and emotional needs of your student. We hope that your student's experience at CHS helps them become a life-long learner ready for whatever they pursue post-CHS.

Sincerely,

Heather Baron  
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 MOTTO

Equity and excellence in a climate of respect, responsibility and pride.

## 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

**Learn**  
**Communicate**  
**Think**  
**Act**

## Colchester High School AT Program

High performing schools systematically ensure that all students are meaningfully connected with at least one adult in the school and that there is a unified focus on high performance. CHS is an accredited school through the New England Association of Schools and Colleges (NEASC). A component of the NEASC required standards for accreditation is:

*There is a formal, ongoing program through which each student has an adult in the school, in addition to the school counselor, who knows the student well and assists the student in achieving the school's 21st century learning expectations.*

CHS has a very focused advisory structure we refer to as **AT**. The “A” represents Academic Acceleration, Access, and Advising. The “T” stands for Time. **AT** is designed to provide systematic opportunities for students to access academic acceleration, advising, intervention and support. **AT** supports this by fostering focus on academics within a structure of community and mentoring. To further elaborate upon this purpose, the following definitions are provided:

- Community Building - Developing positive relationships that foster pride, responsibility, and a desire to become contributing citizens by performing service to the school and greater community.
- Mentoring - Providing guidance to students as they navigate transitions and challenges that they encounter at the various developmental stages of their high school career.
- Academic Enrichment and Support - Ensuring deeper understanding of concepts through targeted academic grouping.

**HomeBase:** Each week, students meet with their Academic Advisor in a consistent “permanent” location for HomeBase. Most weeks HomeBase will take place on Monday during mod 2. The main purpose of HomeBase is for students to meet with their Academic Advisor in order to book (schedule) their locations for the AT Mods for that week. HomeBase is an integral part of AT as a credit bearing class.

**AT:** Each week, students are booked to meet with their teachers during AT mods (also during mod 2). AT locations are usually in rooms other than the HomeBase location unless there is a legitimate academic reason for the student to book a day with their Academic Advisor. While at their AT location, students are engaged in academic activity.

**Personalized Learning Plan (PLP):** Every CHS student will use a portion of their AT time to develop a personalized learning plan with guided assistance from their HomeBase teacher and guidance counselor. The PLP will guide students in the discovery of their post high school goals.

# COLCHESTER HIGH SCHOOL GRADUATION REQUIREMENTS

All students must earn a minimum of twenty-four and a half (24.5) credits in Grades 9 – 12, as awarded by the Colchester High School which shall accept credits received from other accredited secondary schools, including summer school. Students entering Colchester High School from a non-accredited school and alternative programs of study may establish credits through an examination given by the Colchester High School or by other means as determined by the Principal.

Colchester High School will provide students the opportunity to experience learning through flexible pathways, including, but not limited to, career and technical education, virtual learning, work-based learning, service learning, dual enrollment and early college. All learning must occur under the supervision of an appropriately licensed educator.

At Colchester High School academic credit is awarded upon demonstration of proficiency in learning experiences through courses and other non-traditional learning experiences. In courses, students have the opportunity to demonstrate the knowledge and skills for proficiency through a variety of learning experiences and assessments. Each department has delineated 2-8 discipline-specific proficiencies that a student is required to meet for graduation. The scope and sequence of required courses in each department are designed to help students reach the graduation proficiencies (the CHS Essential Expectations and the CHS Discipline Proficiencies). *Please refer to the department specific pages of this Program of Studies for each department's proficiencies.*

When a student receives credit for a particular course that is an indication that the proficiencies have been met. Taken together, the proficiencies or credits gained will provide a cumulative body of evidence that students have met overall school-wide and discipline-specific graduation expectations and are ready to graduate.

In order for a student to participate in the graduation ceremony, they must have completed the twenty-four and a half (24.5) graduation requirements outlined in this policy.

English	4.0 (Essential Writings)
Social Studies	3.5 (American History, Senior Seminar)
Science	3.5 (Earth Systems Science, Biology, Chemistry, Physics)
Mathematics	3.5 (Algebra, Geometry)
Fine Arts	1.0
Health	0.5
Physical Education	1.5
Electives	<u>7.0</u>
<b>Total</b>	<b>24.5</b>

## **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)  
3.5 Years of Social Studies  
2 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 (beyond Algebra II)  
4 Years of Social Studies  
3-4 Years of the same World Language

## **FLEXIBLE PATHWAYS**

Colchester High School is committed to offering students multiple avenues toward earning a high school diploma. Personal Learning Plans (PLP's) will guide students' choices in the discovery and attainment of their high school goals. Students may benefit from taking advantage of some of the options below as they create their course schedule. Students who would like to participate in an option not listed below should contact their guidance counselor.

## **DUAL ENROLLMENT**

Dual Enrollment offers students in grades 11-12 options for exploring post secondary education prior to graduation. Students enrolling in the program may take college courses at four 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

### **Cost**

Dual Enrollment allows students to take up to two college classes with no tuition cost. Families and students must pay any associated course fees. Additional courses may be taken at the University of Vermont.

### **Courses**

Courses vary by college and semester.

### **How do I enroll?**

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

## OTHER COLLEGE CLASSES

### **Introduction to College Studies:**

**This course may, at times, be held at Colchester High School after school hours. See your guidance counselor for more information.**

Community College of Vermont in conjunction with CHS 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

## 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 study is outlined in the student handbook.

## TARGET GRADUATION

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

## 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.**

## 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 advanced 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 are highly encouraged to take the AP examination.

Grade 9 Students enroll in the course of study for highly competitive colleges: please see your school counselor to create a plan.

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: 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.**

## 2018-2019 Advanced Placement Offerings

<b>Area</b>	<b>AP Examination</b>	<b>CHS Course Title</b>
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 Environmental Science	AP Biology AP Physics AP Chemistry AP Environmental Science
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

## **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. Students interested in exploring Flexible Pathways should schedule an appointment with their counselor.

**The student is expected to remain in the original class until the change is made.** Failure in the class is not considered a 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.**

## 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

<b>It is your responsibility to make sure the Clearinghouse has the documents it needs to certify you. These documents are:</b>	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

## Fine Arts

The arts are not only a means of expression, but have been proven to be a way to improve literacy, critical 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.

## Visual Art

**Art 1** is the foundation course in the CHS Art Department, which is a prerequisite for all other classes. **Art 1** prepares students for taking all other art courses, such as **Pottery, Drawing, Painting, Design, 3D-Art, and Photography**. Photography is intended for Juniors and Seniors, but Sophomores may take it with instructor permission.

All Art classes offered are one semester, earning 0.5 credit per class, with the exception of **Advanced Placement Studio Art**, which is a year-long class earning 1 full credit. Juniors and Seniors can also sign up for **Advanced Placement Studio Art**, provided they have taken **Art 1**, and two other classes offered by the department.

## Visual Art Discipline Proficiencies

- **Create:** The CHS graduate can generate, organize, develop, and refine artistic ideas to create works of art.
- **Present:** The CHS graduate can share artistic work through selecting, preparing, interpreting, and presenting in the CSD art show or other exhibition venue.
- **Respond:** The CHS graduate can understand how art conveys meaning through describing, analyzing, interpreting, and evaluating works of art.
- **Connect:** The CHS graduate can connect artistic ideas and work with societal, cultural, historical, and personal meaning.

### #644 Art 1:

The CHS approach to art engages students in the creative process through learning the vocabulary and techniques of a variety of art media, thinking through a personal plan for each project which applies new skills and knowledge, then creating personally expressive works of art. Students will also learn about art historical sources and how artists incorporate influences from other artists and their own culture in their work. The essential Elements of Design and Principles of Composition used to create all works of art will be introduced and used in fun ways in a variety of 2-D and 3-D projects.

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

### #601 Drawing:

The **Drawing** course explores how to capture value, texture, form, movement, pattern and more in both traditional and non-traditional drawing media and techniques. The subject areas of Still Life, Portrait, Landscape, Figure, and Abstract Art will be presented in a variety of ways, using dry and wet media. The art of **Drawing** is taken beyond pencil and paper to explore unexpected surfaces and materials.

**Prerequisite:** Art 1. **Duration:** Semester. **Credit:** 0.5 Fine Arts.

### #602 Painting:

Discover the joy of painting in watercolor, acrylics, and tempera paints, as well as some non-traditional media. Anything that can be used as a brush and any material that can be applied to a surface is fair game for this exploration of the limits of color and design. Students will be challenged to apply their knowledge of the Elements of Design and the Principles of Composition in a variety of Still Life, Landscape, Portrait, Figure, or Abstract forms of art using historical and contemporary artists for inspiration in creating their own expressive statements.

**Prerequisite:** Art 1. **Duration:** Semester. **Credit:** 0.5 Fine Arts.

### **#603 Pottery 1:**

Come on in and get down and dirty with clay (Seriously, you are going to get dirty!). Explore the many ways of creating works of art out of clay, including many hand building techniques, and the Pottery Wheel. Make decorative sculptures and functional vessels that your relatives will want to keep forever. This course will guide you through many different units exploring many facets of the clay medium. Learn the process of this medium from raw clay to glazed works of art. You will use and enhance your knowledge of the Elements of Design and Principles of Composition by creating original works of Art in clay.

**Prerequisite:** Art 1. **Duration:** Semester. **Credit:** 0.5 Fine Arts.

### **#604 3D-Art:**

Come and explore the 3<sup>rd</sup> dimension of Art in this exciting class that will teach you all about sculpture. Learn the categories, types, and methods of sculpture while you use and enhance your knowledge of the Elements Design and Principles of composition. You will explore and use a variety of media including but not limited to clay, wood, metal, plaster, paper/cardboard, and glass. Learn the proper use and techniques of a variety of tools including hand tools like chisels, rasps, brushes, and hammers etc..., and power tools like drills, saws, grinders, and soldering irons etc...Get ready to roll up your sleeves and create things you never thought possible.

**Prerequisite:** Art 1. **Duration:** Semester. **Credit:** 0.5 Fine Arts.

### **#605 Design:**

Communicating ideas visually in a dynamic, well-designed composition is a skill everyone can use, and is the focus of this course which explores the fields of Graphic Design and Printmaking. Create eye-catching posters, illustrations, websites, and prints to communicate a wide range of messages, products, services, and events to a target audience. We'll look at the history and contemporary uses of these forms of visual communication and analyze what makes a design effective, successful, and dynamic!

**Prerequisite:** Art 1. **Duration:** Semester. **Credit:** 0.5 Fine Arts.

### **#685 Photography:**

Experience the past, present, and future directions in the world of creating images with light – also known as Photography! Go beyond simply clicking the shutter to learn the traditional fine art techniques of film photography and darkroom developing. Hone your skills in current forms of digital manipulation of images and color printing of quality works of art. Explore the many applications of contemporary imaging software and the wide array of future careers in the field of image production.

**Prerequisite:** Art 1, one other Art course (C- or better) and 11<sup>th</sup> or 12<sup>th</sup> grade. **Duration:** Semester. **Credit:** 0.5 Fine Arts.

### **#661 Pottery II:**

Come back to the Pottery Studio and create bigger and better projects. Learn to make and defend your own decisions while you make your art. All of your skills learned in Pottery I will be utilized and enhanced in this class. Learn new techniques on the wheel, and many more using slabs, coils, and the extruder (aka... playdough fun factory). You will also learn about alternatives to glaze for decorating/finishing clay. Have you ever used frosting or bananas to finish your clay? Let's try it out! This class is just as messy as Pottery 1.

**Prerequisite:** Art 1, Pottery I (C- or better). **Duration:** Semester. **Credit:** 0.5 Fine Arts.

### **#650 AP Studio Art: Advanced Placement Studio Art**

Experience the reality of working as a professional studio artist. This course follows the challenging curriculum outlined by the College Board for creating a body of work that encompasses the Breadth of your understanding of all the Elements of Design and Principles of Composition, as well as a Concentration of work focusing on a theme of your choice in your own distinctive style. A comprehensive portfolio is submitted to the College Board for review and scoring, which may earn college credit, prepare a student for majoring in art in college, or start an independent studio art career.

**Prerequisite:** Art 1, two other Art courses (C- or better), 11<sup>th</sup> or 12<sup>th</sup> grade, and instructor permission. **Duration:** Full Year. **Credit:** 1.0 Fine Arts.

## Music

### Music Discipline Proficiencies

- **Music Literacy:** The CHS graduate can demonstrate music literacy by applying musical concepts and terminology.
- **Music, Culture, and History:** The CHS graduate can understand the relationship among music, history and world culture.
- **Communicate:** The CHS graduate can create, perform, and/or express ideas through music.

#### **#639 Chorus:**

Students enrolled in CHS Chorus will rehearse and perform music from many cultures, time periods and styles. Chorus is meant for freshmen, to give them a foundation in choral singing. 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 ensembles/activities such as the CHS Concert Choir, CHS Chamber Singers, District III Choral Festival and All-State 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 and All-State Music Festival.

**Prerequisite:** B or better in high school chorus, and ability to match pitch and hold harmony, or teacher's recommendation.  
**Duration:** Full Year. **Credit:** 1.0 Fine Arts.

#### **#618 Chamber Singers:**

This ensemble is made up of advanced singers who have auditioned and been selected. 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 Beginner Guitar:**

Beginner 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.*

**Prerequisite:** 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.

### **#640 Chorale:**

This ensemble offers female singers an exciting opportunity to sing in an all-female choir. The group meets outside of the regular school day to rehearse and learn challenging repertoire. A diversity of choral styles ranging from the Renaissance to current popular music 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. **NOTE: This class meets after school for 1 hour each week.**

**Prerequisite:** Teacher recommendation. **Duration:** Full Year. **Credit:** 0.5 Fine Arts.

### **#623 Intermediate Piano:**

Intermediate Piano is a course designed as a follow up course to Beginner Piano. Students will have the opportunity to build on the piano skills learned either through Beginner Piano or through private lessons previously taken. Students will have independence to learn music at their own level. We will explore many different styles of music, continue to learn how to read music notation, build our technique and ability for playing with both hands, and the basics of music theory.

**Prerequisite:** Beginner Piano. **Duration:** Semester. **Credit:** 0.5 Fine Arts.

### **#624 Introduction to Music Theory:**

If you are interested in learning more about how music is constructed, then this is the course for you! Students will learn about the elements of rhythm, melody, harmony, chord structure and form. Students will listen and analyze music from many different genres and styles. Not only will students learn to read various musical elements, such as scales, chords, pitch notations, and time signatures, they will also learn to construct these elements themselves and compose their own music.

**Prerequisite:** Beginner Piano, Basic Guitar or one of the performing ensembles. **Duration:** Semester. **Credit:** 0.5 Fine Arts.

### **#620 Music Technology:**

Music Technology is a course designed as an introduction to modern music software. Through the Mixcraft software, students will have the opportunity to create and record music through use of digital loops, MIDI input, and live instrument recording. Students will be learning about basic song structure, improvisation, and composition elements in various projects. Students will explore many aspects of music composition, such as playing and creating chords, melodies, and riffs, as well as adding music and sound effects to movies.

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

### **#635 Colchester Concert Band:**

The Colchester High School Concert Band provides any high school student the opportunity to perform quality band music in an ensemble, while developing their individual performance skills. Students will have the opportunity to perform a diverse array of music in various settings, including solo and chamber group performances, honors festivals, concerts (both within and outside of the school district) and travel experiences. Students without instruments can contact the director for information regarding 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 Band:**

The Colchester High School Jazz Band 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 soloing experience is necessary. This ensemble performs at all school instrumental concerts, and is regularly asked to perform outside of the school setting. The CJB rehearses Monday evenings from 6:30-8:30 pm. **This class meets after school.**

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

### **#626 Colchester Wind Ensemble:**

This select ensemble is appropriate for students who have achieved proficiency with the skills and concepts learned in Concert Band. Music selections will be diverse, and will continue to challenge students, as well as maintain a rigorous ensemble experience. Students in the wind ensemble will be offered the same traveling and performance experiences as the concert band. Students must audition to be considered for this class. Acceptance will be based on proficiency shown in audition, as well as the instrumental needs of the ensemble.

**Prerequisite:** Teacher recommendation. **Duration:** Full Year. **Credit:** 1.0 Fine Arts.

## Health and Physical Education

Students are required to complete one semester of health for graduation. Normally students enroll in *Human Ecology* in the GreenHouse. Students may fulfill the health requirement in the Blue House through *Life 101*. In addition, *Life 101* is a very valuable elective to take in addition to Health. *Food! From Soil to Stomach* class focuses on sustainability and creating change, important themes to explore and experience for living in the 21st century. The other electives listed below represent our expanded vision for meeting the needs of all students. These courses will be incorporated into our Pathways in the future and may become part of the Personal Learning Plan.

### Health Discipline Proficiencies

- **Good Health:** The CHS graduate can comprehend core concepts related to health promotion and disease prevention to enhance health.
- **Decision Making & Goal Setting:** The CHS graduate demonstrates the ability to use decision making skills and goal setting to enhance health.

#### #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 tobacco/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. This class focuses on sustainability and creating change, important themes to explore and experience for global citizenship in the 21st century.

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

### Physical Education Discipline Proficiencies

**Motor Skill Knowledge and Use:** The CHS graduate can demonstrate proficiency in a variety of motor skills and movement patterns.

**Motor Skills Analysis:** The CHS graduate can apply knowledge of concepts, principles, strategies and tactics related to movement and performance to analyze and improve performance of self and/or others in selected skills.

**Physical Fitness:** The CHS graduate can demonstrate the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.

**Affective Qualities and Social Interaction:** The CHS graduate can exhibit responsible personal and social behavior that respects and promotes success of self and others.

### **#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	In-Line Skating
Archery	Pickleball
Badminton	Racquetball
Dance	Table Tennis
Fencing	

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

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

### **Team Building 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:

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

### **Team Sports:**

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

**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:

Independent Study  
Interscholastic Sports

***NOTE: All athletic credit and independent studies requests must be approved in advance by The Physical Education Department.***

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

### **#736 Eat! Play! Live! A Fitness and Wellness Course:**

Do you want to move quicker, be stronger, eat healthier, or reach a personal wellness goal? Maybe you want to learn to do something that will improve your fitness in a positive way with others. If this peaks your interest, then this class is for you! This course is for young people of all skill levels who are committed to explore their own current health behaviors, examine how these behaviors make them who they are, and explore what can they do to change, improve their personal health and be successful, productive 21st century graduates.

**Prerequisite: Grades 10-12. 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 world cultures and global 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 GreenHouse essential writings to standard. Upon successful completion of the GreenHouse 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 student's willingness to work independently and meet raised standards, as well as their ability to demonstrate the habits of mind necessary for success.

#### English Discipline Proficiencies

- **Read:** The CHS graduate can effectively summarize, analyze, interpret, and evaluate to comprehend a variety of complex texts.
- **Write:** The CHS graduate can produce clear and coherent writing for a variety of genres (narrative, informational, argumentative), purposes, and audiences.
- **Inquiry & Research:** The CHS graduate can inquire independently to develop and respond to relevant questions and challenging questions about the past and present, in order to demonstrate ability to evaluate multiple sources of information for bias, reliability, and credibility; synthesize information from multiple sources; make a well-informed claim; and present findings in a coherent, engaging way.
- **Speaking & Listening:** The CHS graduate can show ability to engage in a dialogue of ideas by listening actively and speaking with relevance and respect.

#### Social Studies Discipline Proficiencies

- **Read:** The CHS graduate can effectively summarize, analyze, interpret, and evaluate to comprehend a variety of complex texts.
- **Write:** The CHS graduate can produce clear and coherent writing for a variety of genres (narrative, informational, argumentative), purposes, and audiences.
- **Inquiry & Research:** The CHS graduate can inquire independently to develop and respond to relevant questions and challenging questions about the past and present, in order to demonstrate ability to evaluate multiple sources of information for bias, reliability, and credibility; synthesize information from multiple sources; make a well-informed claim; and present findings in a coherent, engaging way.
- **Apply Content & Concepts:** The CHS graduate can demonstrate knowledge and understanding of essential topics in history, economics, geography, and civics and the patterns that emerge among them.
- **Perspectives:** The CHS graduate can articulate an awareness and understanding of multiple perspectives, cultures, and social groups.
- **Enact Citizenship:** The CHS graduate can engage actively with others as global citizens to deepen their understanding of how structures of government impact them and how participating in civic life may shape government's impact on their world.

## Grade Nine

### **#314 Thinkers and Revolutionaries: ♦**

Ninth grade humanities 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 asks them to explore how key historical events and literary achievements shaped the modern world. Students should expect to deepen their prior knowledge of ancient world cultures as they learn about the histories and cultures of the modern world — from approximately 1800 up until today – through the lenses of political systems, economic systems, religious traditions, philosophies, literature, and art. Students will be given ample opportunity to compare and contrast cultural developments among regions of the world, including *China, India, the Middle East, and South Africa*.

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 English & 1 Social Studies).

### **#334 Strategic Reader (Grade 9):**

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 literary and informational 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:** Full Year. **Credit:** 1.0 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 English & 1 Social Studies).

### **#335 The Strategic Reader, American Experience: (Grade 10):**

Strategic Reader is a year-long course committed to helping tenth grade students become more competent and comfortable readers. Students will practice and master a repertoire of strategies for recognizing and making sense of literary and informational texts. Additionally, students will be supported as they read core readings in their grade-ten humanities class, *American Experience*. 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 grade nine core classes.

**Prerequisite:** Teacher recommendation. **Duration:** Full Year. **Credit:** 1.0 Elective.

## 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 student’s 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 English course for eleventh graders that explores literary perspectives from writers of the Western World. It is designed to challenge you, make you think, and advance your literacy skills by reading and writing prose, poetry, and drama. These configurations of words will allow us to examine ourselves, our relationships, and what it means to be human in our world.

As you read, write, and think, you will grapple with universal questions that were posed centuries ago and are still asked today, such as: What defines the human experience for me, and for others? Why do I need to understand what it means to be human? And, how does reading and writing help us to both explore and celebrate what it means to be human? As part of this exploration, we will read prose, poetry, and plays that focus on overarching concepts of *empathy, imagination, and community*.

Together, we will explore responses to these – and other – questions as we construct our own paths to understanding. Our studies of reading and writing are meant to *transform* and *transport*: as S.I. Hayakawa said, “It is not true we have only one life to live; if we can read, we can live as many lives and as many kinds of lives as we wish.”

*Students are expected to complete the essential writing task to standard.*

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

### Additional English Offerings

#### **#359 Creative Writing: ♦**

In this course, students will explore both fiction writing and creative non-fiction writing. 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. Based on student interest, other units may include the art of writing plays, graphic novels, and poetry. All students will write on a consistent basis, as well as read the work and writing tips of professional authors. Students will share their work with each other in a supportive, collaborative environment as they develop their craft and refine their personal voices as writers. By the end of the course, students will develop a polished portfolio of their work and submit at least one of their pieces for publication.

**Prerequisite: Successful completion of GreenHouse humanities classes. Duration: Semester. Credit: 0.5 English.**

### **#361 Dramatic Literature and Theatre Design:**

Dramatic Literature and Theater Design explores the study of theatre through close-readings of dramatic literature which students bring to life through production and performance. Students will not only gain exposure to the skills and content inherent in a rigorous English class, but will also have the opportunity to demonstrate proficiency through a “hands-on” authentic application. Students enrolled in this course should expect to practice the argumentation skills cultivated in TREV, American, and THEE, but will do so through a variety of modalities, for example:

- Studying the art and craft of playwriting by writing their own scenes or plays.
- Using textual analysis to inform acting or directing decisions for a scene performance in order to accurately convey the theme or argument of a dramatic text.
- Using textual analysis to design creative and technical elements which enhance and convey the themes of a dramatic text.

By reading core dramatic texts closely, and actively planning, producing, and performing single scenes and/or entire works, students will gain a deep understanding of literary elements and how those elements work to create a meaningful experience for an audience.

**Prerequisite: None. Duration: Semester. Credit: 0.5 English.**

### **#360 Film as Dramatic Literature: ♦**

Film as Dramatic Literature considers the artistic and social power of film as literary text. We will view and analyze films in order to understand how the craft and content of filmmaking unite to develop specific arguments--and how this art form can potentially develop empathy and impact social change. We will focus on “reading” films through the lenses of race, gender, and social class and consider how these factors impact both the content and style of the art produced.

To unpack the complex meanings of this type of text, students in Film as Dramatic Literature will employ many of the same strategies they use when reading literature (i.e., predicting, interpreting, and questioning). Students should be prepared to read, write, and analyze daily.

Students who enroll in this class should be interested in the art of film as text and in the power of film (and art) to convey powerful social commentary and critique. We will do more than merely watch movies: we will also engage with them as scholars.

**Prerequisite: Successful completion of GreenHouse humanities classes. Duration: Semester. Credit: 0.5 English.**

### **#362 Journalism:**

This course offers students an in depth study of most aspects related to modern multi-media journalism. The journalism class will emphasize the journalist as one having to learn to multi-media task. The class will emphasize reporting across platforms so that the student learns not only to write for an audience, but also learn to shoot and edit photos, video, audio, and produce for the web. 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 also study journalism philosophy, interview skills, desktop publishing, headlining, layout and design, and current events as they apply to print journalism; and news/feature/sports video production as it applies to broadcast journalism. Students in this class will be responsible for the entire production process of the CHS student newspaper, The Lakeside Voice; and also write, direct, edit, and produce a CHS broadcast program.

**Prerequisite: Successful completion of GreenHouse humanities classes. Duration: Semester. Credit: 0.5 English.**

### **#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. 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 influence and power of video sites such as YouTube; power of social networking; frequent media timed writes, and reading and analysis of a media themed novel. Students are expected to complete major assessments using a variety of mediums and to engage their learning based on individual learning styles.

**Prerequisite: Successful completion of GreenHouse 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.

**Prerequisite:** Successful completion of GreenHouse 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.

**Prerequisite:** Successful completion of GreenHouse humanities classes. **Duration:** Semester. **Credit:** 0.5 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.

### **# 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. To succeed in this course students must, to a high standard, study literature and write independently. Students will become skilled readers of (mostly non-fiction) 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. 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.

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

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

Advanced Placement Literature and Composition provides students the opportunity to read, write, think, and speak extensively and effectively about major works of imaginative literature written in English. A selection of classics and some less well-known works by American and British authors, poets, and playwrights, as well as texts by other writers around the English-speaking world, are featured. This course's intent is to help students become strategic and empowered close-readers of a broad range of literary genres, skillful writers and speakers who can persuasively convey their understandings of text and its significance, and committed critical and creative thinkers who passionately pursue “truth” and meaning in literature and life. Much of the thinking done in the course is focused on the topics of storytelling, trauma, and transformation. Students are asked to engage in considerations of how the ability to articulate, reflect on, and curate one's past experiences through language becomes a mode of self-empowerment and a source of rebirth or healing.

These are poignant subjects for high school students who are poised at the onset of their independent lives and who are seeking to actively define their own dreams, identities, and narratives in a complex world. It is our hope that the course content will help students develop the abilities to analyze, evaluate, articulate, and critique the variety of ways that stories and language shape their definitions of selfhood.

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

## Blue House Social Studies

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 0.5 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, which requires them to complete an honors contract at the course’s outset that indicates the student’s 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 issues from around the globe. Students will spend this year examining several major historical eras and events that help shape today's world. Students will make connections about social, economic and political aspects of our society and experiences as we examine events and places around the world. Topics will include the development of monotheistic religions, European revolutions such as the Renaissance and the Enlightenment, global imperialism, and times of extreme prejudice and violence such as the Holocaust. Students will use the concept of legacy to form perspectives about a past which continues to influence the modern world. This exploration will occur through primary sources, scholarly reading, class discussions, extensive research and ongoing reflection on our thinking and learning.

**Prerequisite:** None. **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.

**Prerequisite: None. Duration: Semester. Credit: 0.5 Social Studies.**

### **#467 Holocaust Studies: ♦**

“What is justice?” The Greek thinker Socrates stated it is better to suffer an injustice than to commit an injustice...is that always true? How does this apply to the Twentieth Century Holocaust & the victimization of Jews by Nazi Germany? This course will examine the complexities of European history and human behavior and the social, political and economic factors that helped Hitler rise to power and focus his country on extermination of the Jews. We will analyze threads of Jewish History from Medieval times through World War II. We will examine why genocides occur and ask questions about whether or not humans are obligated to work to stop oppression.

**Prerequisite: None. 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.

**Prerequisite: None. 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.

**Prerequisite: None. Duration: Semester. Credit: 0.5 Social Studies.**

### **#469 International Politics and the United Nations: ♦**

The content of this course examines military, political and diplomatic history of 20th Century Wars with an emphasis on the Post World War II era and specifically the global events of the last 40 years. Students will study international conflicts, politics, and law while considering the function 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 United Nations, including the General Assembly, Security Council and International Court of Justice. Students participating in this class will engage in inquiry research papers and projects including conflict resolution writing. Students will look at the shifting political dynamics of modern times and the challenging role the United Nations has in order to gain a deeper understanding of the complex world we live in.

**Prerequisite: None. Duration: Semester. Credit: 0.5 Social Studies.**

### **#466 Sociology through Pop Culture:**

Through the lens of pop culture, this course will examine historical, social, and political cultural movements from the last half of the 20<sup>th</sup> century to contemporary times. Different mediums, including rock and roll and protest music, television, and film will be used to present content and explore how major American policies and political philosophies have been – and continue to be – shaped by our media-driven world. Minor and major research projects will be conducted and presented through written, oral and technological formats.

**Prerequisite: None. Duration: Semester. Credit: 0.5 Social Studies.**

### **#403 Modern US History through Film:**

This course explores the social and political history of modern day United States through the study of the movies and music that reflected the cultural ideals and realities of life in America. Students will critically examine modern US history through the lens of major cultural movements from the last half of the 20<sup>th</sup> century to the first decade of the 21<sup>st</sup>. US policies and philosophies impacting modern American life will be explored through films and music from specific decades throughout modern US history. Students will leave this course with a deeper understanding of modern life in the United States and how popular culture shapes and reflects historical life for Americans.

**Prerequisite: None. Duration: Semester. Credit: 0.5 Social Studies.**

### **#460 Global Issues in the Modern World: ♦**

This semester-long course will examine how nations throughout the world confront and address particular issues of the 21st century. Students will engage in regional case studies to explore how these issues have evolved in various locations around the globe, as well as how they impact the world today. Students will study the modern histories of these regions, as well as their contemporary realities, in order to better understand the implications of these issues upon our global society. This course is designed to introduce students to, and facilitate their forming of, opinions on the matters that most affect the world's citizens. Students will evaluate the issues and propose solutions from a variety of perspectives.

**Prerequisite: None. 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.

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.

**Prerequisite:** Successful completion of GreenHouse 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.

**Prerequisites:** Successful completion of GreenHouse Humanities courses; completion of summer reading and writing requirements.

**Duration:** Full Year. **Credit:** 1.0 Social Studies.

## Mathematics

The CHS Math Department creates an environment that cultivates mathematical reasoning and meets students at their current level of understanding, so all learners can grow and develop their knowledge and skills. We do this by providing multiple opportunities for learning, and by encouraging students to think flexibly and solve problems in a variety of ways. Our teaching methods stimulate curiosity, encourage persistence, and incorporate technology. We encourage students to be self-sufficient learners who know when to use tools and resources as they model and analyze problems. CHS graduates will achieve a level of math literacy appropriate to any future path they choose.

Students are required to complete three and a half credits of mathematics, including Algebra I and Geometry. Students are also strongly encouraged to continue their study of mathematics by taking Algebra II and Statistics. Most students transition from the middle school into Algebra I at the high school. Upon entering high school, students who have successfully completed Algebra I at the middle school should choose Geometry at the high school. Middle school students who successfully complete Algebra I 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 and a half credits of mathematics at the high school.

### Math Discipline Proficiencies

- **Problem Solve:** The CHS graduate can persist in solving a problem independently by analyzing, making predictions, and using mathematical methods to develop a reasonable solution.
- **Model:** The CHS graduate can use mathematics to explore the relationships among quantities in context and use these relationships to draw conclusions.
- **Number Sense:** The CHS graduate can reason, describe, and estimate using units and appropriate types of numbers that are precise and accurate to the context of a problem.
- **Construct Viable Arguments:** The CHS graduate can justify answers with a logical progression of evidence and explain their reasoning to others.
- **Algebra & Functions:** The CHS graduate can create, interpret, use and analyze expressions, equations, inequalities, and functions in a variety of contexts.
- **Geometry:** The CHS graduate understands geometric concepts and constructions and can use them to prove theorems and to solve a variety of problems.
- **Statistics & Probability:** The CHS graduate can interpret and apply statistics and probability to analyze data, reach and justify conclusions, and make inferences.

#### #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 and graphing equations and inequalities, analyzing functions, exploring features of quadratic and exponential equations, and solving and graphing systems of equations. Considerable emphasis is placed on the process of problem solving in order for students to build mathematical meaning and draw connections between concepts.

**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: similarity and congruence of figures, circles, solids, and an introduction to trigonometry. The use of technology, proof, and problem solving are used regularly to help students visualize and explore these geometric concepts.

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

**#264 Statistics: ♦**

This course will provide an introduction to the principles of statistics. Emphasis will be placed students ability to interpret and apply statistical concepts and reason with statistics. Topics will include describing data, the normal distribution, linear regression, sampling strategies and experimental design. Students will apply these basic statistical principles while solving a variety of problems.

**Prerequisite: C or better in Algebra I or teacher recommendation. Duration: Semester. Credit: 0.5 Math.**

**#256 Algebra II/Statistics: ♦**

This year long course *meets every day* and continues students' study of Algebra, focusing on concepts including solving linear, quadratic, and higher order polynomials. Other topics include probability, exponents and logarithms, sequences and series, and a study of functions and their transformations. In addition, students will receive an introduction to the principles of statistics. Statistics topics include describing data, the normal distribution, linear regression, sampling strategies and experimental design. Emphasis is placed on the process of problem solving to draw connections between concepts. Meeting every day allows additional time for students to work on their skills as well as the applications of Algebra. Technology is regularly used to help students visualize, analyze, and solve problems.

**Prerequisite: Passing grades in Algebra I and Geometry. Duration: Full Year-Every Day. Credit: 2.0 Math.**

**#255 Algebra II in Depth: ♦**

This year long course *meets every other day* and continues students' study of Algebra by going in more depth on concepts including solving linear, quadratic, and higher order polynomial equations. Other topics include probability, systems of equations, exponents and logarithms, sequences and series, and a study of functions and their transformations. Emphasis is placed on the process of problem solving to draw connections between concepts. Technology is used extensively in order to view, analyze, and solve problems.

**Prerequisite: B+ in Algebra I and Geometry and teacher recommendation. Duration: Full Year, Every other day. Credit: 1.0 Math.**

**#252 College Algebra: ♦**

This course, offered in conjunction with the Community College of Vermont, is designed for students who wish to continue their study of mathematics beyond Algebra II with the possibility of earning college credit. The course prepares students for Pre-Calculus by reviewing the fundamental concepts of algebra. Topics include equations and inequalities, exponents, radicals, functions, rational expressions and equations, systems of equations, polynomials and, math applications. In order to be eligible for CCV credit, students must meet the CCV testing requirement or take a math assessment for placement purposes prior to registration. For CCV credit, you will need to be registered for dual enrollment through guidance.

**Prerequisite: C or better in Algebra II. Duration: Semester. Credit: 0.5 Math and possible CCV credit through dual enrollment.**

**#279 Pre-Calculus: ♦**

This course is designed to prepare students for Calculus. Topics of study include an expansion on function analysis, applications of trigonometric functions, rational functions, conic sections, and matrices and vectors. Combining analytic geometry with the concepts of algebra and functions, students develop a stronger dialogue between algebra and geometry, allowing each to illuminate and extend the other. Technology is used extensively in order to view, analyze, and solve problems.

**Prerequisite: B or better in Algebra II in Depth; B+ or better in Algebra II/Stats and Teacher Recommendation; B or better in College Algebra and teacher recommendation. Duration: Full Year. Credit: 1.0 Math.**

**#246 Algebra Extended:**

This course is intended to extend students' knowledge and skills in Algebra I as well as to introduce them to the foundations of Algebra II. In this class students will review and deepen their knowledge in the areas of linear equations and inequalities, exponential and quadratic functions, systems of equations, and analyzing functions. This course will regularly employ differentiated instruction and will meet students where they are in order to grow their math ability and confidence.

**Prerequisite: Grade 11-12 students, completion of Algebra I, and teacher recommendation. Duration: Full Year. Credit: 1.0 Math.**

**#224 Consumer Math:**

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, insurance and investing. All students can benefit from this course to become better prepared citizens.

**Prerequisite:** Grade 11-12 students. **Duration:** Semester. **Credit:** 0.5 Math.

**#227 Math of Sports: ♦**

Are you interested in sports? The Math of Sports will look at sports through a statistical lens to help students gain a better understanding of the games they love. In this course, you will learn to use mathematical tools that can help predict and analyze sporting performances and outcomes. Major topics studied will include design of sporting statistics, predicting performance using linear regression, general probability and hypothesis testing using confidence intervals.

**Prerequisite:** Algebra I. **Duration:** Semester. **Credit:** 0.5 Math.

**#203 Strategic Algebra:**

This course is available to ninth grade students enrolled in Algebra I. This course gives students an elective credit and is designed for those students who may find they need more time and opportunities to master the algebra concepts and skills. Since it is taken concurrently with Algebra I, the skills and concepts taught in this course relate to those being taught in 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.**

**#261 Strategic Geometry:**

This course is available to tenth grade students enrolled in Geometry. This course gives 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. Since it is taken concurrently with Geometry, the skills and concepts taught in this course relate to those being taught in 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.**

**#204 Math Mentoring:**

Math Mentors work as teachers' aides in Strategic Math classes. Students in Strategic Math classes 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 re-teach Algebra and/or Geometry concepts. 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:** Grade 11-12 students. **Duration:** Full Year or Semester. **Credit:** 1.0 Elective, 0.5 Elective, or earn Community Service hours in lieu of credit.

## **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 as a technique for solving problems as well as to help students better visualize the concepts of Calculus.

**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. Graphing calculators are used daily as a technique for solving problems as well as to help students better visualize the concepts of Statistics.

- 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.**

## Science

The CHS Science Department cultivates an environment that fosters lifelong intellectual curiosity and enables students to become scientifically literate citizens. This is achieved through a variety of interconnected, rigorous and authentic learning experiences in which students model concepts, investigate questions, analyze data and evidence, problem solve and communicate findings. Through their science experience students employ and hone lifelong learning habits to achieve proficiency in these skills across science disciplines.

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. Students will practice the skills necessary to research scientific problems they encounter and come up with solutions on their own. The Science Department provides students with the necessary coursework for admittance to colleges and universities. The curriculum also provides scientific experiences for the work-ready 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.

### Science Discipline Proficiencies

- **Modeling:** The CHS graduate can construct, interpret and analyze models and systems to build understanding and test ideas across science disciplines.
- **Analyzing:** The CHS graduate can critically analyze information from a number of sources (written, graphical, verbal) to draw scientifically valid conclusions across science disciplines.
- **Communicating Scientifically:** The CHS graduate can effectively communicate scientifically valid evidence in a number of ways (written, graphically, verbally) to support an argument across science disciplines.
- **Investigating:** The CHS graduate can design, implement, and refine scientific investigations across science disciplines.
- **Engineering Solutions:** The CHS graduate can design, implement, and refine engineering solutions across science disciplines.
- **Connecting:** The CHS graduate can identify, describe and explain interrelationships and connections among disciplines, technology, and society.

### #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 through the following units of study: Geology: Earth's Changing Surface; Earth's Changing Climate; and Natural Resources. 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 inquiry skills and knowledge to real-life situations, and explore the naturally occurring and human-influenced changes taking place in our natural world. All students will be challenged by a common hands-on, inquiry-based curriculum that is differentiated by content, process, or product according to students' different readiness levels, interests, and learning styles. ESS is 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.

### **#111 Strategic Earth Systems Science:**

This course is available to ninth grade students enrolled in Earth System Science. 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 ESS concepts and skills. It is a piggyback course which supports the ESS curriculum and skills development toward proficiency. 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. Earth Systems Science enrolled students.

### **#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: cellular basis of life; homeostasis; heredity; inheritance and variation of traits; biological evolution; and ecology. Students will engage in lab based experiments, hands-on activities, independent work, and use visuals, texts, and other media to learn about and explore biology. During the course of the year students will hone their skills with scientific inquiry. This course meets the science requirement for college admission.

**Prerequisite:** Earth Systems Science. **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 and 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 college preparatory 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 abstract chemical concepts. Topics covered in this course include the nature of matter and the periodic table, atomic theory, chemical nomenclature, gas behavior, chemical reactions, and stoichiometry. Laboratory work, performed frequently, is essential to the development of in-depth understanding. 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. **Duration:** Full Year. **Credit:** 1.0 Science.

### **#150 Experimental Chemistry: ♦**

This college preparatory lab-based course 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 learning dispositions. 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 major themes of chemistry including matter, reactions, and energy. Second semester will circle back to those topics in greater depth to provide the foundation necessary for advanced chemistry study.

**Prerequisite:** B or better in Biology or Earth Systems Science, B or better in Algebra I, concurrent or previous enrollment in an Algebra II course, AND teacher recommendation. **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, basic astronomy and gravity, 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 egg drop containers, impulse rockets, Rube Goldberg machines, steam powered boats, and other projects reinforcing physics concepts.

**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 a challenging, trigonometry-based introduction to mechanics designed for students who will be attending college. 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 design experiments, use sensors to collect data, and compete in engineering challenges. This course is a required prerequisite for students who wish to take the calculus-based AP Physics course. Principles of Physics students should notify their instructor as soon as they know they will be taking AP Physics. These students will need to complete additional physics coursework (outside of class with some teacher support) to better prepare for the AP class. Credit can be earned for this additional work.

**PLEASE NOTE: THERE IS A REQUIRED SUMMER ASSIGNMENT FOR THIS COURSE.**

**Prerequisite:** Previous or concurrent enrollment in Geometry course. 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 21<sup>st</sup> 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. Additionally, students may choose to take an Essential Topics course for exposure to the topic before taking a more rigorous Principles of Physics or Experimental Chemistry course. 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 all of the basic science concepts they are liable to encounter in life. Hands-on, conceptual methods will be used to explore the physics principles of kinematics (how things move), dynamics (why things move or not), momentum, and electricity.

**Prerequisites:** Grade 10 or 11, not enrolled in a year-long physics class. **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 properties of matter, chemical reactions, and energy in a variety of contexts including problem solving, projects, direct instruction, classroom discussions and inquiry-based laboratory activities. Students are supported through differentiated instruction. Completion of this course in combination with the rest of a student's CHS science requirement will equip the student with all of the basic science concepts they are liable to encounter in life.

**Prerequisites:** Grade 10 or 11, not enrolled in a year-long chemistry class. **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.

*This course is offered annually, but will only be taught as enrollment and staffing allow.*

**Prerequisite:** GreenHouse: B or better in Earth Systems Science. **Blue House:** Completion of Earth Systems Science and Biology.  
**Duration:** Semester. **Credit:** 0.5 Science.

### #115 Breaking into Coding:

We all know that electronic devices run by software surround us. Phones, tablets, and laptops immediately jump to mind. If one thinks a little further, vehicles, robots, and things like air traffic control probably also surface. With many of the "things," both seen and unseen, in our lives becoming increasingly software controlled, the opportunities for people with knowledge of computer science and coding are exploding. This course aims to introduce and give students chances to practice some of the fundamental attitudes, skills, and knowledge connected with computer science. Students will be coding (writing computer language) for a variety of purposes. Some will be solely computer-based while others will physically interact (input and output) with the real world. Students will work individually and collaboratively throughout the semester. *This course is offered annually, but will only be taught as enrollment and staffing allow.*

**Prerequisite:** Algebra I. **Duration:** Semester. **Credit:** 0.5 Science.

### #117 Forensic Science:

Just how “real” is CSI? Are holograms really used to examine skeletons? Can crimes be solved in an hour? 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, fingerprints, blood spatter, DNA, bones, and other evidence. Laboratory work utilizing skills and knowledge from chemistry, biology, physics, and more comprises a large portion of the course.

*This course is offered annually, but will only be taught as enrollment and staffing allow.*

**Prerequisite:** GreenHouse: B or better in Earth Systems Science. **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 and construction of original ideas including the use of 3D printing. Brainstorming in groups, and on an individual basis, will be oriented toward the 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.

### #118 Science of Survival:

If you got lost in the wilderness with minimal supplies, how long would you last? Would you know what to do? Would you know how to make a shelter, a fire, or navigate out? The Science of Survival course will teach you basic skills needed if you are ever put in this situation. Science topics embedded in this class include engineering, biology, and physics. By understanding these embedded topics, students will use the engineering process to design and build shelters and create fire multiple ways, learn basic first-aid, plant and animal identification, understand what to pack before heading out into the wilderness, and basic navigation techniques. Students who enroll in this one semester course are expected to have an affinity with the outdoors because this class will often be held outside the classroom in the woods behind CHS. Skills will be assessed through hands on demonstrations and a large culminating activity at the end of the semester. Students will also be required to read and report on a non-fiction survival book of their choice.

*This course is offered annually, but will only be taught as enrollment and staffing allow.*

**Prerequisites:** Open to Grades 9-10 (GreenHouse). **Duration:** Semester. **Credit:** 0.5 Elective.

## BLUE HOUSE ADVANCED PLACEMENT COURSES

### #175 AP Biology: ♦

This course is built around the 2013 College Board Advanced Placement Biology Curriculum Framework. This approach involves exploring four *Big Ideas* of biology and the connections between them. Integrated into the experience are important *Science Practices* and *21st Century Skills*. Though the emphasis is on concept application, the course content is still extremely rigorous and success requires extensive time outside of class. In addition to reading most of a college biology textbook, students will design, perform, and write-up or present numerous experiments and labs, do field work, and undertake a variety of in-depth activities to enhance their learning. Students will have the option of an internship/job shadow experience or self-design investigation following the AP exam to explore applications of their learning from the course. A presentation on this 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 Chemistry or Experimental Chemistry, and teacher recommendation. **Duration:** Full Year - Meets EVERY day for the entire 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. *This course is offered annually, but will only be taught as enrollment and staffing allow.*

**Prerequisite:** B or better in Experimental Chemistry OR A- or better in Lab Chemistry; College Algebra OR Pre-Calculus (math prerequisite may be taken concurrently); and teacher recommendation. **Duration:** Full Year - Meets EVERY day for the entire year. **Credit:** 2.0 Science.

### **#174 AP Environmental Science: ♦**

The AP Environmental course will provide students with the scientific principles, concepts, and methodologies required to understand the interrelationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving or preventing them. Environmental Science is interdisciplinary and will include topics in Earth Science and Biology. Specifically, content and labs will address: Earth Systems and Resources, The Living World, Population, Land Use and Water Use, Energy Resources and Consumption, Pollution, and Global Change. A variety of teaching techniques will be employed, including lab, lecture, discussion, movies and data-driven field trips. This class will prepare students for the AP examination given in May.

*This course is offered annually, but will only be taught as enrollment and staffing allow.*

**Prerequisite:** B or better in ESS and Biology, and Algebra I; and teacher recommendation. **Duration:** Full Year - Meets EVERY day for the entire year. **Credit:** 1.0 Science.

### **#163 AP Physics (lab): ♦**

This course meets the College Board standards for Calculus-based mechanics and is designed to prepare the students for the AP Mechanics C exam. 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 embedded in the curriculum; students will use probes and sensors to collect data and graphical analysis software to develop visual displays of information. Students will be expected to attend AT (Mod 2) once per week for problem solving support or content extension. *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 - Meets EVERY OTHER day for the entire year. **Credit:** 1.0 Science.

## Support Services

Colchester students are served through a variety of ways to support their academic, social and emotional growth. Some of the services and programs that are available for students are:

- ELL - for English Language Learner students requiring additional language supports.
- 504 - for identified students who are diagnosed with a disability and need accommodations as part of their school day.
- EST - for identified students requiring additional educational supports as part of their school day.
- Special Education - for identified students who are diagnosed with a disability and demonstrate a need for specialized instruction around basic skill areas and/or areas with adverse effect.
- School Based Clinicians - provided to students who are in need of family or social and emotional supports. Enrollment determined by teacher recommendation.
- Speech - 1:1, small group or large group instruction and supports around identified Speech & Language needs.
- Crossroads - School program which provides instruction and support for students identified with an intellectual disability. Instruction is focused on the acquisition of life and transitional skills. Enrollment determined by team recommendation.
- CAP - Colchester Alternative Program designed to support the instructional needs of students needing a smaller environment. Enrollment determined by need, application and teacher recommendation.

Additionally, there are some course offerings available to students within support services. Student enrollment within these courses are based on data collected, team discussions/decisions and teacher recommendations.

### # 55/57 Direct Instruction:

This course is designed to provide students with specialized instruction around identified academic, basic skill and/or behavioral needs. This course is taught by a special educator. This course is broken into two major parts:

- 1) specialized small group or individual instruction around identified academic, basic skill and/or behavioral needs.
- 2) additional in-class time and supports to complete homework

**Prerequisite:** Open to identified students in Grades 9-12 (with teacher recommendation). **Duration:** Full Year. **Credit:** 0.5 Elective.

### #56 Supported Study:

This course is designed to provide students with academic and homework supports in a smaller group setting. The structure of this class is similar to a study hall with additional scaffolded supports in place. Some student supports found as part of this class are: small class size, more frequent teacher check ins, instruction around organization and executive functioning. A large portion of this course is designated to provide additional in-class time and supports to complete homework.

**Prerequisite:** Open to identified students in Grades 9-12 (with teacher recommendation). **Duration:** Full Year. **Credit:** 0.

### # 929 Strategic Study:

This course is designed to provide students with a structured setting to gain the skills they need in order to be a successful learner in, and beyond, high school. They will work to develop skills such as collaboration, self-advocacy, organization, time management, and goal-setting. Students will also work to develop awareness and responsibility for their learning style, needs, and strengths, and will be taught to access supports and resources to help them overcome obstacles and gain independence.

**Prerequisite:** Open to identified students in Grades 9-12 (with teacher recommendation). **Duration:** Full Year. **Credit:** 0.5 Elective.

### #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.

**Prerequisite:** None. **Duration:** Full Year. **Credit:** 1.0. Up to 2.0 credits of ELL may be applied to the graduation requirement in English.

## World Languages

### World Language Discipline Proficiencies

- **Presentation:** The CHS graduate can engage in meaningful one-way communication (speaking and writing) to inform, explain, persuade and/or narrate to an intended audience on a range of content and contexts.
- **Interpretive:** The CHS graduate can interpret meaning and cultural perspective through reading, listening and viewing a variety of authentic materials.
- **Interpersonal Communication:** The CHS graduate can participate in conversations on familiar topics, using sentences and/or series of sentences, in appropriate time frames, as well as handle social interactions and everyday tasks by asking and answering a variety of questions.
- **Language Conventions:** The CHS graduate can recognize and make use of thematic vocabulary and grammatical conventions of increasing complexity as they communicate with the various modes and advance through the levels of language learning.
- **Culture and Connections:** The CHS graduate can interact with empathy and an awareness of the perspectives of self and others, while recognizing the factors that influence who people are and how they communicate.

### French

#### #500 French I: ♦

Students will practice communicating in French in practical, real-life situations as outlined by the course proficiencies and 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 use the structures of the language necessary for basic communication. They will become familiar with French culture and customs from around the world. Music, audio-visual resources and the Internet will support the curriculum.

**Prerequisite:** None. **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 course proficiencies and 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. Music, audio-visual materials, the Internet and magazines will support the curriculum. The students will study the culture of France, Québec and other francophone countries and will understand the role of Franco culture in the United States.

**Prerequisite:** C or better in French I and teacher recommendation. **Duration:** Full Year. **Credit:** 1.0 Elective.

#### #515 French III: ♦

This course will continue language study in the five areas as outlined by the course proficiencies and 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 further develop 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. Music, audio-visual resources and the Internet will support the curriculum.

**Prerequisite:** C or better in French II and teacher recommendation. **Duration:** Full Year. **Credit:** 1.0 Elective.

#### **#520 French IV: ♦**

In this course, students will build upon their prior communication skills as outlined by the course proficiencies and the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Communities) New vocabulary and grammar will be presented through thematic units of study (daily life, travel, health and relationships). Students will also use the French language to explore some aspects of contemporary culture, history and the arts of the francophone world . Music, the Internet, audiovisual and print materials will support the curriculum and highlight connections between French speakers and the greater community.

**Prerequisite: Commitment to speaking French is essential. C or better in French III and teacher recommendation.**

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

#### **#519 French V: ♦**

In this course, students will use authentic and current French materials to develop language skills in multiple modes of communication, including interactions in writing and speaking, interpretation of audiovisual and print materials, and oral and written presentation of information and ideas. The AP College Board suggested themes of Beauty and Aesthetics, Contemporary Life, Families and Communities, Global Challenges, Personal and Public Identities, and Science and Technology will facilitate the integration of language, content and culture and promote the use of higher level French in a variety of interdisciplinary contexts. Students may choose to take the AP French Language and Culture exam in May, but it is not a requirement. *This course is not offered annually. It will be offered as enrollment and staffing allow.*

**Pre-requisite: A commitment to the use of French is essential. B or better in French 4 and teacher recommendation.**

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

## **Spanish**

#### **#525 Spanish I: ♦**

Students will practice communicating in Spanish in practical, real-life situations as outlined by the course proficiencies and 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 become familiar with Hispanic culture and customs. Music, audio-visual resources and the Internet will support the curriculum.

**Prerequisite: None. 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 course proficiencies and 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. Music, audio-visual resources, the Internet and printed materials will support the curriculum. 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: C or better in Spanish I and teacher recommendation. Duration: Full Year. Credit: 1.0 Elective.**

#### **#535 Spanish III: ♦**

This course will continue language study in the five areas as outlined by the course proficiencies and 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 Hispanic culture and civilization of Spain, Latin America and the United States. Students will further develop 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. Music, audio-visual resources, the Internet and printed materials will support the curriculum.

**Prerequisite: C or better in Spanish II and teacher recommendation. Duration: Full Year. Credit: 1.0 Elective.**

**#537 Spanish IV: ♦**

In this course, students will build upon their prior communication skills as outlined by the course proficiencies and the standards for foreign language learning (Communication, Cultures, Connections, Comparisons and Communities) They will build upon their prior communication skills and knowledge of grammar through thematic units of study. Students will use the Spanish language to explore some aspects of contemporary culture, history and the arts of the Spanish-speaking world. Music, the Internet, audiovisual and print materials will support the curriculum and highlight connections between Spanish speakers and the greater community.

**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: ♦**

In this course, students use authentic and current materials in Spanish to develop language skills in multiple modes of communication, including interactions in writing and speaking, interpretation of audiovisual and print materials, and oral and written presentation of information and ideas. The AP College Board suggested themes of Beauty and Aesthetics, Contemporary Life, Families and Communities, Global Challenges, Personal and Public Identities, Science and Technology will facilitate the integration of language, content and culture and promote the use of higher level Spanish in a variety of interdisciplinary contexts. Students may choose to take the AP Spanish Language and Culture exam in May, but it is not a requirement. *This course is not offered annually. It will be offered as enrollment and staffing allow.*

**Pre-requisites: A commitment to the use of Spanish is essential. B or better in Spanish 4 and teacher recommendation.**

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

## Additional Academic Opportunities

### #364 Extended Learning:

**Extended Learning** is a semester course in which students explore a question or topic about which they are very passionate while honing research and inquiry skills. Students will regularly reflect on their process, write a research paper, create an annotated bibliography, and connect with local experts in their chosen field of study. The main focus of the class, however, will be creating a self-designed final product guided by their research question, which they will share with an authentic audience. *Extended Learning* is a great opportunity for students to design their own goals and become self-directed, expert learners. Learning is guided by student interest.

**Prerequisite:** Successful completion of GreenHouse humanities classes. **Duration:** Semester. **Credit:** 0.5 Elective.

### #582 TIPS:

The class is being offered both in the spring and fall semesters for juniors and seniors. It involves a 20-hour pre-employment skills course, a 40-hour unpaid internship, and student self-reflection. The expected outcome is increased skills and solid work-place experience, both of which enhance a student's potential for college admittance and/or paid employment. Students who elect to take this course must be highly self-motivated, willing to critically evaluate themselves, and be willing to take calculated risks. Students will earn .5 elective credit upon successful completion of the course and internship.

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

## 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.

### PLEASE NOTE: WHEN WILL STUDENTS RECEIVE THEIR COMPLETION CERTIFICATE?

**VT State Driver Education Certificate of Completion will be issued according to the following schedule:**

**Fall semester: last week of the semester in January.**

**Spring semester: last week of the semester in June.**

**Summer session: late August.**

**Please be aware that some students may finish the driving portion of this class prior to receiving their certificate of completion. In some cases this means that students will have to wait for a period of time (in some situations a few weeks) before they receive their certificate. Please see the above guidelines for when students will receive their certificate as these are the ONLY times that these certificates are issued.**

## 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. 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 are placed back on the waiting list and the school will follow the process outlined in item number two above.
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 daytime; we do not MOVE yearlong 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 homeschooled 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.



[burlingtontech.org](http://burlingtontech.org)

## **Daytime Program of Studies 2018-2019**

### **Introduction**

Burlington Technical Center (BTC) provides students with the opportunity to explore careers and acquire skills in comprehensive technical programs of study. All students are supported in working toward individual goals through immersive, hands-on study with highly trained professional instructor mentors in state-of-the-art labs and classrooms, and through experiential learning opportunities.

Our half-day programs are a unique opportunity for students to develop academic and technical knowledge and skills in a morning or afternoon session while attending classes at their sending high school. BTC offers twelve programs for juniors and seniors and a new, one-year Pre-Tech Exploratory program (three credits toward high school graduation) for freshman and sophomores. Students attend BTC daily in one session: morning (9:35-11:47 a.m.) or afternoon (12:09-2:21 p.m.).

Juniors and seniors complete a technical program in two years. Each of the twelve programs offer one to two academic credits and four to five elective credits for a total of six credits toward high school graduation. In addition, many BTC programs offer students dual enrollment credits through agreements with colleges.

BTC programs support students' Personalized Learning Plan goals, offering Flexible Pathways to graduation, careers, and postsecondary education through high school credits, dual enrollment college credits, internships and Co-op work opportunities, and industry credentials and/or licenses.

### **Embedded high school credits:**

BTC students earn core academic credits in math, science, social studies, or art which are approved by the Vermont State Board of Education and meet state high school graduation requirements. Full details on embedded credits are listed in the course descriptions below.

### **Dual Enrollment college credits:**

Many BTC programs offer students dual enrollment college credits (up to 18 credits) for free or at a significantly reduced rate within the program's integrated curriculum. Dual enrollment credits and the opportunity to build a college transcript with transferable credits is valuable for students pursuing postsecondary education goals. Currently, students can receive two dual enrollment course vouchers at their sending high school and two additional dual enrollment course vouchers at BTC.

**Professional certifications:**

Many BTC programs offer pathways to earn industry recognized professional certifications and/or licenses related to their technical fields as students build specialized and transferable skills.

**Internships and work-based (Co-op) experience:**

Students participate in internships and may be eligible for paid work (Co-op) positions across technical fields at BTC through partnerships with local businesses and organizations.

**Career Technical Student Organizations:**

BTC programs opt to participate in SkillsUSA activities and competitions as they prepare students for the workforce, higher education, and continued community involvement.

**Interdisciplinary studies:**

BTC offers students connections across fields and programs through working and collaborating with other students on challenging projects.

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**For additional information, updated news, photos, and videos visit the BTC web site:**

[burlingtontech.org](http://burlingtontech.org)

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**How to Apply / Admission Requirements:**

1. Visit the program of interest: BTC hosts a number of school visits (Open Labs) and an annual Open House.
2. Prerequisites: Applicants must have a minimum of 10 high school credits, including 2 credits in math, science, social studies, and English by June, 2017 for 11th-12th grade programs of study, to be eligible for the 2017-2018 school year.
3. [The application form \(LINK\)](#) must be completed and signed by the student, school counselor, advisor, and/or case manager (if applicable), and parent/guardian.
4. Submit application to your school counselor by March 17, 2017. School counselors will submit applications to BTC with transcript, attendance, and discipline records.

**School counselors** may forward applications to BTC in one of the following ways:

- Email scanned PDF to: [btcAdmissions@bsdvt.org](mailto:btcAdmissions@bsdvt.org)
- Mail to: 52 Institute Rd., Burlington, VT 05408
- Fax: 802-864-8521
- Arrange pickups at your school by calling BTC at: 802-864-8426

## **How do I get from my school to BTC?**

Round trip busing from your sending school is provided. For Burlington High School students, just walk into A or F building.

## **BTC provides academic support for your learning needs:**

Academic counseling:

- Personalized Learning Plan (PLP) and Flexible Pathways integration
- Dual enrollment college credits
- Professional certification pathways
- Robust internship opportunities

ELL support services: BTC offers ELL students in and out-of-class support, guided study labs, differentiated curriculum, and individualized learning strategies to support academic achievement and goals across programs.

## **Program of Studies: 2017 - 2018: Descriptions and Course Listings**

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### **Pre-Tech Foundational: Design Tech (Digital Media, Design and Illustration, Programming and Computer Science) - 4769 (Freshman or Sophomore Program)**

The Pre-Tech Foundational Program will offer 9th and 10th grade students a unique experience with technology, innovation and entrepreneurship in a collaborative studio/makerspace environment. Students will progress through modules in Information Technology, Web & Digital Communications, Visual Art, and Technology & Application of Science. Students will be immersed in project-based learning using design basics, rapid prototyping, communication, problem solving, data analysis, and ideation skills. Students will learn how to 3D print, construct robots, use laser technologies, develop a website or blog, program basic hardware, and build familiarity with CAD programs or VR technology. Instructors will lead students through the design thinking process and/or engineering design process to facilitate projects that solve challenges and/or questions to student identifiable problems. Students will be immersed in projects that will teach the skills of: safety, communication, collaboration, problem-solving, leadership, and entrepreneurship. In the second half of the year, students will identify which programs within the tech center in the technology cluster best fit their skills and interests, and tailor a project that meets specific program curriculum and/or skills. Students will also have the opportunity to visit the tech program(s) of interest. The Pre-Tech Foundational program culminates with a portfolio.

The one-year Pre-Tech Foundational program at BTC, Design Tech (Digital Media, Design and Illustration, Programming and Computer Science) will run for 120 minutes per day and is designed to prepare students for the following technology cluster of gr. 11-12 Programs of Study at BTC: Programming and Computer Science, Digital Media Lab, and Design and Illustration.

**HS Credits for 1 Year Program:** 2.0 Elective Credits and 1.0 Embedded Science Credit

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## **Auto Body Repair 1- 4826**

### **Auto Body Repair II - 4827**

In the Auto Body Repair program, students will acquire core skills, refine skills and build knowledge in vehicle body repair and alignment, refinishing, welding techniques, frame and chassis repair and estimating, shop management procedures, and collaborative teamwork. Coursework and class experience provide the knowledge needed to grow with the latest technological changes in the auto body field. The curriculum utilizes ASE (Automotive Service Excellence) certified instructional materials, a symbol of quality in this industry.

### **HS Credits for 2 Year Program**

Year 1 - 3.0 Elective Credits

Year 2 - 2.0 Elective Credits and 1.0 Embedded Science Credit

**Industry Recognized Certifications:** OSHA -10, S/P2 Collision Repair Safety, Hazard Waste, PPG Paint certification

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## **Automotive Science and Technology I - 4822**

### **Automotive Science and Technology II - 4823**

Study scientific principles and gain hands-on experience as they are applied to the design, operation and service of a modern automobile. Build electro-mechanical knowledge and other skills to begin successful careers in related areas such as: automotive repair, electrical/mechanical engineering, heating/ventilating, plumbing, industrial refrigeration and heavy equipment, to list just a few. Auto Science and Tech follows the ASE (Automotive Service Excellence) curriculum in a fully functional auto repair shop.

### **HS Credits for 2 Year Program**

Year 1 - 3.0 Elective Credits

Year 2 - 2.0 Elective Credits and 1.0 Embedded Science Credit

**Industry Recognized Certifications:** OSHA -10, S/P2 Collision Repair Safety, Hazard Waste, PPG Paint certification

**Dual Enrollment for College Credit:** Qualified students can earn guaranteed admission status and up to six college credits in the General Motors-Automotive Associate's Degree Program at New Hampshire Technical College (Laconia), six college credits at University of Northwestern Ohio, and advanced standing and four credits at New England Institute of Technology.

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## **Aviation and Aerospace Technology I - 4834**

### **Aviation and Aerospace Technology II - 4835**

High salaries and extremely challenging jobs make Aviation Technology a very attractive career. This program has a waiting list of employers ready to hire BTC's program graduates. Learn how to repair any type of aircraft through the use of specialized tools, through work on aircraft components in the laboratory and at our own airport hanger (with over 11 aircraft), in classroom instruction, and in observations with local aviation companies. We bus our aviation students to Burlington International Airport to take part in this incredible training program. All training received in this program is FAA approved and is applied to the Airframe and Powerplant (A&P) Certification to provide the opportunity to become a certified aircraft technician.

**HS Credits for 2 Year Program:**

Year 1 - 3.0 Elective Credits

Year 2 - 1.0 Elective Credit, 1.0 Embedded Science Credit, and 1.0 Embedded Math Credit

**Industry Recognized Certifications:** Airframe & Powerplant (A&P), Avionics: General Radio Operator's License (GROL) and Radar Endorsement

**Dual Enrollment for College Credit:** Year 1 - VTC, Year 2 - VTC

**Articulation Agreements:** NASA, Vermont Technical College (VTC, pending final approval for 18 dual enrollment credits)

**Other:** The American Council on Education (ACE) will award up to 67 college credits for students earning their Airframe & Powerplant License (A&P).

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**Criminal Justice I - 4850****Criminal Justice II - 4851**

This is a college preparatory program that helps students build skills to explore careers in virtually any field in Criminal Justice, including law-enforcement, legal fields, and security. Units of study include the history of law enforcement, the court system, juvenile law, ethics, criminal law, criminal procedures, interview and interrogation, combat training, criminal investigation, and corrections. Practical experiences are provided that enhance classroom learning. Field trips, guest speakers, and the 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, and combat training. Simulated crime scene investigations involving guest experts allow students to study modern techniques and procedures in real world scenarios using industry-standard equipment.

**HS Credits for 2 Year Program:**

Year 1 - 3.0 Elective Credits

Year 2 - 2.0 Elective Credits and 1.0 Embedded Social Studies Credit

**Industry Recognized Certifications:** FEMA NIMS 100, 200, 400, 70, 800, VT Boater Safety Certificate

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**Culinary Arts / Professional Foods I - 4772****Culinary Arts / Professional Foods II - 4773**

Culinary/Professional Foods is designed to introduce students to all aspects of the restaurant and institutional food service industry. Emphasis is on quality food preparation. Instruction includes sanitation, safety, use and care of equipment, basic meal preparation, and front-of-the-house service. 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, employee evaluation and responsibilities.

**HS Credits for 2 Year Program:**

Year 1 - 3.0 Elective Credits

Year 2 - 2.0 Elective Credits and 1.0 Embedded Science Credit

**Industry Recognized Certifications:** ServSafe

**Articulation Agreements:** CIA, NECI (pending)

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Design and Illustration I - 4750

**Design and Illustration II - 4752**

Design and Illustration is a program for students interested in the visual arts, whether seriously considering art school or interested in exploring different mediums. BTC's unique program offers students the chance to build skills in traditional and digital mediums. With a focus on building a portfolio, students will be exposed to many different forms of art, from the foundation of observation drawing to photography and graphic design to using the technology of the Adobe Creative Cloud.

**HS Credits for 2 Year Program:**

Year 1 - 3.0 Elective Credits

Year 2 - 2.0 Elective Credits and 1.0 Embedded Art Credit **or** 2.0 Elective Credits and 1.0 AP Studio Art Credit: Drawing or 2-D Design

**Dual Enrollment for College Credit:** Year 1 - 3.0 CCV Graphic Design I

Year 2 - 3.0 CCV Graphic Design II

**Articulation Agreement:** Community College of Vermont (CCV)

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**Digital Media Lab I - 4767**

**Digital Media Lab II - 4768**

Digital Media Lab is the place for students who are seriously interested in exploring film making, script writing, directing, producing, electronic music, podcasting, graphic design, digital video, FX, photography, and emerging media. This class is fun, fast, and focused as students build a wide array of digital, collaborative, and leadership skills. With a project-based learning structure, students work both independently and in groups on a variety of diverse media projects both in class and across the technical center.

**HS Credits for 2 Year Program:**

Year 1 - 3.0 Elective Credits

Year 2 - 2.0 Elective Credits and 1.0 Embedded Science Credit

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**Human Services I - 4776**

**Human Services II - 4777**

This program is for students interested in careers in fields such as counseling, social work, rehabilitation, hospitals, geriatric service and care, and all avenues of K-12 and postsecondary education and support. Students interested in education have the opportunity to build skills in BTC's state licensed, on-site preschool program. Students completing this course with a concentration in early childhood education meet state requirements for mid-level positions in that field.

**HS Credits for 2 Year Program:**

Year 1 - 3.0 Elective Credits

Year 2 - 2.0 Elective Credits and 1.0 Embedded Social Studies Credit

**Industry Recognized Certifications:** American Red Cross: CPR and AED, First Aid, Shaken Baby Syndrome

**Dual Enrollment for College Credit:** Year 1 - 3.0 CCV Intro to ECE

Year 2 - 3.0 CCV Communication in ECE, 3.0 CCV Curriculum in ECE

**Articulation Agreement:** Community College of Vermont (CCV)

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## **Health Sciences Academy I - 4780**

### **Health Sciences Academy II - 4782**

The Health Sciences Academy 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. Students will participate in laboratory experiences, including microscopic analysis, dissection, phlebotomy (blood drawing), massage, microbiology and wound care. Nutrition and extensive job shadowing opportunities complete the two-year curriculum. Students will also participate in hands-on medical labs and dissections. Human Growth and Development (exploring physical, cognitive and social-emotional development through the lifespan).

Instructors of the Health Sciences Academy Program are adjunct faculty at local colleges. Qualified students may earn up to seventeen transcribed college credits (seven credits in the first year and ten 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.

#### **HS Credits for 2 Year Program:**

**Year 1** - 2.5 Elective Credits and .5 Embedded Social Studies Credit

**Year 2** - 2.0 Elective Credits and 1.0 Anatomy & Physiology Embedded Science Credit

**Industry Recognized Certifications:** American Red Cross: CPR, First Aid, AED, Bloodborne Pathogens

#### **Dual Enrollment for College Credit:**

Year 1 - 4.0 VTC Anatomy & Physiology I

3.0 VTC Human Growth & Development

Year 2 - 4.0 VTC Anatomy & Physiology II

3.0 VTC Nutrition

3.0 CCV Medical Terminology

OR

3.0 CCV Human Biology

**Articulation Agreements:** Vermont Technical College (VTC), Community College of Vermont (CCV)

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## **Programming and Computer Science I - 4765**

### **Programming and Computer Science II - 4766**

Students will learn foundational programming skills applicable to almost any language with an emphasis in Python, JavaScript, and Java. Programming and Computer Science graduates are in high demand in a variety of careers. Learn to apply mathematics and analytics to solve complex problems. Learn how to build solutions with digital tools and explore computational thinking and design processes. Students program apps for mobile tech, work on projects in programmable electronics and robotics, and apply skills and knowledge to create solutions on interdisciplinary projects.

#### **HS Credits for 2 Year Program:**

Year 1 - 3.0 Elective Credits

Year 2 - 2.0 Elective Credits and 1.0 Embedded Science Credit

**Dual Enrollment for College Credit:** Anticipated: Up to 9 college credits in Programming and/or Computer Science

**Articulation Agreements:** Anticipated: Champlain College, University of Vermont

**Welding and Metal Fabrication I - 4832**  
**Welding and Metal Fabrication II - 4833**

The Welding and Metal Fabrication Program trains students in the recognition of metals as well as the proper procedures of commercial / industrial welding. Instruction includes electric arc, oxyacetylene and tungsten inert gas welding, as well as metal cutting and brazing. The welding industry today presents continually growing opportunities, high pay, and travel opportunities for skilled workers throughout the world. Build skills and certifications in commercial welding and move into complex artistic projects with the help of design students and modelers in our new award-winning makerspace.

**HS Credits for 2 Year Program:**

Year 1 - 3.0 Elective Credits

Year 2 - 2.0 Elective Credits and 1.0 Embedded Math Credit

**Opportunities to Earn Industry Certifications:** American Welding Society (AWS) Structural Welder

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**Work-Based Learning:**

Work-Based Learning is an extension of our technical programs, which enables students to develop both their technical and general employability skills through supervised, planned work experiences with area employers. These work-based learning experiences include unpaid short-term internships, Job Shadows, Informational Interviews and Cooperative Career Employment (long term salaried positions).

Our newest and highest level of work-based learning is Student Apprenticeship. This program requires an employment/training commitment of at least one year between the student and the employer and leads to a Certificate approved by the State Board of Education. It can also be linked to a nationally recognized Registered Apprenticeship program and/or a college or other post secondary educational program. These services provide our students with invaluable experience and references for college admission or employment, as well as opportunities for career exploration and decision making. They may also result in permanent, full time employment.

Work-Based Learning services are individual and flexible. The work experience is planned according to the needs and career goals of the student, the structure of the technical program and the opportunities available in the community. Work-Based Learning may be paid or unpaid, during class or after school, limited or long term. However, all students are evaluated. The Evaluation and Learning Plan are used to determine and measure learning and skill development.

Academic credit is given for Cooperative Education experiences based on the length of time students participate in the work experience in addition to their time in class. Typically, students earn 1/2 credit per semester, with a possible maximum of 2 credits. All students who are enrolled in a technical program are eligible for work-based learning services. It is BTC's belief that they are an integral part of every program and our goal is to provide every student with at least one of these opportunities for work-based learning. For more information about Work-Based Learning, contact Jane Donahue Davis, at 802-846-8427.

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## **SkillsUSA**

SkillsUSA is a national career and technical student organization for any student in technical programs. A vital solution to the growing skills gap, SkillsUSA improves the quality of America's skilled workforce through a framework of personal, workplace and technical skills grounded in academics. SkillsUSA enhances the lives and careers of students, instructors and industry representatives as they strive to prepare students for the workforce, higher education and continued community involvement. Students may have the option to participate in State SkillsUSA competitions in BTC programs. State winners move on to the National Competition.

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## **Equal Opportunity Statement**

Applicants for admission and employment, students, parents, employees, sources of referral of applicants for admission and employment, and all unions or professional organizations holding collective bargaining or professional agreements with the Burlington School District are hereby notified that it is the intent of the Burlington Board of School Commissioners that the District will not discriminate against employees and/or applicants for employment, students or other designated beneficiaries of the statutes listed below on the basis of race, sex, gender (including but not limited to pregnancy and parental status), color, age, creed, religion, disability, handicap, ancestry, place of birth, national origin, marital status, political affiliation, sexual orientation, gender identity or gender expression in any of its employment and education practices, policies, procedures or decisions or in the operation of, access to, participation in, benefit of or admission to its programs, activities, services and facilities and that it will provide equal access to the Boy Scouts of America and other designated youth groups in compliance with and to the extent provided by the laws listed below. The District's Title VI Coordinator, the Age Discrimination Act Coordinator and Americans with Disabilities Act Coordinator for employees and others: Nikki Fuller, Human Resources Director, Burlington School District (802) 864-2159; 1-800-253-0191 TDD The District's Title IX Coordinator for employees, students, parents and other such relatives, friends, guest speakers or visitors: Henri Sparks, Director of Equity, Burlington School District (802) 865-4168; 1-800-253-0191 TDD The District's Americans with Disabilities Act Coordinator for students and 504 Coordinator: Director of Special Services of the Burlington School District (802) 864-2159; 1-800-253-0191 TDD

**Burlington Technical Center - 52 Institute Road, Burlington, VT 05408**

802-864-8426-phone 802-864-8521-fax

[burlingtontech.org](http://burlingtontech.org)



## CTE Program of Studies 2018-2019

### Mission Statement

The Center for Technology, Essex provides comprehensive technical programs for all students which include career exploration, preparation and technical literacy in a respectful learning environment. All students will be afforded the opportunity to acquire skills necessary to reach their individual goals.

The Center for Technology, Essex strives to offer every student who is committed to technical education:

- A progressive vision driven by exemplary performance reflected by its staff, curricula and learning environments
- Qualified and caring instructors capable of developing a student's academic and technical knowledge and the application of these skills relevant to both employment and continuing education
- Opportunities to participate in leadership activities which will assist students in achieving both a sense of self-worth and community
- Pathways leading to further education, certifications, and viable careers through active partnerships with industry
- A safe, positive, and enriching environment within the classroom, laboratory, and business community which fosters creativity, individual achievement and promotes the students' abilities to succeed with imagination and discrimination

Visit our web site [www.gocte.org](http://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. 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, many 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 pursue post-secondary education. 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 in all programs are also offered the opportunity to take college courses for free or at a reduced rate at area colleges.

### Admission Requirements:

- 1) visit the program
- 2) submit a complete application with transcript, attendance and discipline records attached by March 1 deadline
- 3) attend Step-Up Day
- 4) documentation indicates a minimum of 10 high school credits/proficiencies (including 2 credits each in math, science, social studies and English) by June

*\*our Pre Tech Exploration program has separate credit entrance requirements*

- 5) good attendance (no more than 15 absences, unless there are extenuating circumstances)
- 6) ability to work both independently and in group situations
- 7) ability and willingness to follow safety instructions
- 8) respect for self, others, the environment, the learning process, and the CTE employability skills

CENTER for TECHNOLOGY, Essex: PROGRAMS OFFERED

*Full day programs*

For Eleventh and Twelfth Grade Students

Automotive Technology I & II	Design & Creative Media I & II
Building Technology: Residential	Engineering/Architectural Design I & II
Building Technology: Systems	Health Informatics
Childhood Education/Human Services I & II	Natural Resources and Agri-science Technology: Mechanical Science
Computer Animation & Web Page Design I & II	Natural Resources and Agri-science Technology: Forestry
Computer Systems Technology I & II	Professional Food Services I & II
Cosmetology Arts and Sciences I & II	Apprenticeship Training / Internship
Dental Assisting	

**For Ninth and Tenth Grade Students**

Pre-Tech Explorations: Foods, Health, and Human Development (*grade 10 - full day program*)

Pre-Tech Explorations: BASES - Building Arts and Small Engine Systems (*grade 10 - full day program*)

Pre-Tech Explorations: IDEA – Information Technology, Design, Engineering, and Arts (*grade 10 - full day program*)

Pre-Tech Explorations: Natural Resources (*grade 10 - full day program*)

Pre Tech Explorations: Culinary, Hospitality and Tourism (*grade 10 – full day program*)

Pre-Tech Foundations: Intro to Engineering (*grade 9 or 10 - single block course*)

Pre-Tech Foundations: Intro to Automotive Technology (*grade 9 or 10 - single block course*)

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 2018-2019

### 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 automotive technology 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**

Qualified students are invited to apply to our apprenticeship program with a limited number of slots available. 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, onsite in 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 onto 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 who 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 onto 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 who 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 young children, the elderly, and people with special needs. Students are introduced to careers in education, human services, and child psychology and instructed in the steps they need to take to pursue a teaching career or a career in the human service field. The program teaches students to provide instruction in math, science, reading, and social studies at the elementary school level. Students are also trained to work with the handicapped and the elderly. The students enrolled in this program operate the CTE Preschool. 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 childcare facilities. Students are introduced to the human service field, such as social work, geriatrics, and child psychology. Students attend Career Work Experiences with infants and toddlers, school-age children, and the elderly. 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 ChildCare 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 21<sup>st</sup> 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 computer science/ robotics credit, one embedded fine art credit, and four elective credits.

*Certification(s):* World Organization of Webmasters

*College Credits:* Same dual enrollment agreement with CCV as CAWD I. In addition, qualified students can earn up to three VTC credits in English Composition and three credits at CCV in Drawing I.

## **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 credit, 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+

## **DESIGN AND CREATIVE MEDIA 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 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 Design and Creative Media Certification awarded by the *Regional Design and Creative Media 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+

## **DESIGN AND CREATIVE MEDIA II**

Students who successfully complete the Design and Creative Media I 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 Design and Creative Media I program.

*HS Credits:* One embedded math credit, one integrated art credit, plus four 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 and Digital Image Manipulation (three credits each) as well as a Drawing I class available to qualified students.

## **ENGINEERING / ARCHITECTURAL 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.

## **ENGINEERING / ARCHITECTURAL DESIGN**

### **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+

## **ENGINEERING / ARCHITECTURAL DESIGN**

### **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 credit, 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.

## **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 anatomy and physiology 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+

## **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 seniors can earn three 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 CTE Café and Bakery". 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 embedded 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 embedded 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 three-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: Building Arts and Small Engine Systems - BASES (Full Day Program)**

Get your bases covered in this section of Pre-Tech. We learn a variety of carpentry and construction skills through project based learning in an extensive woodshop. We discover the ins and outs of small engines by dissecting and restoring engines and equipment to working order. If woodworking or engines interest you, this is the place to build a solid foundation or crank up your passion for your future.

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, 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. Students apply specifically to this strand of the Pre Technical program.

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 EXPLORATION: Information Technology, Design, Engineering, and Arts - IDEA (Full Day Program)**

#### **Inquiry, Imagination, Innovation. What drives you?**

PreTech:IDEA prepares students to be successful on a path to technology and design careers. Through projects, students learn how to creatively solve problems, communicate ideas, and work with a team. We follow a creative production process and use technology as a tool to communicate and produce ideas. Some units include: Brain Science, Product Development and Marketing, Electronics, Fine Art, IT, and more!

PreTech:IDEA is a gateway to the following CTE programs: Computer Animation and Web Design, Computer Systems Technology, Graphic Design and Digital Publishing, and Engineering.

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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 10, Geometry, science, fine arts, physical education and elective.

### **PRE-TECHNICAL EXPLORATION: Health, and Human Development (Full Day Program)**

In this section of Pre-Tech, experience nutrition through learn about how the human body works, including personal fitness and wellness, and child development. Through projects such as planning and preparing meals, creating books for kids, home made skin care products and others, students will develop the positive relationship and communication skills needed to join a workforce of people who enjoy helping others.

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, 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. Students apply specifically to this strand of the Pre Technical program.

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 EXPLORATION: Natural Resources (Full Day Program)**

Natural Resources provides an opportunity to study curriculum related to natural resources in an environment that caters to a hands-on, creative and mindful individual. The class explores many topics, including heavy equipment, welding, soil science, forestry and silviculture. Units will be structured around student led projects and activities that focus on communication, academics, and occupational skills.

*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 EXPLORATION: Culinary, Hospitality and Tourism (Full Day Program)**

This program is designed to introduce students to the Hospitality Industry with emphasis on Culinary Arts, Baking and Pastry, Nutrition and Customer Service Skills. Units will be structured around quarterly project based learning. There will be a focus on 21st Century Transferable Skills including communication, problem solving and time management. Throughout the school year students will receive hands-on experience operating our student run restaurant and bakery. This program introduces multiple pathways towards employability, college, and career opportunities in the culinary, hospitality and tourism industry.

*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, Geometry, science, fine arts, physical education and elective.

### **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.

## **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.

## **ACADEMIC COURSE OFFERINGS**

### **VERMONT TECHNICAL COLLEGE INTRO TO COLLEGE ENGLISH/ ENGLISH COMPOSITION 1060**

This Honors English dual enrollment course offers qualified seniors the opportunity to earn both a high school English credit and six 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 credit. Students must meet additional requirements to earn college credit. Enrollment is limited to 20 students. This is a full year class.

### **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.

### **ENGLISH 11/12**

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.

### **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 2**

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.

### **INTRO TO ALGEBRA 2**

Intro to Algebra 2 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.

## **VTC PRE CALCULUS 1 & 2**

This six credit course is an opportunity for students to earn college credits through Vermont Technical College in 2 semester-long mathematics classes. It is meant to be a stepping-stone to college mathematics. The first semester we focus on strengthening and expanding algebra 1, Algebra 2, and Geometry skills through work with systems of equations, factoring, quadratics, exponents, and radicals. During the second semester we explore the big ideas in trigonometry, logarithms, and complex numbers -- skills that both prepare students for college level mathematics and for being a thoughtfully engaged member of their community. Prerequisites: Teacher recommendation, Credit in Algebra 2, and Accuplacer scores.

## **GEOMETRY**

Students are introduced to geometry principles they apply to the world of work. Topics include points, lines, circles, and 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 relevant connections to life and careers.

## **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 surfaces dimensions, measurement, right triangle, circles, and polygons are central to real-world skill application.

## **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 Next Generation Science Standards. 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.

## **FINE ARTS**

Through the assignments given in this Independent Study, students will explore different art techniques and media to create expressive and interesting artwork. Students will be pushed to think independently about assignments and to create interesting compositions. By the end of the semester students will have a portfolio that shows a range of knowledge and skills that they have learned through creating artwork.

## **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.

## **U.S. HISTORY**

This social studies course attempts to connect our lives as Americans to the past, present, and future. Students will gain an understanding of some of the major events, people, places, and ideas that are affecting our world today, and connect these modern day events with the history that created them. This course will also present opportunities for students to learn to think critically, identify cause and effect, recognize and appreciate diversity, and understand key institutions, ideas and principles of human rights, government and economics. The course covers the following units through the lens of three central themes (politics/foreign policy; society/culture, and economy): the Civil War & Reconstruction, Westward Expansion/Native Americans, Industrialization & Progressivism, Imperialism & The Spanish-American War, World War I, The "Roaring Twenties" & the Great Depression, World War II & the Holocaust, the Cold War/Korea/Life in the 1950s, Civil Rights & Turmoil in the 1960s, Vietnam, and the 1970s-1990s.

In addition to the topics listed above, students also work on some critical skills, including reading, research, developing persuasive arguments, and writing

## **SENIOR PORTFOLIO**

Senior Portfolio is a .5 credit social studies class that fulfills the senior project requirement for many sending schools. As part of the class, students create a professional portfolio of work that they can use to represent their job skills and qualifications in an employment or college interview. The project consists of multiple components that include professional documentation (resume, letters of recommendation), community service work, reflective essays and work samples that demonstrate the student's proficiency in their career area. Students finish the course with a demonstrated learning presentation in an area of their expertise.