Alvirne High School

and

Wilbur H. Palmer

Career & Technical Education (CTE) Center

2022-2023

Program of Studies

Character • Commitment • Curiosity • Community

Statement of Nondiscrimination

The Hudson School District does not discriminate in the administration of its admissions and educational programs, activities or employment practices on the basis of race, color, religion, national origin, age, sex, disability, sexual orientation or marital status. This statement is a reflection of the Hudson School District and refers to, but is not limited to, the provisions of the following laws:

Title VI and VII of the Civil Rights Act of 1964
The Age Discrimination Act of 1967
Title IX of the Education Amendments Act of 1972
Section 504 of the Rehabilitation Act of 1973
The Americans with Disabilities Act of 1975
NH Law against Discrimination (RSA 354-A), and
State Rule: Ed. 303.01(i), (j), (k).

The Title IX Coordinator is: Joyce Coll, SAU 81, Hudson, NH 03051.
The Section 504 Coordinator is: Kim Organek, 20 Library Street, Hudson, NH 03051. Inquiries may also be directed to the: US Department of Education, Office for Civil Rights, Region 1, J.W. McCormack Post Office and Courthouse Building, Room 222, Boston MA 02109-4557 (617-223-9696); Equal Employment Opportunity Commission, JFK Federal Building, Room 475, Government Center, Boston MA 02201 (617-565-3200) NH Commission for Human Rights, 2 Chennell Drive, Concord, NH 03301 (603-271-2767) A lack of English language skills will not be a barrier to admission or participation to any program at Alvirne High School

COMPETENCIES

In accordance with Ed 306.27(d) issued by the NH Department of Education, each GPA value, credit-bearing course at Alvirne High School has course-level competencies associated with it.

Two different types of course-level competencies exist. On-going competencies are categories that work is continually added to as a course progresses. The "Body of Evidence" in this type of competency area builds throughout the entire course. For example, **Historical Knowledge and Interpretatio**n is a competency area in US History. This competency area remains open and student assessments (homework, quizzes, tests, writing assignments, projects…) are added to this area throughout the entire course.

The next type of competency area is referred to as concept specific. These competency areas are only open when specific topics are being addressed in a class. In classes where the skills are progressive in nature, competency areas are often closed, and a subsequent competency area opens as a new topic is introduced. For example, **Limits and Continuity** is a competency area in Calculus that is addressed. As this competency area is concept-specific, it is closed when the class moves on to the next topic.

To earn credit, students must pass each identified competency area in a course. A student who passes each competency area will receive a GPA value grade on their report card.

Students who are struggling in competency areas are encouraged to work with their teachers to address this. As an added support, the Academic Support Center runs on a regular schedule throughout the school day. Teachers and Parents may request that a student attends the Academic Support Center for additional instructional assistance.

Competencies elevate the focus on all the major topics of a course. Students must demonstrate a basic understanding in ALL identified competency areas in a subject. The overall average of the "Body of Evidence" in each competency area (which will consist of homework, quizzes, tests, writing assignments, projects, SMAs…) will determine each area's average. Within each category, certain assignments will weigh heavier (Student Mastery Assessments – SMAs – are worth more points than homework for example).

Questions regarding competency areas in a particular course are best sent to the teacher of the specific course. Many options are in place to help students achieve in the era of competencies.

An extremely important skill for students to develop and hone is that of self-advocacy. Students at AHS are asked to be active participants in their education.

For more information regarding competencies at Alvirne High School, please contact Susan Bureau, Dean of Academics.

GRADUATION REQUIREMENTS 24 CREDITS

Beginning with the class of 2021 students will need 4 years of math and a total of 24 credits to earn an Alvirne High School diploma. The fourth year may be earned outside of the math department via interdisciplinary coursework.

English*	4 credits
World Studies, Social Study Elective, Humanities* course, U.S. & N.H. Government and Economics.	3 credits
Mathematics - Algebra I required	4 credits
Science – Earth Science, Biology, and either Chemistry or Physics	3 credits
Fine Arts Education - any Art or Music course, Retail Florist II, or a third semester of English in Visual Communications or Theater Arts	0.5 credits
Wellness	1 credit
ICT Literacy (if not met at Middle School)	0.5 credits
ICT Requirement (through various ICT courses)	0.5 credits
Physical Education	.5 credit
Open Electives –Choose classes from the following areas: Fine Arts Family & Consumer Sciences, Business, Technology Education, Career and Technical Education, Foreign Language	7 credits
Total	**24 credits**

SUGGESTED COURSE OF STUDIES FOR 2022-23

GRADE 9 (6 credit minimum required)

English 9	1 credit
World Studies	1 credit
Mathematics	1 credit
Earth Science	1 credit
Wellness (Health and PE 9 combined)	1 credit
Electives/Foreign Language	1 credit
Required Minimum Total	6 credits

GRADE 10 (6 credit minimum required)

English 10	1 credit
Biology	1 credit
Social Study Elective	.5 credit
Mathematics	1 credit
Physical Education	.5 credit
Electives/Foreign Language	2 credits
Required Minimum Total	6 credits

GRADE 11 (6 credit minimum required)

American Humanities	2 credit
Mathematics	1 credit
Chemistry or Physics	1 credit
Economics (could be completed in senior year)	.5 credit
Electives	1.5 credits
Required Minimum Total	6 credits

GRADE 12 (6 credit minimum required)

English	1 credit
U.S. and N.H. Government	.5 credit
Mathematics	1 credit
Electives	3.5 credits
Required Minimum Total	6 credits
Credits required to graduate	**24 credits**

A minimum of 20 credits is needed upon the conclusion of semester one for seniors to maintain senior status. A minimum of 24 credits and all high school graduation requirements must be met prior to the graduation ceremony. Seniors who fail to attain 24 credits and meet all requirements are not eligible to participate in the graduation ceremony in June, per Hudson School Board policy IKF.

INDEPENDENT STUDY

Independent study is intended to provide an opportunity for students to go beyond the classroom experience to pursue or develop an interest. We recognize the value of self-discovery and self-teaching, and we wish to encourage the responsibility and growth which is involved in this process.

I. Qualifications

A. Student must be a junior or senior

B. Students shall be involved in only one independent study per semester

C. Students may not carry more than 3.5 credits per semester including the independent study

II. - Procedure

A. Student develops a topic or project in the form of an essay explaining the purpose of the proposed course and the new skills and knowledge that are desired. The student should consider not only why they are interested in the topic, but also discuss how it will apply to their future academic and vocational plans.

B. Student finds a teacher-advisor who has knowledge in the area in which he/she wishes to study and who is willing to act as a supervisor. The teacher should help the student develop their proposal by naming key material to be studied and the essential assignments to be assessed.

1. - It will be the individual teacher's responsibility to determine if he/she has the time and interest to act as advisor to a particular student and to determine if the student has a viable plan and is sufficiently motivated. If a particular teacher is requested as an advisor by more students than he/she can assume, seniors will have priority.

2. - The plan must have the approval of the student's counselor, department head, the teacher-advisor, and the Dean of Academics, who are the independent study coordinators, at least one month prior to the beginning of the semester.

C. Setting up a schedule

1. - Minimum of one hour per week consultation or supervision between advisor and student shall be established at the beginning of the independent study. There will be at least two check points or progress report dates during each quarter of the semester in which the independent study is done. By these times certain goals or progress, as developed by the student and his advisor, shall be accomplished.

D. Miscellaneous

1. - An independent study will have the same point value as any other academic course (0.5 credits).

2. - Independent study is not intended as a substitute for regular class work.

CAREER FOCUS INTERNSHIP PROGRAM

ELECT089 **Career Focus Internship** **70 Hours**

The Alvirne High School internship program is designed to provide Seniors with a work experience in their specific career focus area. The structure involves a strong business partnership that links the program and its participants to current resources, information, and guidance from industry professionals. Internships may be paid credit-bearing experiences, but students should expect an internship that is unpaid. The Career Focus Internship (CFI) provides students with the opportunity to explore career interests by actively participating in a professional work environment. This competency-based program will allow students the opportunity to observe how decision making, problem solving, technology, communication and teamwork skills are utilized in a professional environment in a specific industry. Seniors will be supervised by the Career Development Coordinator and an assigned Workplace Mentor. A commitment to completing workplace hours, weekly class internship meetings, weekly attendance forms, journal entries and a Capstone presentation are required. A Pre-Internship Application and Mentor/Mentee Application are also required prior to starting with any Internship sponsor. Internship hours (Minimum 70 hours) may need to be completed outside the regular school day. Students may be required to interview with a potential Internship sponsor before being placed in the program.

Guidelines:

- Successfully passed one (1) course related to the student's industry of interest
- Must have passed all classes in the prior semester, have a minimum GPA of 2.5 (*OR PERMISSION OF THE INSTRUCTOR*).
- Student MUST complete an internship application.
- Application must be submitted by May 15th.
- Must have an approved internship site prior to the beginning of assigned semester.
- This will be a pass/fail course for Seniors only.
- Will receive a half credit (.5) for successful completion of 1 semester. Internships can be extended for another half credit (.5) with permission of the instructor.
- Journals, Weekly Attendance, Mentor Evaluation and Capstone presentation are due to the internship coordinator as scheduled.
- Additions and withdrawals will only be allowed during the first fifteen days of the semester.
- An excellent attendance and discipline record, the ability to work independently, reliable transportation and parent/guardian support and approval are required.

CFI Application can be found here: https://forms.gle/GjhPdVD1mmv9mcCHA

ON-LINE LEARNING OPPORTUNITIES

Alvirne High School has established a procedure for students to follow to receive permission to participate in an On-Line Learning Opportunity. An On-Line Learning Opportunity, for the purposes of this procedure, will be defined as an on-line course. Alvirne High School recognizes that at times there may be certain scheduling restrictions which create a need to look outside the building to meet the academic and scheduling needs of students. Alvirne High School has chosen the Virtual Learning Academy Charter School (VLACS) as our on-line course option due to its alignment with the State of NH Frameworks. Some examples of these restrictions may be, but are not limited to the following:

- A course is unable to be scheduled at Alvirne because it conflicts with another course
- A student wishes to take a course not offered at Alvirne
- A student wishes to take a prerequisite course to enroll in the next sequential course during the academic year
- A student needs a course for Credit Recovery
- A student is unable to attend school because of documented medical reasons

All courses attempted will be added to the student's schedule and posted on the transcript similar to courses taken at Alvirne High School.

DUAL ENROLLMENT

Alvirne High School has entered into dual enrollment agreements with the Community College System of NH and Southern New Hampshire University. Each postsecondary institution has minimum enrollment requirements. In the event the minimum enrollment is not met; college credit will not be available, and payment will be returned.

Community College System of NH

Running Start is a partnership with the New Hampshire Community College system, which allows students to take courses at Alvirne High School and receive both high school and college credit for the same course. Students may apply to this program through their teacher. It will be the student's responsibility upon completion of the course(s) to request a transcript from the college. These courses will be offered during the regular school day at AHS. The faculty members who teach the Running Start Program come from within Alvirne High School. Upon successful completion of a Running Start course, students receive a college transcript from the Community College System of New Hampshire. College credit can be used to continue at any NH Community College or may be transferred to other colleges. The 2021-22 cost to students was $150 payable to either Manchester Community College or Nashua Community College. This cost allows students to receive college credit for an earned grade of "C" or higher.

Running Start Courses Offered

Alvirne Courses	Manchester Community College
Health Science and Tech II Honors	**Medical Terminology (3)**

Alvirne Courses	Nashua Community College
Drafting & Architectural Design 2 H	**Tech Drawing (3)**
Culinary Arts II Honors	**Basic Food Preparation (3)**
Culinary Arts II Honors	**Food Safety and Sanitation (3)**
Marketing II Honors	**Marketing 1**
Careers in Ed I Honors	**TCHE104M-Foundations of Education**
Careers in Ed II Honors	**TCHE101M-Introduction to Exceptionalities**
Working With Children Honors	**ECE103N-Health, Safety, and Nutrition**

Alvirne Courses	Great Bay Community College
Veterinary Science II Honors	**Intro. to Vet. Tech. (2)**

SOUTHERN NH UNIVERSITY

Alvirne High School has partnered with SNHU, allowing juniors or seniors to take courses at Alvirne High School and receive both high school and college credit for the same course. The courses will be taught by Alvirne faculty during the regular school day. The 2021-2022 cost to students was $100.00 to $125.00 payable to SNHU which covers the administrative cost to post the credit.

Dual Enrollment Courses Offered

Alvirne Courses	SNHU Courses-Credit
Accounting II Honors	**ACC 201-Fundamentals of Financial Accounting (3)**
French 3	**LFR 112-Beginning French 2 (3)**
French 4 and French 5	**LFR 211-Intermediate French 1 (3)**
Spanish 4/5	**LSP 112-Beginning Spanish II (3)**

INTEGRATION OF ACADEMIC & CAREER AND TECHNOLOGY EDUCATION

Pursuant to District policy, students may earn credit for graduation requirements through other academic and CTE courses. Only one graduation requirement may be met per class. Students may meet graduation requirements in the following areas:

 Art requirement

 Math requirement

 English requirement

 Computer requirement

What's New at Alvirne in 2022-2023!

New Course offerings!

ALL CTE programs are 90 minutes in length

CTE courses that offer dual enrollment opportunities (through SNHU or CCSNH) will receive Honors designation and will be reflected in the GPA calculation.

Course updates:

- College Accounting is now Accounting II
- Business Management content is now included in the Accounting and Marketing programs
- Building Trades is now Construction
- Air Force JROTC courses now include more aviation and drone pilot coursework
- Computer Science II focusses on Cyber Security
- Digital Media II students will utilize the TV studio for class assignments
- Heavy Equipment students have the opportunity to attain Snap-On certifications
- Natural Resources I is now a CTE program course. Students will have the option to focus on Forestry in year 2, or continue to Natural Resources II in 2023-24
- Welding & Fabrication has adopted the American Welding Society curriculum

Other

- ENG099 Senior English Capstone CP Semester course
- ENG160 Visual Communication through Screens, Scripts, and Social Media CP Semester course
- ART901 Mixed Media Semester course
- ART903 Children's and Comic Book Illustration Semester course
- ART905 Drawing and Painting Semester course
- MATH423 Business, Sports, and Consumer Statistics CP Semester course

ENGLISH LANGUAGE LEARNER (E.L.L.)

English Language Learner (E.L.L.) services are offered to students who have Limited English Proficiency (LEP) because it is not the primary language in the home. The extent to which a student receives English Language Learner instruction is determined by individual need. E.L.L. classes will be scheduled for appropriate students, not more than two class periods a day per semester. Credit is granted for the E.L.L. class (es). Students will receive no more than 1.0 credit per E.L.L. class.

GRADING SYSTEM

Report cards are issued after each marking period (four times during the year.) Mid-quarter reports are also issued four times during the year. Marks are recorded by letter grades, which indicate the scholastic achievement of the student. **Honors classes receive a .3 bump in their reported G.P.A. AP classes receive a .6 bump in their reported G.P.A.**
The interpretation of these letter grades is as follows:

% Score	Grade	G.P.A. Value	Honors	AP
100 - 98	A+	4.3	4.6	4.9
97 - 93	A	4.0	4.3	4.6
92 - 90	A-	3.7	4.0	4.3
89 - 87	B+	3.3	3.6	3.9
86 - 83	B	3.0	3.3	3.6
82 - 80	B-	2.7	3.0	3.3
79 - 77	C+	2.3	2.6	2.9
76 - 73	C	2.0	2.3	2.6
72 - 70	C-	1.7	2.0	2.3
69 - 67	D+	1.3	1.6	1.9
66 - 63	D	1.0	1.3	1.6
62 - 60	D-	0.7	1.0	1.3
59 - 0	F	0.0	0.0	0.0
	PC	0.0	0.0	0.0
	FC	0.0	0.0	0.0

**Credit in semester courses is earned at the end of the semester. The semester grade is determined by cumulative grade for the course along with the semester final exam grade. Credit in yearlong courses is earned at the end of the full year by averaging the cumulative course grade with the midterm and final exam grades. Credit for a course is only awarded upon completion of the class. Official class rank will be calculated at the start of the year, at midyear, and at the end of the year only.

Honor Roll

Honor Roll is determined at the end of each quarterly marking period, as well as at the end of each semester. The following guidelines are used to determine honor roll eligibility. Along with no grade below a C, a student must earn:

Honors with Distinction	3.7 G.P.A.
High Honors	3.3 G.P.A.
Honors	3.0 G.P.A.

Course Levels:

Alvirne High School courses have varied academic rigor and are classified in the following categories:

WKS- Workshop **CP-College Preparatory** **Hon-Honors** **AP-Advanced Placement**

Honors and Advanced Placement Courses

Alvirne High School offers Honors classes in English 9, English 10, College Comp, Geometry, Algebra II, Pre-Calculus, World History, Humanities, Model. U.N., African & Middle East Studies, East Asian Studies, Psychology, Economics, Earth Science, Biology, Chemistry, Physics, French, Spanish, Chamber Choir, Symphonic Band, Concert Band, Jazz Band, Concert Choir, Music Theory, and numerous CTE courses.

Advanced Placement courses are offered in English Literature, Humanities, U.S. History, US Government and Politics, Psychology, Economics Calculus, Statistics, Chemistry, Physics, and Studio Art.
Honors and Advanced Placement course work is geared to the highly motivated and high achieving students. Admission to Honors and Advanced Placement courses is based on students' past performance. Students who enroll in Advanced Placement courses are required to take the Advanced Placement Examination.

Articulation Agreements

Articulation agreements between secondary and postsecondary schools provide a pathway for students that may lead to a credential, a certificate, or a degree. In some agreements, students can earn college credits at the partnered school by meeting individual postsecondary requirements. Students must successfully complete the full two-year program to be eligible for articulated credit. **Specific requirements are listed in each articulation agreement.**

Program	College	Agreement
Air Force JROTC III	Southern NH University (SNHU)	2 Credits Foundations of Management
Air Force JROTC IV	Southern NH University (SNHU)	3 Credits Principles of Management
Welding 2	Manchester Community College	Fundamentals of Welding
Pre-Engineering Project Lead the Way (PLTW)	NH Technical Institute	3 credits toward degree
Veterinary Science	SUNY Cobleskill	3 credits for Intro to Animal Science
Forest & Wildlife Management	Thompson School	4 credits toward degree

Athletic and Co-Curricular Opportunities

Interscholastic Sports: Scholastic Standing

To be eligible for participation in athletic activities, students must have been enrolled in a minimum of five courses, have successfully passed four courses, and earned at least a 1.7 GPA in the marking period immediately preceding the season. **Students must also maintain a course load of five units during the season.** Fourth quarter grades determine fall eligibility.

Pre- Season Requirements - Before any athlete can tryout, practice and/or participate in any school year, the athlete must have:
A. - A written statement from a physician stating that he/she can compete in interscholastic activities. The medical statement must certify that the pupil has passed a pre-participation physical examination prior to the beginning of his/her middle school or high school career. In every subsequent year, the athlete shall have an annual medical examination pertinent to their needs. Any pupil significantly injured or ill should be re-examined by a physician to be eligible.
B. – Completion of the online form is required by the student and his/her parent or guardian.
https://www.familyid.com/organizations/alvirne-high-school
C. - School insurance or verification from parents that they have the equivalent of school insurance.
Additional rules and regulations apply. Information is available in the Athletic Office.

Intramural: A variety of seasonal activities are offered.

Alvirne Offers the Following Co-Curricular Activities for Student Participation

Interscholastic Sports

Fall

Cheerleading-Varsity, JV
Cross Country-Girls' Varsity, JV
Cross Country-Boys' Varsity, JV
Football-Varsity, JV, Freshmen
Golf-Varsity, JV
Soccer-Girls Varsity, JV
Soccer-Boys' Varsity, JV
Volleyball-Girls' Varsity, JV, Freshmen
Bass Fishing-Varsity
Unified Soccer

Winter

Basketball-Girls' Varsity, JV, Freshmen
Basketball-Boys' Varsity, JV, Freshmen
Cheerleading-Varsity, JV
Gymnastics-Varsity
Ice Hockey-Varsity
Indoor Track-Girls' Varsity
Indoor Track-Boys' Varsity
Wrestling-Varsity, JV
Swimming-Varsity
Unified Basketball
Unified Cheerleading

Spring

Baseball-Boys' Varsity, JV
Softball-Girls' Varsity, JV
Outdoor Track-Girls' Varsity, JV
Outdoor Track-Boys' Varsity, JV
Tennis-Girls' Varsity, JV
Tennis-Boys' Varsity, JV
Lacrosse- Girls' Varsity, JV
Lacrosse- Boys' Varsity, JV
Unified Track

Clubs and Activities

Art Club
Boys' State
Chess Club
Class Act
Class Officers
Color Guard
Debate Club
DECA
FFA
Fitness Club
French National Honor Society
Future Business Leaders of America
Foreign Exchange Club
Gender Sexuality Alliance GSA
Girls' State
Granite State Challenge
HOSA
KEY Club
Leo Club
Math Team
National Honor Society
National Technical Honor Society
Model UN
National Assoc. of Home Builders
Photo Club
Robotics Club
Russian Language Club
Science Olympiad
Ski Club
Skills USA Culinary
Skills USA Building Trades
Skills USA Mechanics
Skills USA Heavy Equipment
Spanish National Honor Society
String Ensemble
Student Council
Unified Theatre
WATS Club
Weightlifting Club
Studio 19
Yearbook

ENGLISH DEPARTMENT COURSE OFFERINGS

The English program at Alvirne seeks to develop proficiency in our students in all of the fundamental language arts skills that constitute the range of the State of New Hampshire's curriculum frameworks: reading, writing, literature, speaking, listening and viewing, research, critical thinking, and communications. In addition, we seek to lead students into a meaningful engagement with the best that has been thought and written in both American and World cultures, so that a reflective experience of imaginative and humanistic literature will become part of their lifelong learning and personal growth.

Ninth Grade

ENG101 English 9 Honors **Semester 1**
ENG103 English 9 Honors **Semester 2**

This course is for students with outstanding reading, speaking and writing skills, strong self-motivation and self-discipline, and a desire to deal with complex literature. In addition to the regular ninth grade curriculum, other texts to be studied include choices from a set of challenging nineteenth century novels such as Charles
Dickens' Tale of Two Cities or Charlotte Bronte's Jane Eyre.
Preparation: Recommendation of 8th grade teacher. A summer reading assignment and independent reading throughout the school year will be required.

ENG116 English 9 CP **Semester 1**
ENG117 English 9 CP **Semester 2**

This course is a comprehensive program of reading, writing, speaking, and research skills, providing the important foundation for effective communication in all disciplines. Areas of the course include advanced reading skills, studying the short story and novel; writing effective paragraphs and essays emphasizing focus, audience, development, and organization; studying the structure of grammar, mechanics, and usage; practicing effective oral communication; and developing research techniques. Common literary selections include Romeo and Juliet, A Christmas Carol, and To Kill a Mockingbird, as well as a wide range of modern short stories.

ENG108 English I Workshop **Double Period** **Year- long course**

English I Workshop is an intensive program intended for students with significant needs in basic reading and writing skills, while giving them preparation in a wide range of NH State Language Arts competencies. Classes are small, and the program incorporates state-of-the art materials and technology to ensure that each student's individual needs are addressed to attain maximum achievement. Students are placed in this course with careful consultation of the classroom teachers and other administrative and support service professionals.

Tenth Grade

ENG118 English 10 Honors **Semester 1**
ENG120 English 10 Honors **Semester 2**

Intended for students with outstanding reading, speaking and writing skills, strong self-motivation and self-discipline, and a desire to deal with complex literature. Preparation: A summer reading assignment and independent reading throughout the school year will be required. Students interested in continuing in the English honors program as sophomore must maintain a B average for each of the four quarters of their freshman year. In addition, a teacher recommendation will also be required to be considered for the honors program. **This course is a prerequisite for AP American Humanities in the 2023-24 school year.**

ENG121 Career English I **Semester 1**
ENG123 Career English II **Semester 2**

Do you love your CTE classes? Are you looking for a different kind of English course that aligns with your career goals and prepares you for possible internship opportunities? In Career English, you will develop English 10 language arts skills through a real-world, work-focused curriculum explored through fun and authentic professional leadership activities including supporting clients, training potential staff, professional communication, and projects focused on your individual career goals. This course will be co-taught by an English and CTE teacher and fulfills the English 10 graduation requirement. Permission from English Department Chair required

ENG125 **English 10 CP** **Semester 1**
ENG 127 **English 10 CP** **Semester 2**

The sophomore curriculum is built around four quarterly units integrating core language arts skills with poetry, media, research and drama. Among core texts that will be studied are a Greek tragedy such as Antigone or Oedipus Rex , The Strange Case of Dr. Jekyll and Mr. Hyde, and The Catcher in the Rye. Throughout the year students explore the theme of the individual's encounter with society to explore the tensions between individuality and assimilation to social expectations. In addition to literature and writing, intensive study of critical reading and vocabulary for SAT preparation, and clauses, sentence combining, and punctuation are major emphases of the tenth-grade curriculum.

ENG128 **English II Workshop** **Double Period** **Year- long course**

English II Workshop is an intensive program intended for students with significant needs in basic reading and writing skills, while giving them preparation in a wide range of NH State Language Arts competencies. Classes are small, and the program incorporates state-of-the art materials and technology to ensure that each student's individual needs are addressed to attain maximum achievement. Students are placed in this course with careful consultation of the classroom teachers and other administrative and support service professionals.

Eleventh Grade

ENG137A-Sem 1 **American Humanities CP** **Double-period** **Year-long course**
ENG137B-Sem 2

Students in this course will explore American culture through the study of history, literature, art, music, film, and television. This interdisciplinary program is team-taught by two teachers, one from the English Department, and one from the Social Studies Department. The course meets daily for two consecutive periods and satisfies the junior English and History requirements. The course places emphasis on group cooperation and self-motivation. **Students enrolling in American Humanities can select to pursue additional study and earn an honors level designation on their transcript. In addition to maintaining an 85 percent average in the regular course expectations, honors students will be expected to complete independent reading, upper-level writing, special projects, and summer assignments.**

ENG145 **AP American Humanities** **Double-period** **Year-long course**

This intensive, college-level study of American history, literature, culture, and thought prepares students to take both the Advanced Placement United States History and Advanced Placement English Language and Composition exams. Through this interdisciplinary approach co-taught by a history and English teacher, students will grow in their capacity to think, read, view, analyze, synthesize, and evaluate critically, as they engage with a wide variety of written, visual, and aural texts, with an emphasis on primary sources and their interpretation. Students will also learn how to communicate and collaborate in effective and powerful ways through daily writing, discussion, and presentation activities.
This course meets for two consecutive periods and satisfies both the junior English and US History requirements. Completion of one or both of the AP US History and AP English Language and Composition exams in May are mandatory for all students.
Prerequisite: AP US History I and Honors English 10 (or permission)

Twelfth Grade

Guidelines for Senior year English courses:

Senior English Capstone is a requirement for all seniors with an additional .5 English course of their choice. **Advanced Placement Literature fulfills the requirement for both***. Depending on availability of space, juniors who have a special career interest or extracurricular involvement in writing, theater, media, or public speaking, may be permitted to take College Composition, Creative Writing, Visual Communications through Screens, Scripts, and Social Media, Theater Arts, or Creative Writing, with the approval of the Director of Counseling and the English Department Head, as long as they are already enrolled in American Humanities and have room for an elective in their schedule. Self-Discovery through Contemporary Themes, Fantasy, and World Literature electives are only available to seniors. Because of staffing limitation, seniors must be given priority when filling out class rosters. Maximum course enrollments cannot be exceeded to add juniors to the electives.

ENG147 Advanced Placement Literature and Composition **Year-long course**

This course is offered for students with outstanding reading, writing, and speaking skills, strong motivation and self-discipline, and a desire to deal with the complex literature of the British literary heritage, as well as the key standards of a college-level composition course. Students prepare to take the Advanced Placement Literature and Composition exam given annually in May. Summer assignments and recommendation from eleventh-grade English teacher required. **Students are required to take the AP exam in May. Capstone curriculum is embedded in this AP course.**

Senior English Requirement-All seniors must select this and one other semester English course*

ENG099 Senior English Capstone CP **Semester course**

Is there something you wish you could learn in school that's not offered in the program of studies? The Capstone Project is a unique opportunity for you to explore a passion or interest in a self-directed, independent manner with the support of a classroom teacher and mentors who are experts in your area of study. Student-designed projects will demonstrate inquiry, real-world learning, and authentic application of knowledge and skills that reflect our core values and school-wide competencies. The possibilities are endless--start a small business, record an album, organize a community service program, develop an app or create a website, run a marathon, choreograph a dance performance, restore an old car, design and create a jewelry or clothing line; go wherever your curiosity or career interests take you. School-day instruction will guide you through a series of benchmarks along the way, which include developing a proposal, conducting research, connecting with mentors in the school and community, and organizing your time. Each student's Capstone Project experience concludes with a public presentation, which will also be supported through classroom instruction. **Students enrolling in Senior English Capstone can select to pursue additional study and earn an honors level designation on their transcript. In addition to maintaining an 85 percent average in the regular course expectations, honors students will be expected to complete independent reading, upper-level writing, special projects, and summer assignments.**

Senior English Electives: Choose One

ENG152 Self-Discovery through Contemporary Themes in Literature **Semester course**

This course challenges students of all career choices to think seriously about the many complex issues that face them as individuals in the society of today. Additionally, this course will use mediums of literature and film to explore a range of themes important to contemporary society and the individual which might include sacrifice, duty, family, ethics, responsibility, prejudice, and career exploration. This course emphasizes critical reading and viewing as well as writing and discussion skills, preparing students to intellectually consider the many issues that affect our society. A variety of instructional approaches will be utilized to accommodate students who may need continued support in developing core reading and writing skills.

ENG155 World Literature CP **Semester course**

This course is a look at the global society we live in today and how we all fit together in that world. Literature is studied through the context of the culture it was created in politics, religion, geography, language, etc. Students are encouraged to broaden their world view and consider the similarities among young people around the world despite cultural differences. **This course is strongly recommended for students planning to attend college.**

ENG159 Fantasy CP **Semester course**

This course focuses on those works in which the author or filmmaker creates, from his/her imagination, a world where the rules of reality as we know them are suspended, but the universal themes that have been at the heart of humanity's search for the meaning of life are addressed. The works of such authors as J.R.R. Tolkien, Peter Beagle, William Goldman, Brothers Grimm, George Lucas, and Rob Reiner will be studied.

ENG160 Visual Communications through Screens, Scripts, and Social Media CP **Semester course**

This course is in an introduction the modern media, including the critical study of television, magazines, film, theater, and advertising. Throughout the semester, students will examine the ways writers, directors, and producers communicate with their audiences through different techniques. Students will learn how to become critical viewers, and communicators through the analysis of visual concepts. Critical interpretation of visual, aural, and the written message will promote media literacy. Students will then take the concepts they have learned to produce and film their own videos throughout the semester.

ENG163/164 Theater Arts/Theatre Arts II CP **Semester course**

This course introduces the basic principles of drama and theater production. In addition to studying dramatic texts, a hands-on approach to scenic design, technical theater, and acting techniques can be expected. Class projects will also include critical viewing of theatrical videos and a live performance. Works in the genres of drama, tragedy, comedy, farce, and musical will be explored through playwrights such as O'Neil, Miller, Williams, Simon, Sondheim, Lerner and Loew, and others

ENG167 College Composition CP **Semester course**

This course focuses on mastery of the writing process, including sourcing, outlining, drafting, revising, and editing. This course is highly recommended for students who wish to expand and perfect writing skills in anticipation of college and career choices. This course **requires students to write an extended research** essay in order to prepare them for college-level writing. Students enrolled in College Composition can select to pursue additional study and earn honors level designation on their transcript. In addition to maintaining a B average in their regular course expectations, honors students will be expected to complete additional independent projects.

ENG169 Creative Writing CP **Semester course**

This course is designed for students who enjoy creative expression in their writing. Students explore original fiction, poetry, and other creative forms such as personal essays. A writing workshop approach is used to emphasize writing as a process, including peer editing, teacher commentary, multiple drafts, and sharing of work. Regularly scheduled writing prompts, selected essays, short fiction, plays, non-fiction, various supplemental media, and relevant film clips for each type of writing support the creative writing process.

ENG177 Literature of War CP **Semester course**

Honor and deceit, courage and cowardice, love and hatred, triumph and suffering, destruction and creation—extending back to Homer's Iliad and Odyssey, these paradoxical themes are at the center of a canon that is at the same time epic and deeply personal, mythical and all too real—the literature of war. Taught by an English and JROTC humanities team, this course explores war through a variety of textual lenses: fiction, poetry, biography, and film, as well as in the interdisciplinary context of history, sociology, psychology, and current events. Students will develop their language arts and critical thinking skills as they engage in both classic and contemporary works in this complex genre. Independent reading and writing are required. **This class may fulfill ½ credit of the state's 1 credit junior English requirement.**

ENG180 True Crime and Detective Literature CP **Semester course**

Not for the faint of heart! This 18-week course will explore the "true crime" genre and the art of storytelling through literature, film, and podcast, which has reignited the radio narrative. The course will explore the pop-culture phenomenon of the true crime obsession and look at the psychology of criminals as well as the forensic science used to catch them. Come and explore an eclectic curriculum from Truman Capote's *In Cold Blood* to the *Serial* podcast.

ENG083 Shakespeare and Performance CP **Summer course**

This summer enrichment course focuses specifically on producing a full-length Shakespearean play, exploring the entire theatrical process from "page to stage" in a hands-on experience, culminating in performances for the general public. All components of theatrical performance and production will be researched and employed, including audition and rehearsal processes, and the design and implementation of all technical aspects including set, lighting, sound, costume, dance/choreography, and makeup. Class projects will also include the critical viewing of other Shakespeare offerings in the area, including performances by such companies as the Commonwealth Players of Boston, Shakespeare in the Park, and New England Shakespeare Company. Enrollment is in mid-June. The class meets for six weeks (July-August), three evenings a week, and culminates in two or more evening performances in mid-August. Additional rehearsal time may be required. No pre-requisites, beginners welcomed. Enrollment is open to all levels, incoming freshman through current-year graduates.
½ Credit. Tuition Fee: $100
Course may be used to fulfill a senior English or Fine Art credit requirements.

SOCIAL STUDIES COURSE OFFERINGS

*** *World Studies Requirement****

Freshmen are required to take at least *one semester of World History*. The remaining ½ year of "World Studies" credit may be earned through U.S. & World Geography, East Asian History, African & Middle Eastern Studies, US/Russian Relations, 1777-prsesnt CP, or Model United Nations courses taken in sophomore, junior, or senior years. If a student elects to take Honors World History, s/he *must enroll for the full year*.

SS202 World History Honors **Year-long course**

This course, which is recommended for the accelerated student, provides a global, in-depth approach to the study of the development of civilization from the 1500s to the present day. Topics to be studied will include: the Renaissance, the Reformation, the Age of Enlightenment, the Age of Revolution, the Industrial Revolution, European Imperialism, both World Wars, and the events which are shaping the modern world. Well-defined verbal and writing skills are expected of students who take this course. The course is structured to help the student to develop various skills: listening and reading for comprehension, organization skills, and critical thinking skills of application, analysis, synthesis, and evaluation. Students will be expected to draw information from a wide variety of sources, including but not limited to, class lecture, primary and secondary source readings, film, television, and the Internet. A strong emphasis on analytical writing is a major component of the course. This course aims to prepare the college-bound student for a successful transition to Advanced Placement U.S. History as well as to provide skills and information for careers in education, the humanities, law, politics, and government.

SS279 World History I (1500-1900) CP **Semester course**

This course is the study of the development of World History from the 1500 to 1900. Among the topics to be studied are the Age of Exploration, the Enlightenment, the Age of Absolutism and Revolution, Napoleon, the Industrial Revolution, and European imperialism. The course will help prepare the student to master such practical skills as the interpretation of maps, charts, tables, and time lines, as well as fostering reading for comprehension and application and developing higher order thinking skills. The student will do research using computer technologies and primary and secondary sources. These skills will enhance the 9th grade students' ability to successfully continue their high school career, to pursue studies beyond the secondary level, as well as providing preparation for entry level positions in a technologically advanced world.

SS281 World History II (1900-present) CP **Semester course**

This course is the study of the development of World History from 1900 to present. Among the topics to be studied are European nationalism, the First and Second World Wars, Communist and the Cold War, conflicts in the Middle East, and events shaping our modern world. The course will help prepare the student to master such practical skills as the interpretation of maps, charts, tables, and time lines, as well as fostering reading for comprehension and application and developing higher order thinking skills. The student will do research using computer technologies and primary and secondary sources. These skills will enhance the 9th grade students' ability to successfully continue their high school career, to pursue studies beyond the secondary level, as well as providing preparation for entry level positions in a technologically advanced world.

SS205 World History I Workshop (1500-1900) **Semester course**

This course is a skills-based approach to the study of World History from 1500 – 1900. Among the topics to be studied are the Age of Exploration, the Enlightenment, the Age of Absolutism and Revolution, Napoleon, the Industrial Revolution, and European imperialism. **Students who meet the criteria for Workshop level are at or below the 25% on Star testing in Reading.**

SS207 World History II Workshop (1900-present) **Semester course**

This course is a skills-based approach to the study of World History from 1800 – 2000. Among the topics to be studied are European nationalism and imperialism, the Russian Revolution, the First and Second World Wars, Communism and the Cold War, conflicts in the Middle East, and events shaping our modern world. **Students who meet the criteria for Workshop level are at or below the 25% on Star testing in Reading.**

Economics Requirement

SS251 Economics CP **Semester course**

This one semester course will cover the 20 National Standards and the 5 NH State Standards for Economic education. Those standards include basic economic concepts, microeconomic concepts, macroeconomic concepts, and international economic concepts. Students will learn the art of the economic way of thinking (compare benefits with costs) and apply this skill to solving problems and making decisions. They will run their own Junior Achievement company with the aid of a consultant. Students will compete in the Stock Market Game against other NH schools. Skills learned include budgeting and investing money, maintaining a checking account, completing tax forms, a resume, and a cover letter. Lastly, students will know pertinent facts about the economy, including the current rates of unemployment, inflation, and interest. This course will prepare students to major in Business/Economics in college, to be work force ready, and to use their citizenship skills. **This course has an option for an embedded Honors component.**

American History Requirement

SS239 Advanced Placement US History I* **Year-long course**

This is a two-year course based on the College Board Advanced Placement U.S. History curriculum. Entry to the course requires the instructor's permission and a two-year commitment on the part of the student. The course, which requires the student to demonstrate strong verbal and writing skills, also focuses on the development of critical thinking skills. Through class discussions, group presentations, and individual written work, the students will be expected to articulate various historical viewpoints, develop theses, and organize and present position papers. Extensive work in document based questioning is required. The course follows the evolution of American History from the Pre-Colombian period to the close of the nineteenth century, with a strong emphasis on social history. The skills developed in this class will help prepare students for college course work and will be useful in any career which requires strong analytical and critical thinking skills. Students are required to take the Advanced Placement national exam at the end of the second year.

Students who wish to enroll in A.P. U.S. History I & II must complete this course in grades 10 & 11. Recommendation of a Social Studies teacher or department head is required for this course.

Students in this course must enroll in English 10 Honors.

ENG137A-Sem 1 American Humanities CP Double-period Year-long course
ENG137B-Sem 2

Students in this course will explore American culture through the study of history, literature, art, music, film, and television. This interdisciplinary program is team-taught by two teachers, one from the English Department, and one from the Social Studies Department. The course meets daily for two consecutive periods and satisfies the junior English and History requirements. The course places emphasis on group cooperation and self-motivation. **Students enrolling in American Humanities can select to pursue additional study and earn an honors level designation on their transcript. In addition to maintaining an 85 percent average in the regular course expectations, honors students will be expected to complete independent reading, upper-level writing, special projects, and summer assignments.**

ENG145 AP American Humanities Double-period Year-long course

This intensive, college-level study of American history, literature, culture, and thought prepares students to take both the Advanced Placement United States History and Advanced Placement English Language and Composition exams. Through this interdisciplinary approach co-taught by a history and English teacher, students will grow in their capacity to think, read, view, analyze, synthesize, and evaluate critically, as they engage with a wide variety of written, visual, and aural texts, with an emphasis on primary sources and their interpretation. Students will also learn how to communicate and collaborate in effective and powerful ways through daily writing, discussion, and presentation activities.

This course meets for two consecutive periods and satisfies both the junior English and US History requirements. Completion of one or both of the AP US History and AP English Language and Composition exams in May are mandatory for all students.

Prerequisite: AP US History I and Honors English 10 (or permission)

U.S. & N.H. Government Requirement

SS224 Advanced Placement U.S. Government and Politics **Year-long course**

This course is designed for junior and senior students who have displayed exceptional ability, creativity, and task commitment. The class will follow the curriculum designed by the Advanced Placement Advisors. Key components of this course are critical thinking, research writing assignments, and topical debates. The students are required to have the approval of the department chairman in order to be eligible for this course. The purpose of the course is to give a detailed look into how our American government system functions in all its complexities. The primary objective will be to develop the knowledge of our governmental system and to promote an understanding of the democratic ideas. The major areas covered will be the political process, the presidency, the Constitution and the courts. A large part of the curriculum will utilize case studies to give the student a clearer understanding of some of the various issues that our country faces today. **Students are required to take the AP exam in May.**

SS209 U.S. and N.H. Government CP **Semester course**

This course offers an overview of the structure and function of the U.S. and New Hampshire Governments. Students will study the evolution of the social contract, the Constitution (how it was created, what it says, checks and balances), the importance of the Bill of Rights, Federalism and the balance between federal and state governments, and the elements of the American political process (voting, elections, the role of political parties). In addition, students will examine the 3 branches of the federal government in depth – Legislative, Executive, and Judiciary – as well as New Hampshire's variations on these. Research and the development of one's own political ideology is central to this course. Student will use a variety of sources including primary sources, newspapers, magazines, websites and computer technology, and film and other media to research, discern, and determine political truth. This course will prepare students for college and responsible citizenry, as well as careers in law, law enforcement, or government.

***SOCIAL STUDIES ELECTIVES ***

U.S. & World Geography, East Asian History, African & Middle Eastern Studies, US/Russian Relations, 1777-present CP, and Model United Nations may be chosen to fulfill a half credit of the World Studies Requirement.

SS213 East Asian History CP **Semester course**

This semester course will focus of the emergence of China, Japan, and other East Asian countries in the 19th and 20th centuries. The course will study the transition of these countries from traditional, agrarian countries to industrial and economic powers in the world. Among the topics to be studied are the abolition of feudal Japan, the Sino-Japanese War, Japan as an imperial power, the collapse of the Qing Dynasty, Sun Yat-sen and the Chinese Republic, World War II, Mao Zedong and the People's Republic of China, the Cultural Revolution, the Korean War, and modern-day events. Through lecture, film, reading, and research, students develop listening, writing, and organizational skills. This course aims to prepare the student for college, show the importance of East Asia in the world today, and provide a non-western perspective of world history.
Prerequisite: Must have successfully completed at least one semester of World History and have sophomore standing or higher.

SS215 U.S. & World Geography CP **Semester course**

This course will introduce students to both the Western and non-western regions of the world. Topics such as natural resources, population growth, economic development, as well as the more general categories of physical and cultural geography, will be explored. Maps, graphs, charts, computer-based technology, film and television will be employed in this study. In our present day, more opportunities in life, government, and business rely on knowledge of other cultures and societies. Students will develop a greater appreciation and knowledge, not only of the United States, but other countries around the world. This course aims to help students to prepare for possible careers in such fields as geology, meteorology, environmental studies, forestry, construction and travel.
Prerequisite: Must have successfully completed at least one semester of World History and have sophomore standing or higher.

SS219 Model United Nations CP **Semester course**

Model U.N. is a semester course that simulates the operation of the United Nations Security Council. Student participants assume the roles of diplomatic representatives to the UN and consider items from the UN's vast agenda. Through their role playing, students gain a greater understanding of international affairs and our world's problems as well as possible solutions to these problems. The main focus of the course is on the development of a world view that stresses the political, economic, and cultural interconnectedness of the world. Strong research, writing, and debating skills are recommended and class participation is a must.
Prerequisite: Must have successfully completed at least one semester of World History and have sophomore standing or higher.

SS218 African & Middle Eastern Studies CP **Semester course**

This semester course will focus of the development of African and Middle Eastern countries in the modern era (colonial and post-colonial) and on current events. Students will develop a better understanding of African and Middle Eastern history, learning the culture, economics, religion, and geography of both regions. Through lecture, film, reading, and research, students will develop listening, writing, and organizational skills. This course aims to prepare students for college, show the importance of Africa and the Middle East in the world today, and provide a non-western perspective of world history.
Prerequisite: Must have successfully completed at least one semester of World History and have sophomore standing or higher.

SS250 Social Revolutions CP **Semester course**

The semester class will examine the social revolutions in American culture through both a historical and a modern lens. The course will examine the politics and legal struggles from Reconstruction through today of various disenfranchised groups such as African Americans, Immigrants, women, LGBTQ+, etc. The course will be taught through readings, primary and secondary source documents, discussions, movies and traditional lectures. Students will be expected to participate, sharing and defending their opinions on controversial topics, as well as write research papers. Students are not expected to agree with each other on all issues but are required to listen with an open mind and respond respectfully. **This course may be taken to fulfill ½ credit of the 1 credit US History requirement.**
Prerequisite: Students must have junior standing or higher. This class fulfills ½ credit of the state's 1 credit requirement in US History.

SS263 US/Russian Relations, 1777-present CP **Semester course**

This course is a college preparatory semester elective that surveys U.S. and Russian / Soviet relations from 1777 to present. The themes of war (World Wars I and II, the Cold War), revolution (October Revolution), and empire (American and Soviet) will be examined as students explore America's relation with the Russians / Soviets. Students will grapple with how the ideals of "American Exceptionalism" and Russian / Soviet autocratic rule led to cycles of conflict, coexistence, cooperation, and potential conflict. This course will include reading and discussion of Russian/Soviet literature to correspond with each historical period.
Prerequisite: Must have successfully completed at least one semester of World Studies and have sophomore standing or higher.

SS265 U.S. in the Cold War: Eve of Destruction CP **Semester course**

This course is a college preparatory semester elective that surveys the major events of the Cold War (1945 – 1991), with a focus on the perspective of the United States. The class will study the Containment Policy, Korean War, McCarthyism, Cuban Missile Crisis, Vietnam War, I, the counterculture / anti-war movement, and other tensions between the US and the Soviet Union. We will also examine how the Cold War influenced the pop culture of the time, using books and films as examples. The course will be taught through readings, primary and secondary source documents, discussions, movies, and traditional lectures.
This course may be taken to fulfill ½ credit of the 1 credit US History requirement.
Prerequisite: Must have junior standing or higher. This class fulfills ½ credit of the state's 1 credit requirement in US History.

SS270 Sociology CP **Semester course**

This class will survey the discipline of Sociology by studying cultural anthropology, case study research, deviance and crime, individuals in society, social inequalities, social institutions, group collective behavior, and modern global issues. Students will draw on their knowledge of the social sciences to view human behavior from many perspectives. Students will be challenged to set aside personal bias and learn about cultures of the world, different social norms, theories of human development, statuses and roles in society, and the importance of family, government, economics, religion, and sport. This course aims to prepare students for college and help students understand their role in a modern, global world.
Prerequisite: Students must have successfully completed one semester of World Studies and have sophomore standing or higher.

SS268 Psychology CP Honors or College Prep **Semester course**

This course is a college-level course which surveys the discipline of psychology, the science of behavior and mental processes. The units of study are based on the National Standards for the Teaching of Psychology and include psychology's history and research methods, biopsychology, life span development and personality, cognition and learning, and psychological disorders and treatment. The course utilizes reading, films, documentaries, discussion, data analysis, simulations, and cooperative group activities to better understand the human mind and behavior. This course can be taken for Honors credit by completing additional readings and projects under the direction of the teacher.
Prerequisite: Students should be college-bound seniors.

SS226 Advanced Placement Psychology **Year-long course**

This is a college-level course surveying the discipline of psychology, the science of behavior and mental processes. The units of study are based on the College Board Advanced Placement curriculum. Topics include psychology's history, approaches, and research methods, biological bases of behavior, sensation and perception, states of consciousness, learning and conditioning, cognition and memory, motivation and emotion, developmental psychology, personality, intelligence and testing, social psychology, and psychological disorders. The course and AP exam (which is taken in May) are designed to measure your knowledge of psychological concepts and your ability to apply these concepts in real-world ways. Students will be asked to gather data, do data analysis, and form and test hypotheses. **Students are required to take the AP exam in May.**

FOREIGN LANGUAGE

LANG315 French I CP **Year-long course**

French I is an introduction to the French language, its pronunciation, inflection and tempo. Students gradually master basic conversational sentences, such as greetings, weather, numbers, etc., through active participation. Listening comprehension of native speakers is a major part of each lesson, in addition to understanding of basic French grammar, culture and geography. **French I is geared to the student who has had no previous or limited study of French.** Classes are conducted in French. There is an Honors option available for this course.

LANG321 French II Honors **Year-long course**

Having been introduced to basic French conversational expressions, students now combine these with their own ideas to communicate with greater ease, and with an expanded vocabulary. Students increase accuracy in all skills with added fluency. French 2 embeds the study of Francophone and American lifestyles and their cultural differences. Classes are conducted in French. French II Honors maintains the rigor and pacing of the French I Honors course. It continues to gear the students to the demands of the AP French test. Classes are taught in French.
Prerequisite: C- or better in French I or the permission of the department chair

LANG320 French II CP **Year-long course**

Having been introduced to basic French conversational expressions, students now combine these with their own ideas to communicate with greater ease, and with an expanded vocabulary. Students increase accuracy in all skills with added fluency. French 2 embeds the study of Francophone and American lifestyles and their cultural differences. Classes are conducted in French.
Prerequisite: C- or better in French I or the permission of the department chair

LANG332 French III CP **Year-long course**

Students continue to develop proficiency in speaking, writing, reading and listening. All classroom interactions are exclusively in the target language. The study of France, Canada and French Speaking Africa serves as the base for presentations and communication on a variety of current topics.
Prerequisite: C in French II or permission of the Department Chair.

LANG333 French III Honors **Year-long course**

Students who have successfully completed French I honors and II honors continue to develop sophistication and acquisition of advanced listening, reading, speaking and writing skills. French is exclusively spoken, and students are expected to work independently and encouraged to seek opportunities to speak the target language outside the classroom setting.
Prerequisite: C or higher in French II Honors or permission of the Department Chair

LANG335 French IV Honors **Year-long course**

French IV continues the advanced development of French and expands the students' immersion in the language with reading selections, vocabulary exercises, oral proficiency and cultural lessons. English is totally eliminated from the communication process. A major component of evaluation is the students' use of French throughout each class session. **Required Minimum grade of a C in French III or permission of the department chair.**

LANG337 French V Honors **Year-long course**

French V delves into areas of French literature, French art, French culture, and everyday life. Activities are mainly conversational in nature as a result of daily reading assignments. Writing skills are enhanced. Outside readings and/or written assignments are a student responsibility. English is eliminated from the lessons. A major component of evaluation is student's use of French throughout each class session. **Required Minimum grade of a C in French IV**.

LANG355 Spanish I CP **Year-long course**

Spanish I is an introduction to the Spanish language, its pronunciation, inflection and tempo. Students gradually master basic conversational sentences, such as greetings, weather, numbers, etc., through active participation. Listening comprehension of native speakers is a major part of each lesson, in addition to understanding of basic Spanish grammar, culture and geography. **Spanish I is geared to the student who has had no previous or limited study of Spanish**. Classes are conducted in Spanish. There is an Honors option available for this course.

LANG366 Spanish II Honors **Year-long course**

Having been introduced to basic Spanish conversational expressions, students now combine these with their own ideas to communicate with greater ease, and with an expanded vocabulary. Students increase accuracy in all skills with added fluency. Spanish 2 embeds the study of Hispanic and American lifestyles and their cultural differences. Classes are conducted in Spanish. Spanish II Honors maintains the rigor and pacing of the Spanish I Honors course. It continues to gear the students to the demands of the AP Spanish test. Classes are taught in Spanish.
Prerequisite: C- or better in Spanish I honors or the permission of the department chair

LANG368 Spanish II CP **Year-long course**

Having been introduced to basic Spanish conversational expressions, students now combine these with their own ideas to communicate with greater ease, and with an expanded vocabulary. Students increase accuracy in all skills with added fluency. Spanish 2 embeds the study of Hispanic and American lifestyles and their cultural differences. Classes are conducted in Spanish.
Prerequisite: C- or better in Spanish I or the permission of the department chair

LANG370 Spanish III Honors **Year-long course**

Students having shown competence in their previous Spanish honors courses continue their comprehensive study of the Language and culture. The students develop sophistication of their listening comprehension on the native speaker while building vocabulary and acquiring more fluency in oral and written self-expression. Teacher/student communication is entirely in Spanish.
Prerequisite: C in Spanish II Honors or permission of the department chair.

LANG373 Spanish III CP **Year-long course**

Spanish III students study advanced grammar and develop a sophistication of their listening comprehension of the native speaker. The study of the history of Spain, Mexico, and South American countries enable the students to read and study independently and to communicate ideas in class entirely in Spanish.
Prerequisite: C in Spanish II class or the permission of the department chair.

LANG383 Spanish IV Honors **Year-long course**

Spanish V delves into areas of Spanish literature, Spanish art, Spanish culture, and everyday life. Activities are mainly conversational in nature as a result of daily reading assignments. Writing skills are enhanced. Outside readings and/or written assignments are a student responsibility. English is eliminated from the lessons. A major component of evaluation is student's use of Spanish throughout each class session. **Required Minimum grade of a C in Spanish III.**

LANG386 Spanish V Honors **Year-long course**

Embedded in Spanish IV with independent projects and advanced studies.

LANG389 American Sign Language I CP **Year-long course**

This year long course is an introduction to American Sign Language and deaf culture. Students will develop a beginner's range of communication skills, as well as examine the educational, social, political, and artistic experience of deaf people. The course will cover vocabulary development, fingerspelling, and an introduction to the syntax and grammar of ASL through demonstrations, dialogues, film, guest speakers, and other media. Reading, writing, and research are also required as a foundation for students to debate and discuss the central issues within the deaf community. A signing environment is maintained in the classroom, which means only the target language is used.

LANG391 American Sign Language II CP **Year-long course**

This year long course is a continuation of American Sign Language I. Using a language immersion approach, students will continue to develop an intermediate range of communication skills, as well as examine the educational, social, political, and artistic experience of Deaf people. The course will cover continued comprehension of previous lessons in ASL I, but it will also expand on fingerspelling practice, various number types, 21pecial verb agreement, and negation signs. There will be a greater focus on storytelling and narrative structure as well as cultural insight of the deaf community. Content is presented through demonstrations, dialogues, film, guest speakers, and other media. Reading, writing, and research are also required as a foundation for students to debate and discuss the central issues within the deaf community. **Successful completion of ASL I is required or teacher permission.**

LANG397 Russian Language and Culture I CP **Year-long course**

Students in this enriching and exciting course will expand their global knowledge and understanding through an exploration of Russian language and culture–and they will see that Russian is fun to learn and is not difficult! They will gain insight into the real lives of Russians and the people of the former Soviet Union. Upon completion of this course, students will be able to converse using limited vocabulary and grammatical constructions on the topics which have been presented in class and be able to read and write simple passages containing familiar vocabulary and structures. Students will also acquire cultural awareness about Russia, including some geography and history, customs, literature, music, and traditions.

LANG398 Russian Language and Culture II CP **Year-long course**

This course is a continuation of Russian Language and Culture I. Further development of grammar, reading, conversation and listening comprehension skills, based on authentic material from Russian culture and civilization with the emphasis on communicative competence. A literature in translation and Russian film component will enhance knowledge of the living language and provide further insight into the modern Russian culture.
Successful completion of Russian Language and Culture I or teacher's permission is required.

MATHEMATICS

Alvirne offers a wide array of math courses, ranging from Pre-Algebra to AP Calculus. The math courses you should take are based on requirements at the state level, as well as courses that will prepare you for the future. Colleges and universities, both two and four-year programs, require four years of high school math as an entrance requirement. Many professional fields (such as engineering or science-related fields) will require you to take all the high school math courses you can. Regardless of your intended major, all career paths demand knowledge of math through intermediate algebra (Algebra II), in order to go beyond the entry-level jobs that exist. Since research shows that the nature of a person's job will change at least six times in their lifetime, and you wish to be prepared to be able to make these changes in the future, you should take the highest-level math courses that you can successfully manage as you complete your high school education. As you proceed, have conversations with your parents, teachers, counselors, and future employers to be prepared for a successful future by making the right choices. There are several CTE programs that will allow you to earn your fourth math credit as required by the state. Please see the CTE section in the program of studies for these options.

MATH408 Pre-Algebra **Year-long course**

This course is designed for those students who intend to take Algebra I, but lack the necessary skills for success in an introductory algebra course. It provides a sound course of study that builds on previously learned skills, while introducing algebraic concepts needed for success in an algebra course. Topics studied include: properties of rational numbers, variables and expressions, linear equations and their graphs, geometric concepts of area and volume, and basic statistics. Problem solving and estimation skills are emphasized throughout the course and calculators are used when appropriate to increase understanding of concepts.

MATH409 Algebra 1 CP **Year-long course**

This course is intended for students who have successfully completed Pre-Algebra and for incoming freshmen who have a good grasp of arithmetic skills and who have performed at an average/above-average level in prior math courses. Topics covered in this course include: the basic operations and their properties on the set of real numbers, solutions and graphs of linear equations and inequalities, relations and functions, systems of equations and inequalities, properties of exponents, and operations with polynomials and their factors are studied extensively. Throughout the course, algebra as a problem-solving tool is emphasized and calculators are used when appropriate.

MATH411 Algebra 1 Honors **Year-long course**

This course is intended for incoming freshmen who have demonstrated the ability and desire to accomplish math at an above-average level. This course will prepare students to accelerate in math in the sophomore year. Topics covered in this course include operating with the set of rational numbers, simplifying algebraic expressions, solutions of linear equations and inequalities, linear and quadratic functions and their graphs, properties of real numbers and related proofs, systems of equations and inequalities, simplifying rational expressions and their use in graphs. Emphasis is placed on determining equations of lines in a coordinate system and properties of lines in a coordinate plane. Operating with polynomials and their factors is extensively studied. Knowledge of the real number system is extended to include a study of radicals and irrationals and applied in solving quadratic equations. The importance of algebra as a tool to solve problems in the real world is stressed and the use of calculators is used to enhance understanding of concepts.

MATH413 Essentials of Geometry & Algebra 2 **Year-long course**

This course is intended for those students who need to complete their graduation requirement. Most of the students enrolled in this course will have completed both the Algebra 1 Part 1 and Part 2 courses. The course will teach the basics of a Geometry B class and an Algebra 2B course. Please note that this is a terminal class. This course is NOT a prerequisite for either Geometry B or Algebra 2B.

MATH416 Geometry Honors **Year-long course**

This course is intended for incoming freshmen who have completed Algebra I in the eighth grade at an honors level or have department head approval. The topics studied parallel those of Geometry A and topics are covered at a more vigorous pace, but more emphasis is placed on solving challenging geometric problems. Students will also engage in more independent and group project work, requiring a deeper study of some topics than normally found in level one geometry. **Students in the honors program are required to participate in several math contests throughout the year, which require time outside the normal school day**.

MATH418 Algebra I, Part I **Year-long course**

This is the first course of a two-course set which is structured over two years to accommodate students with varying abilities—those who have trouble mastering concepts and need to proceed at a slower pace, those who need more practice and hands-on experience, or those who learn better in an activity-based environment. The principal objective of this course is to develop and to strengthen the skills traditionally covered the first semester of Algebra I. Topics include operations with rational and signed numbers, working with percentages and proportions, simplifying and evaluating algebraic expressions, converting from verbal to symbolic expressions, and solving linear equations and inequalities. Students will be introduced to graphing linear equations.

MATH420 Algebra I, Part II CP **Year-long course**

This is the second course of a two-course set which are structured over two years to accommodate students with varying abilities. This course places primary emphasis on problem-solving through algebraic reasoning and graphing traditionally taught in the second semester of Algebra I. Topics include solving linear and polynomial equations and inequalities, simplifying and evaluating polynomial, rational, radical, and exponential expressions, graphing linear functions, and solving applied problems and systems of linear equations. **Pre-requisite: Algebra 1 Part I.**

MATH423 Business, Sports, and Consumer Statistics CP **Semester course**

This semester course is open to all students who have completed Algebra 1. It is a **project-based** class that will cover the various statistical methods, both categorical and quantitative. Methodologies for accurate data collection will be addressed, including sampling methods, biases, and determination of the population of interest. Types of data collection will be explored such as experimentation and various types of observational studies. These statistical methods will be applied in business applications, sports applications, and consumer applications, as statistics are used in every aspect of life. **Prerequisite: Algebra 1.**

MATH422 Geometry B CP **Year-long course**

This course is intended for those students in Grades 10, 11 or 12 who have completed Algebra 1 and who wish to study Geometry on a less rigorous level than Geometry A. This course covers the basic structure of geometry, points, lines and angles, followed by an introduction to proofs. Triangles, polygons, circles and related concepts of congruency, constructions, and similarity will be studied. Areas and volumes of two and three-dimensional figures will be studied and transformational geometry will be introduced. Calculators will be used when appropriate.

MATH426 Geometry A CP **Year-long course**

This course is intended for those students who have successfully completed Algebra 1 Honors or Algebra 1 CP (and have demonstrated an above average ability in mathematics), or Algebra in Grade 8. The course will focus on the structure of geometry and the properties of two and three- dimensional figures. Logical thinking will be developed and applied in constructing and understanding formal proofs, both direct and indirect. Basic properties of the real number system will be studied, as well as properties of geometric figures. The properties of parallel lines are extended to the study of special quadrilaterals, such as parallelograms and trapezoids. Congruency and similarity are studied extensively and applied to the various polygons. Problems, involving right triangles, are solved using the Pythagorean Theorem, special triangles and trigonometric ratios. Other topics studied include the area and volume of figures, circles and spheres, constructions, and coordinate geometry. Geometric constructions are used to reinforce geometric concepts where applicable. Calculators are used to support problem solving.

MATH438 Algebra II B CP **Year-long course**

This course is intended for students who want a college preparatory course, but on a less rigorous level than Algebra II A. Emphasis is placed on conceptual understanding, connections that exist in math, modeling and problem solving. Topics studied include: properties of real numbers and, solving equations and inequalities and related systems. Also studied are linear, quadratic, polynomial, exponential, logarithmic functions and their graphs, rational expressions, irrational and complex numbers, series and sequences. Calculators are used when appropriate in problem solving.

MATH440 Algebra II A CP **Year-long course**

This course is intended for students who have successfully completed Algebra I CP and have demonstrated an above average ability in mathematics. The properties of the Real Number system developed in previous algebra courses will be reviewed, utilizing proof and principles of logic to develop these properties further. Emphasis will be placed on a study of functions and their related graphs and equations – linear, quadratic, exponential, logarithmic, and polynomial. Matrices, inverses and composition of functions will also be studied. Knowledge of polynomials will be extended to include the Remainder and Factor theorems, and the use of synthetic division. The irrationals and complex numbers will be studied, along with the solution of radical equations. Conic

sections, systems of equations in several unknowns, probability and statistical methods will be studied. Calculators and graphing calculators will be used when appropriate to focus on problem solving.

MATH436 Algebra II Honors **Year-long course**

This course deals with topics from intermediate and advanced algebra. The emphasis is on understanding of the foundations of algebra through a study of the field properties and the study of functions. The concept of a mathematical function will be examined through a study of linear, quadratic, exponential, logarithmic and rational functions and their applications as a mathematical model for solving problems. Other topics studied include irrationals, polynomials, and complex numbers. The use of a scientific or graphing calculator will be used to enhance concepts and problem solving. A graphing calculator, preferably the TI-84 or TI-84 Plus is required. **Students in the honors program are required to participate in several math contests throughout the year, which require time outside the normal school day.**

MATH442 Trigonometry B CP **Semester 1**

The course will include a study of trigonometric and circular functions and their inverses. Emphasis will be placed on using trigonometry as a tool for solving triangles and as a mathematical model for real-life situations. Students will also study the graphs of the trigonometric functions, verifying and proving identities, and solving equations. Students should have access to a scientific or graphing calculator, which will be used extensively in the course. **Prerequisite: Algebra II.**

MATH443 Probability and Statistics CP **Semester 2**

This course is open to students who have successfully completed Algebra II. Fundamental concepts of probability, including conditional probability, independent events, tree diagrams, multiplication principle, random variables, Bernoulli experiments and standard normal distribution will be studied. Other topics of concern will be: expected value and variance of a random variable, Chebyshev's inequality, binomial distributions, methods of counting, sampling, Central limit Theorem, confidence intervals and decision-making. **Prerequisite: Algebra II.**

MATH444 Pre-Calculus A CP **Semester 1**

This course is intended for those students who plan a scientific or mathematical career and who can succeed at an above average level. The course will include a thorough study of trigonometric and circular functions and their inverses. Included will be a study of the graphs of these functions (Polar and Cartesian coordinates), verifying identities, and using the functions as a mathematical model of certain real life situations. The use of trigonometry in solving triangles, both oblique and right, will also be studied and applied. Other topics considered will include rotary motion, vectors, complex numbers and solving trigonometric equations. Students should have access to a scientific calculator or a graphing calculator, which will be used extensively in the course. **Prerequisite: Algebra II**

MATH445 Pre-Calculus A CP **Semester 2**

This course deals with a study of mathematical functions and their use as mathematical models of situations that generate data. Polynomial, exponential, logarithmic and other elementary functions are studied so that students are ready to matriculate in more advanced courses, such as calculus. **Other topics will include sequences and series.** Students should have access to a graphing calculator, as problems are chosen to reflect real world problems. Preparation: Pre-Calculus A semester 1.

MATH448 Pre-Calculus Honors **Year-long course**

This course is intended for students who plan to take AP calculus as their next course. Students are expected to own a TI-83 or 84 graphing calculator which will be used to investigate various types of mathematical functions and their applications. The heavy use of graphing calculators provides the students with firm intuitive foundations often used in solving real world problems. Functions previously studied in Algebra II are further developed to provide a firm foundation for calculus. Also studied will be the 25 trigonometric functions and their applications and interrelationships. Other topics will include probability, sequences and series. **Students will be required to participate in math competitions which involve after school time.**

MATH451 Advanced Placement Statistics **Year-long course**

This course is intended for students who have completed Algebra II A or Honors Algebra II. It may also be taken concurrently with Pre-Calculus. The course begins with an analysis of data, making use of graphical and numerical techniques to study patterns and departure from patterns. Data will be collected according to a well-developed plan so as to obtain valid information on a conjecture. Probability is used as a tool for anticipating what the distribution of data should look like under a given model. Statistical inference will be used to guide the selection of appropriate models. Students should have access to a graphing calculator (TI83 Plus recommended) which will be used extensively in the course. Students in the honors/AP program are required to participate in several math contests throughout the year, which require time outside the normal school day. **Students are required to take the AP exam in May.**

MATH455 Advanced Placement Calculus **Year-long course**

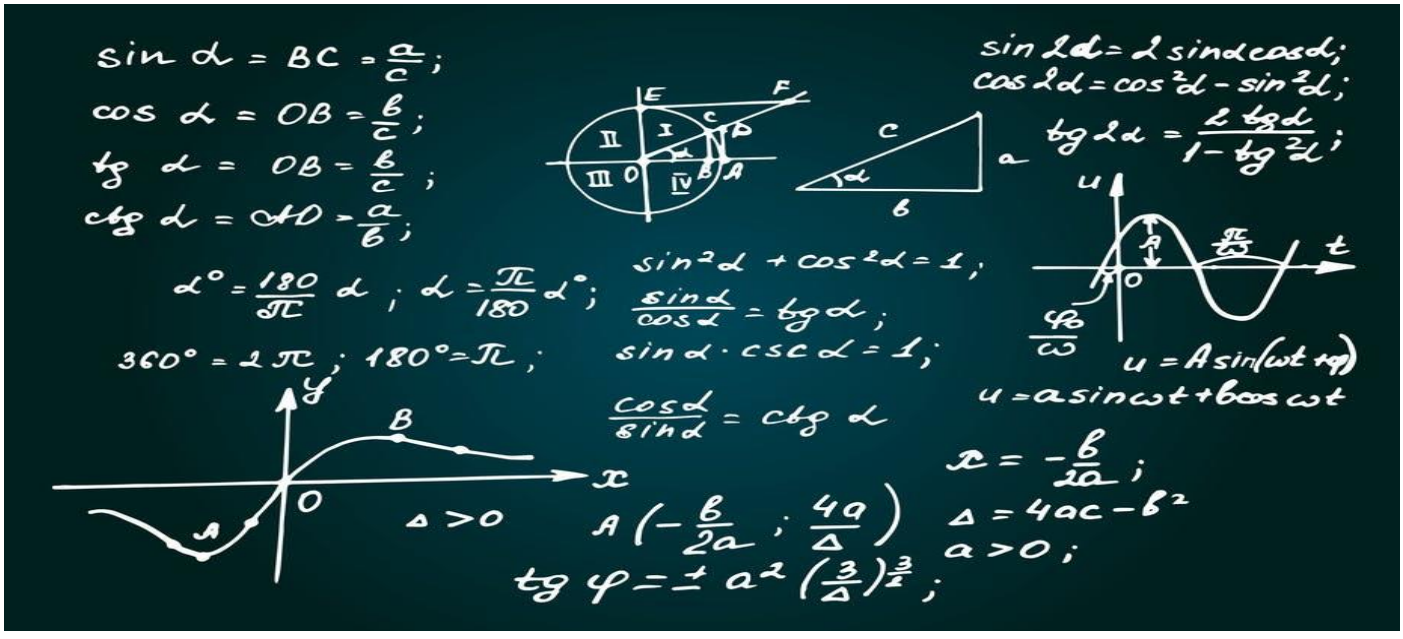
This course follows the College Board Syllabus for AP calculus. The course begins with analytic preparation for calculus with a review of analysis topics. The concept of limit is used to develop the derivative of algebraic functions and related applications. Methods of integration, the definite integral and applications of the integral as an accumulation function are studied. Also included is a study of differential equations. All topics rely heavily on a graphical, tabular, and analytical approach, which reflects the reform movement in calculus. Students are expected to have and know how to use a graphing calculator (TI-83 PLUS strongly recommended). **Students in the honors/AP program are required to participate in several math contests throughout the year, which require time outside the normal school day**. **Students are required to take the AP exam in May.**

MATH456 Calculus CP **Year-long course**

This course is intended for students who have completed a study of trigonometry and analysis. The course begins with analytical preparation for calculus with a review of analysis topics. The calculus material will be covered at a slow pace to provide a good foundation for succeeding in a college calculus course. The pace will be adjusted to allow for mastery and application of the concepts covered. The concept of limit and its relationship to derivatives is thoroughly explored. Techniques and applications of differentiation are explored. Methods of integration, the definite integral and application of the integral are studied as time permits. Students are expected to have and will be shown how to use a graphing calculator (TI-83 strongly recommended) in the study of calculus. All topics will be explored both analytically and graphically. Please note that this course does NOT follow the syllabus to prepare the student for the AP Calculus exam.

MATH467 Business Math CP **Year-long course**

Business Math Applications is a course designed for students to have the opportunity to understand mathematics in the context of business and personal finance. Students will work to improve both their math and financial literacy through the use of real-world examples and applications. This course prepares students to be smart shoppers, informed taxpayers, and valued employees. A solid understanding of math, including algebra and personal finance, provides the necessary foundation for students interested in careers in business and skilled trades areas. Critical thinking applied to Excel spreadsheet applications, as well as individual and group activities will help to solidify students' concept knowledge. A calculator is needed for this course. **Prerequisite: Algebra 1**



SCIENCES

Science courses at Alvirne provide an applied, inquiry, and lab-based approach to learning about the natural, physical, and technological world in which we live. Many colleges require three to four years of high school lab science courses, and a strong foundation in science will benefit any career choice. Alvirne offers a large selection of science courses, including core sequential courses as well as electives. It is required that freshmen begin with a year-long sequence of Earth Science followed by a Biology course in the sophomore year. It is recommended that students take a science course each year at Alvirne.

The state of New Hampshire requires that students have one physical science credit and one life science credit. These credits must be earned by taking Earth Science and Biology. The third science credit must be obtained by completing a chemistry course, a physics course, or a combined introduction to chemistry/physics course. Additional science electives are offered within the science department and also in the CTE department.

RECOMMENDED SCIENCE PROGRAM SEQUENCES		
Year	**Students attending a selective 4 year college** (See college for specific requirements)	**Students attending a 2 year college, trade school, or entering the military or workforce**
Freshman	**Earth Science (Honors or CP level)**	**Earth Science (CP or Workshop)**
Sophomore	**Biology (Honors or CP level)**	**Biology (CP or Workshop)**
Junior	**Chemistry (Honors, A or B level)** and/or **Physics (A or B level)**	**Integrated Chemistry (.5)** and **Integrated Physics (.5)**
Senior	**Chemistry (Honors, A or B level)** and/or **Physics (H, A or B level)**	**Electives** ***see below
Electives (May be taken year 3 or 4 after necessary prerequisites are complete)	**Offered Every Year:** ● Anatomy & Physiology (A or H) **Offered in EVEN years (22-23):** ● Organic Chemistry Honors ● Biochemistry Honors ● AP Physics **Offered in ODD years (23-24):** ● AP Chemistry ● AP Biology	**Electives:** ● Anatomy & Physiology **CTE Electives:** ● Principles of Engineering ● Wildlife Management ● Natural Resources ● Veterinary Science ● Health and Science Technology

EARTH SCIENCE

SCI521 Earth Science 1 Honors (Semester 1) **Semester course**

Honors Earth Science is a laboratory course emphasizing the process of scientific investigation through inquiry and the study of the physical world. Major topics of study include chemistry, physics, astronomy, geology, and scientific method. Interpretation of the periodic table, manipulation of mathematical formulas, the use of technology to collect, analyze, and report data; the utilization of science skills in systematic investigation; and problem solving and decision-making skills are all integral parts of the course. Honors Physical Science students will do outside reading, additional projects and research, and more in-depth labs. Students will be learning research skills and applying research results to course content. Successful completion of this course fulfills ½ of the physical science graduation requirement. **Prerequisite: Must have already taken or concurrently enrolled in Algebra 1A or Geometry A or higher, have earned at or above the 75th percentile on iReady testing for both reading and math, and have a teacher recommendation. A summer homework assignment will be required.**

SCI519 Earth Science 2 Honors (Semester 2) **Semester course**

Honors Earth Science is a laboratory course emphasizing the process of scientific investigation through the study of the physical world. Major topics include the study will include Earth's systems, climatology, and sustainability. Interpretation of maps, charts, tables, and profiles; the use of technology to collect, analyze, and report data; the utilization of science skills in systematic inquiry investigation; and problem solving and decision-making skills are all integral parts of the course. Honors Earth Science students will do, outside reading, additional projects, research, and in-depth labs. Successful completion of this course fulfills ½ of the physical science graduation requirement. **Prerequisite: Must have already taken or concurrently enrolled in Algebra 1A or Geometry A or higher, have earned at or above the 75*th* *percentile* on iReady testing for both reading and math, and have a teacher recommendation. A summer homework assignment will be required.**

SCI506 Earth Science 1 CP (Semester 1) **Semester course**

This semester of Earth Science expands on the physical science concepts and the scientific skills that were learned in 8th grade. Chemistry, physics, geology, and astronomy concepts will be explored in depth to prepare students for biology, chemistry, and future science classes. Students will collect and analyze data in order to solve problems using the scientific method. Laboratory work is usually performed in groups, but students will be responsible for writing individual lab reports as evidence of mastery of the concepts covered in the labs. Students will apply math and graphing skills. Reading and writing assignments are also an integral part of this class; therefore, students taking this class will develop stronger reading and writing skills. Students will be learning research skills and applying research results to course content. Students are expected to complete regular homework assignments in addition to occasional outside projects utilizing current technology. Successful completion of this course fulfills ½ of the physical science graduation requirement.

SCI507 Earth Science 2 CP (Semester 2) **Semester course**

This semester Earth Science is a continuation of physical science concepts with an increased focus on Earth's systems, climatology, and sustainability. Students will collect and analyze data in order to solve problems using the scientific method. Laboratory work is usually performed in groups, but students will be responsible for writing individual lab reports as evidence of mastery of the concepts covered in the labs. Students will apply math and graphing skills. Reading and writing assignments are also an integral part of this class; therefore, students taking this class will develop stronger reading and writing skills. Students are expected to complete regular homework assignments, in addition to occasional outside projects utilizing current technology. Successful completion of this course fulfills ½ of the physical science graduation requirement.

SCI523 Earth Science 1 Workshop (Semester 1) **Semester course**

This semester of Earth Science expands on the physical science concepts and the scientific inquiry skills that were learned in 8th grade. Chemistry, physics, geology, and astronomy concepts will be explored in depth to prepare students for biology, chemistry, and future science classes. Students will collect and analyze data in order to solve problems using the scientific method. Laboratory work is usually performed in groups, but students will be individually responsible for writing lab reports to demonstrate mastery of the concepts covered in the labs. Students will apply math and graphing skills. Writing and reading assignments are also an integral part of this class; therefore, students taking this class will develop stronger writing skills. Students will be learning research skills and applying research results to class content. Successful completion of this course fulfills ½ of the physical science graduation requirement. ***This course is appropriate for students with identified reading/writing/mathematical/conceptual understanding needs. Students who meet the criteria for Workshop Level Science are at or below the 25th percentile on iReady testing in Reading and/or iReady Math. Students are placed in this course with careful consultation of the classroom teachers and other administrative and support services.***

SCI518 Earth Science 2 Workshop (Semester 2) **Semester course**

This inquiry-based approach to the study of basic earth and space phenomena incorporates simplified chemistry and physical science concepts. Areas of study will include Earth's systems, climatology, and sustainability. Emphasis will be placed on mastering concrete scientific processes and concepts. Students will perform lab work in groups but will be individually responsible for demonstrating their understanding of concepts through lab report writing. Successful completion of this course fulfills ½ of the physical science graduation requirement. ***This course is appropriate for students with identified reading/writing/mathematical/conceptual understanding needs. Students who meet the criteria for Workshop Level Science are at or below the 25th percentile on iReady testing in Reading and/or iReady Math. Students are placed in this course with careful consultation of the classroom teachers and other administrative and support services.***

LIFE SCIENCES

SCI522 Biology Honors **Year-long course**

Topics covered in this course include cells and the chemicals and structures that form them, the ways in which the organisms composed of these cells interact in the environment, reproduction of cells, the study of DNA, animal systems, and maintaining homeostasis at both the organism and cellular levels. Changes in living things over time as well as the kingdoms of living things will also be studied. There will be a strong emphasis on inquiry, laboratory skills (including using a microscope, making accurate observations, reporting results in an organized fashion, and measuring), biotechnology, microbiology, and genetics. Additional depth of study, formal laboratory writing, scientific research, independent research projects, career exploration, and summer work (to be completed before the school year begins) are required for the Honors level. Successful Completion of this course fulfills the life science graduation requirement. **Prerequisite: Must have already taken Honors Earth Science and also must have taken or be concurrently enrolled in Honors Geometry or Geometry A, and have a teacher recommendation from a Freshman science teacher. Placement in Honors Biology is also conditional upon completion of summer homework assignments.**

SCI525 Biology CP **Year-long course**

Topics covered in this course include cells and the chemicals and structures that form them, the ways in which the organisms composed of these cells interact in the environment, reproduction of cells, the study of DNA, animal systems, and maintaining homeostasis at both the organism and cellular levels, changes in living things over time as well as the kingdoms of living things will also be studied. There will be a strong emphasis on inquiry, laboratory skills (including using a microscope, making accurate observations, reporting results in a well-organized fashion, and measuring), biotechnology, microbiology, and genetics. Projects and reports are an integral part of this course. Successful completion of this course fulfills the life science graduation requirement.

SCI528 Biology Workshop **Year-long course**

This is an introductory biology course that is designed to teach basic biological concepts to students and to help students apply the principles of biology to their lives. Topics covered in this course include cells and the chemicals and structures that form them, the ways in which organisms composed of cells interact in the environment, reproduction of cells, and the study of DNA. Changes in living things over time as well as the kingdoms of living things will also be studied. Successful completion of this course fulfills the life science graduation requirement.
This course is appropriate for students with identified reading/writing/conceptual understanding needs. Students who meet the criteria for Workshop Level Science are at or below the 25th percentile on iReady testing in Reading and/or iReady Math. Students are placed in this course with careful consultation of the classroom teachers and other administrative and support services.

SCI534 Human Anatomy & Physiology **Year-long course**

Human Anatomy & Physiology covers body systems with a focus on the skeletal, muscular, and nervous systems. Smaller units cover the eye, cardiovascular, and endocrine systems. Students preparing for careers in medicine, nursing, physical/occupational/speech therapy, athletic training, or other health care careers (at 2 or 4 year colleges) will be well prepared upon successful completion of this course. Lectures, frequent lab activities, microscope usage, and dissection of animal specimens are required for this class. **Prerequisite: Successful completion of Honors Biology or CP Biology. *** Embedded Honors option available*****

SCI527 AP Biology *offered 2023-24* **Year-long course**

AP Biology is an introductory college-level biology course. Students cultivate their understanding of biology through inquiry-based investigations as they explore the following topics: evolution, cellular processes – energy and communication, genetics, information transfer, ecology, and interactions. The course focuses on four underlying principles, called Big Ideas, encompassing evolution; cellular processes and homeostasis; genetics and information transfer; and ecology and biological interactions. The course also emphasizes inquiry-based learning and the development of science practices and skills. Content and lab activities are conducted as prescribed by the College Board. A comprehensive description of this course can be found on the College Board AP Central Course Description web page at: https://apcentral.collegeboard.org/courses/ap-biology?course=ap-biology **Prerequisite as set by the College Board: Successful completion of Biology and Chemistry are required.** *Students are required to take the AP exam in May.*

CHEMISTRY

SCI540 Chemistry Honors **Year-long course**

Chemistry is the study of the structure, composition, and behavior of matter. Students will study a variety of topics that include characteristics and behavior of matter; energy transformations during physical and chemical changes; atomic structure and the periodic table of elements; systems and the factors which influence their behavior, and chemical reactions and their quantitative analysis. Student investigations emphasize accurate observations, collection of data, data analysis and the safe manipulation of scientific apparatus and materials. A college-level text is used. A ***strong foundation*** in both mathematics and English composition is essential. This course is intended for students considering post-secondary study in the fields of medicine, engineering, and physical and life sciences. **Prerequisite: Successful completion of or concurrent enrollment in Algebra IIA or Honors Algebra II. *** *This course contains embedded mathematics and may be used to fulfill either the four-credit math OR the third-year science requirement.* *****

SCI544 Chemistry A **Year-long course**

Students will study the properties and the behavior of matter and investigate the answers to the following Essential questions:

1. How can matter and its physical and chemical properties be explained by the structure and the arrangement of atoms, ions, or molecules and the forces between them?
2. How is matter measured consistently?
3. During chemical reactions, what pattern of rearrangement or reorganization of atoms and/or transfer of electrons have occurred?
4. How do the laws of Thermodynamics describe the essential role of energy and explain and predict the direction of changes in matter?
5. What factors influence the stability of systems?

Laboratories reinforce the principles and concepts presented in class and help develop critical thinking and scientific writing. Therefore, a strong foundation in Mathematics and English composition is required. This course is intended for those students considering physical or life science, engineering, Pre-med, Pre-Vet, or four-year nursing programs. **Prerequisite: Successful completion of or concurrent enrollment in Algebra II (it is recommended that students have a B average or better). *** *This course contains embedded mathematics and may be used to fulfill either the four-credit math OR the third-year science requirement.* *****

542 Chemistry B **Year-long course**

This course will study the fundamental chemical principles which are necessary for understanding the composition and properties of matter and the changes which it undergoes. Emphasis will be placed on atomic theory and its relationship to the Periodic Table, bonding, and molecular structure, chemical reactions, kinetic molecular theory, solutions, mole concept and stoichiometry, and energy. Laboratory activities will reinforce and expand class work. Problem solving, critical reading and comprehension, and writing will be emphasized. This course provides excellent preparation for students who plan on attending a two-year nursing program or who will pursue a Liberal Arts major in college. **Prerequisite: Successful completion of Algebra I (It is recommended that students have a C average or better). *** *This course contains embedded mathematics and may be used to fulfill either the four-credit math OR the third-year science requirement.* *****

SCI545 Integrated Chemistry **Semester course**

The purpose of this semester-long course is to provide a comprehensive introduction to the foundational concepts of chemistry. This course is designed to meet the chemistry related Next Generation Science Standards for students who are not enrolled in a traditional yearlong chemistry course. This course will explore scientific skills and real-world applications of chemistry concepts as they relate to students' real world experiences. Students will explore concepts related to periodic trends, types and rates of reactions, chemical structures, conservation of mass, and nuclear energy. ***Successful completion of this course fulfills ½ of the third-year science requirement.***

SCI551 Advanced Placement Chemistry *offered 2023-24* **Year-long course**

This course is the equivalent of the first year of General Chemistry offered at the college level. Advanced Placement is a course based on the content established by the College Board. The content includes: (1) structure of matter: atomic theory and structure, chemical bonding, molecular models, nuclear chemistry; (2) states of matter: gases, liquids and solids, solutions; and (3) reactions:

reaction types, stoichiometry, equilibrium, kinetics and thermodynamics. A comprehensive description of this course can be found on the College Board AP Central Course Description web page at: http://apcentral.collegeboard.com/apc/public/courses/descriptions/index.html All students will take the AP exam in May which is fully funded by the district. Serious students who will pursue majors in physical sciences, medicine, or engineering are advised to enroll in this course. **Prerequisites as Set by the College Board: Successful completion of Chemistry A or Honors Chemistry and completion of Algebra II. *** *This course contains embedded mathematics and may be used to fulfill either the four-credit math* *** *Students are required to take the AP exam in May.***

SCI546 Organic Chemistry Honors *offered 2022-23* **Semester 1**

This elective course begins with the fundamental study of carbon-based compounds, electron cloud hybridization, molecular geometry and bonding principles. Students will relate carbon chemistry to organic, physical and chemical properties. Advanced topics will include nomenclature, organic synthesis and reactions, and stereochemistry. This course is suitable for those students considering majors in chemistry, health careers, and chemical or biochemical engineering. **Prerequisite: Successful completion of Chemistry A or Honors Chemistry with teacher recommendation, as well as successful completion of Algebra II.**

SCI547 Biochemistry Honors *offered 2022-23* **Semester 2**

This elective course will introduce students to the biologically significant organic molecules. The structure and function of carbohydrates, proteins, lipids, vitamins, enzymes, and nucleic acids will be studied. Emphasis will be placed on emerging research in areas including, but not limited to: DNA technologies, stem cells, membranes, and ion channels through scientific reading and journal writing. The laboratory is a significant part of the course. Students will complete an independent research project as part of the Inquiry competency. Students considering careers in pharmacy, medicine, other health related fields, chemistry or biochemistry will find this course beneficial. **Prerequisite: Successful completion of Chemistry A or Honors Chemistry with teacher recommendation AND successful completion of Honors Organic Chemistry, as well as successful completion of Algebra II.**

PHYSICS

SCI554 Physics A **Year-long course**

Physics A is an applied mathematics course and requires strong mathematics skills. An emphasis is placed on logical problem solving and inquiry skills. This course thoroughly explores the main topics in physics and is intended to prepare students for an introductory physics course in college. Topics include kinematics, vectors, projectile motion, forces, Newton's Laws, work, energy and power, momentum, rotational motion, mechanical waves, sound, and basic electricity. **Prerequisite: Successful completion of Algebra II, successful completion of or concurrent enrollment in Pre-Calculus (It is recommended that students have a B average or better in these courses). *** *This course contains embedded mathematics and may be used to fulfill either the four-credit math OR the third-year science requirement.* *****
***** Embedded Honors option available*****

SCI556 Physics B **Year-long course**

This course introduces the main topics in physics including kinematics, vectors, projectile motion, forces, Newton's Laws, work, energy and power, momentum, mechanical waves, sound and basic electricity. An emphasis will be placed on conceptual learning, but application of algebra in the study of one-dimensional motion will occur. **Prerequisite: Successful completion of Algebra I and Geometry and successful completion of or concurrent enrollment in Algebra II (it is recommended that students have a C average or better in each math course). *** *This course contains embedded mathematics and may be used to fulfill either the four-credit math OR the third-year science requirement.* *****

SCI553 Integrated Physics **Semester course**

The purpose of this semester-long course is to provide a comprehensive introduction to the foundational concepts of physics. This course is designed to meet the physics related Next Generation Science Standards for students who are not enrolled in a traditional yearlong physics course. This course will explore scientific skills and real-world applications of physics concepts as they relate to students real world experiences. Students will explore concepts such as: forces and motion, magnetism, electricity, energy, and waves. ***Successful completion of this course fulfills ½ of the third-year science requirement.***

SCI559 Advanced Placement Physics 1 offered 2022-23 **Year-long course**

AP Physics 1 is equivalent to a first-semester college course in algebra-based physics. The course is mostly Newtonian mechanics (including kinematics, vectors, projectile motion, forces, rotation, and momentum), and includes topics of work, energy, and power. **Note: Beginning the 2023-2024 school year APP1 will begin covering Oscillations and Fluids as part of the course.** Emphasis is on providing a university-level foundation in physics for students interested in the life sciences, pre-medicine, and applied sciences, as well as other areas of study. A comprehensive description of this course can be found on the College Board AP Central Course Description web page at: *https://apcentral.collegeboard.org/courses/ap-physics-1?course=ap-physics-1-algebra-based* ***Prerequisite: Successful completion geometry (students must be comfortable with trigonometry) and algebra II are required. Concurrent enrollment in precalculus is recommended. *** This course contains embedded mathematics and may be used to fulfill either the four-credit math OR the third-year science requirement. ***** *Students are required to take the AP exam in May.*

ART

ART901 Mixed Media **Semester course**

This course will offer in-depth exploration of techniques and new ways to see, use, and interpret found objects. Students will create multi-directional compositions with a variety of materials, paint, images, found objects, and drawing media. Techniques will include collage, monotype printing, drawing, painting, mixing, fiber arts, assemblage, cutting, and pasting, etc. This course is designed to give students a wide variety of art making experiences and allows students to continue to explore various visual art forms and techniques through the elements and principles of art and design. Students will produce original artworks and learn skills and techniques associated with a variety of art media. Students will develop technical skills and personal style. Students explore the world of relief. Both traditional and non-traditional approaches are taught. Many projects may include ordinary objects that can be transformed into creative works of art.
This art course satisfies the Fine Arts requirement for graduation

ART903 Children's and Comic Book Illustration **Semester course**

This course will allow for students to explore the art within the pages of a book from Graphic Novels, Comics, Children's Books, Visual Journals, etc. Students will learn the process of creating their own book from story boarding, color studies, edits, final rendering, and the publishing process. Students will be able to create successful page spreads in various media as well as considering elements and principles of art and activating an entire page incorporating text. Students will be able to explore the different areas of Graphic Novels, Comics, Children's Books, and Visual Journals to create a final book that is ready to be pitched to a publishing agency!
This art course satisfies the Fine Arts requirement for graduation

- **If a student has a drawing tablet, this may be used but not required**

ART905 Drawing and Painting **Semester course**

In Drawing and Painting students will start to develop the drawing skills fundamental to all art media, art courses and most careers in art. They will demonstrate these skills in painting, design and other 2-dimensional media. They will experience the organization of the Art Elements and Principles while they experiment with a variety of 2-dimensional art techniques and mediums. Primarily they will use contour, freehand and observational techniques to render works. Creative art projects will be explored using graphite pencil, marker, charcoal, ink, pastel, and colored pencil. Painting media will include tempera and watercolor, and mixed media through collage. Possible subject areas are still-life, fantasy, nature, and portrait studies. Design techniques will be also explored to highlight current trends and students' interests. Students will study artists, cultures, aesthetics and art history.
Sketchbook/Journal is required.
This art course satisfies the Fine Arts requirement for graduation

ART912 Introduction to Ceramics **Semester course**

Introduction to ceramics is designed for students who are interested in art and really enjoy hands-on learning. Over the semester, students will create projects using basic hand-building techniques and may also learn how to throw basic forms such as bowls and cylinders on the wheel. Using hand building techniques, they will make various pieces including mugs, geometric and organic forms, and other functional and non-functional pieces. Through each project, students will learn about the various methods of surface treatment, firing, and design. The course will also explore the tradition and history of ceramics as both an art form and a practical skill. **This introductory art course is a foundation for Advanced Ceramics.**
This art course satisfies the Fine Arts requirement for graduation

ART913 Advanced Ceramics **Semester course**

Advanced Ceramics will build upon the knowledge and skills gained in Introduction to Ceramics. Students will continue to develop their skills in hand building and wheel throwing. In this course students will have the opportunity to focus on sculptural or hand building techniques that help them express their artistic vision. Students will learn different glazing techniques to achieve desired appearance and aesthetic, as well as to express their creativity. Weekly class critiques will be conducted, and students will be required to keep an up-to-date sketchbook. This curriculum will reflect a more open-ended design, with a focus being on technique and process. Students will be introduced to more complex concepts and vocabulary incorporating artistic perception, creative expression, historical/cultural context, making connections and relationships to students interests and future career Opportunities. This course can be retaken over the duration of a student's high school career as they enhance their technical and artistic skills, create a body of work and build a portfolio.
Prerequisite: Introduction to Ceramics

ART921 Introduction to Graphic Design **Semester course**

Introduction to Graphic Design introduces students to basic graphic design techniques used by commercial and visual artists while exploring the Elements and Principles of Art. Students will learn basic Adobe Photoshop, music mixing and movie maker skills while applying the fundamentals of design, layout, composition and typography in the digital realm. Projects may include digital collage and composite imagery, masking and photo and digital editing, using typography though creating original logos, posters and designs, as well as vector and raster image manipulation. This introductory art course satisfies the Fine Arts requirement for graduation. Journal may be required for assignments. This class has no advanced or repeatable option.
Prerequisite: Computer Literacy; basic computer skills/approval of the instructor
This art course satisfies the Fine Arts requirement for graduation

ART923 Advanced Studio Arts **Semester course**

Advanced Art is a high-level course offered to students who wish to develop their technical artistic skills and develop a more sophisticated approach to process and subject matter while creating a solid body of original artwork. Students who take this course keep an artist journal to explore artistic process, media experimentation and teacher-student discussions to support the process, analysis, reflection and refinement of work. Students will submit a portfolio for review at the end of each semester. While the Portfolios are oriented specifically for the advanced studio art practices the work may also be for exhibition, for enhancing the college application process, and may be submitted for scholarship considerations.
This class may be taken by students who wish to put together a portfolio for college applications and is appropriate for students with strong, independent motivation and a desire to become a mature artist. This course can be retaken over the duration of a student's high school career as they enhance their technical and artistic skills, create a body of work and build a portfolio.
Prerequisite: Any intro level course – Drawing and Painting
Comic & Children's Book Art
Mixed Media
Digital Photography (with instructor approval)

ART930 Digital Photography **Semester course**

Digital Photography offers the opportunity for students to initially learn the needed technical and aesthetic skills to make quality digital photographs and prints while using a DSLR camera. Students will then explore the visual Art Elements and Principles while they challenge themselves to create work that celebrates their own individual identity and self-awareness, in addition to their view of the world and people around them. Students will learn about communicating and creating meaning and narrative via the camera lens, careers, cultural and contemporary theory and trends, the digital editing of images and the history of Photography. This art course is open to 10^{th} – 12^{th} grade students only and satisfies the Fine Arts requirement for graduation. Journal is required for homework assignments and all students & guardians must sign a liability acceptance form. This course can be retaken over the duration of a student's high school career as they enhance their technical and artistic skills and build a portfolio and create a body of work.
Prerequisite: Computer Literacy; basic computer skills/approval of the instructor. Grades 10-12 only.
This art course satisfies the Fine Arts requirement for graduation

MUSIC

Courses in Music are offered with the belief that this art is an essential aspect of a person's personal, social, and cultural evolution. The goal of the music program at Alvirne High School is to endow students with lasting understanding and enjoyment of the riches of our musical heritage.
Some careers that can be explored through these courses are: music education, music performance, music publication, music arranging and composing, music recording and technology, music sales, music librarians, music therapy and arts management.

ART953 Concert Choir Year-long course

Concert Choir is a non-auditioned vocal group, singing a variety of standard and contemporary music. Performance of various SAB and SATB arrangements help the student to experience proper rehearsal procedures, vocal technique, choral blend, balance and style. This course is offered to all students whose interest is of a general nature, and to those who anticipate singing at the college or community level. Concert performances are a requirement. Students are urged to give of their time in order to reach those in the community who cannot attend public or school performances. This course can be taken for Honors credit by completing additional auditions and projects under the direction of the teacher. This course may be repeated.

ART954 Chamber Choir Year-long course

Chamber Choir ("B Naturals") is an auditioned group which involves the performance of standard and contemporary vocal literature. The performance of various arrangements in the SATB repertoire helps students experience proper rehearsal procedure, choral blend, balance and technique. An emphasis is placed on community service through performance. Students in this ensemble are highly encouraged to take private lessons. Students are urged to give of their time in order to reach those in the community who cannot attend public or school performances. This course can be taken for Honors credit by completing additional auditions and projects under the direction of the teacher. Pianists are urged to audition as accompanists. This course may be repeated.

ART956 Concert Band Year- long course

Concert Band is a non-auditioned instrumental ensemble in which students study and perform standard and contemporary wind band literature. Performance of various musical styles as well as composition, arrangement, and self-guided musicianship projects help students to develop musical literacy, proper instrumental technique, and ensemble performance skills. Concert performances are a requirement. Participation in marching band is required for first-year members. This course may be repeated.

ART957H Symphonic Band Honors Year- long course

Symphonic Band is an auditioned instrumental ensemble which serves as the Honors credit component of Concert Band through concurrent enrollment. Students in this ensemble will study and perform advanced standard and contemporary wind band literature beyond what is required of Concert Band. Rehearsals for Symphonic Band occur three mornings per week before school. Participation in marching band is a requirement for all students enrolled in Symphonic Band. This course may be repeated.

ART958 Jazz Band Year- long course

Jazz Band is an auditioned instrumental ensemble in which students study and perform standard and contemporary jazz literature in a variety of musical styles. Students must be able to perform and read music on one of the following instruments: saxophone, trumpet, trombone, piano, string bass/bass guitar, guitar, vibraphone, and drum set. Listening exercises, development of improvisational skills, and arrangement projects are designed to enhance students' understanding of performance practices in the jazz idiom. Concert performances are a requirement. This course can be taken for Honors credit by completing additional auditions and projects under the direction of the teacher. This course may be repeated.
Co-requisite requirement: Enrollment in Concert Band or Symphonic Band Honors*
*Exceptions must be approved by the District Director of Music

ART960T Music Theory Semester course

This course teaches fundamental music theory skills. Students enrolled in this course learn to read, write and understand the symbols of music notation. No formal study in music is required. Classroom instruction will also include sight singing, ear training, rhythmic dictation as well as performance and listening activities. The material covered in Music Theory provides a firm foundation for more advanced studies in music. This course may not be repeated.

ART961 History of Rock n' Roll Semester course

This course is a survey of the growth and development of rock music, beginning with the study of Afro-American field songs and chants, up to and including rock styles of the 1970's. The basic elements of music: rhythm, melody, harmony, tone color, forms and texture are studied. Students will explore the history of the artform through research projects, podcasts, and other various projects throughout the semester. This course may not be repeated. This course fulfills the fine art requirement.

ART963 Piano Lab Semester 1

This course is intended for the non-pianist. Fundamental instruction will be given on electronic keyboards. The student will learn to read music notation, chords, melody and accompaniment in a variety of styles such as Classical, Rock and Blues. Students are required to perform weekly. Enrollment is limited to 10 students. This course may not be repeated.

ART969 Intro to Guitar Semester course

This course is intended for the non-guitarist. All students will learn basic music theory, chord positions and chord progressions. Weekly performances are a requirement and enrollment is limited to 14 students. Acoustic guitars are provided by the school but students may choose to bring their own *acoustic* guitars (electric guitars are not permitted). This course may not be repeated.

FAMILY & CONSUMER SCIENCES

FACS761 Food Works I Semester course

This course is an introduction to the basic skills on food preparation and the understanding of nutritional needs and disease prevention. Consumer awareness and environmental issues are emphasized. Student assessment includes lab work and a variety of hands-on activities as well as homework and exams. Students concerned with their own food choices, as well as those interested in health and fitness careers are encouraged to take this course.

FACS763 Food Works II Semester course

This course is intended for the students who choose to continue the study of food preparation and want to increase their basic skills. This course of study allows students to explore more complex and detailed areas. Students interested in consumer choices concerning health, finance, time, effort, and the environment are encouraged to take this course. **Preparation: Food Works I**

FACS777 Housing & Interior Design Semester course

This course will include the study of homes from early times to the present. The student will gain an understanding of the elements and principles of design and how they influence housing style and interior decorating. Students will apply this knowledge to a variety of hands-on projects and activities. Students with an interest in interior decorating, design, or art careers would find this a valuable course.

FACS782 Child Development Semester course

This course involves the study of the emotional, social, and intellectual development of the child from birth through the preschool years. The students will explore attitudes and decisions involved in parenting and child-centered careers. The importance of prenatal care and childbirth options are also included. This course is recommended for students interested in early childhood or elementary education as well as for those who are planning careers in human services.

FACS784 Human Relationships Year-long course

This course is the study of the many factors that influence relationships throughout the lifespan. The major focus is on adolescence and the primary relationships that influence development at this stage. Topics included in this course are examination of family stages, personality development, communication skills, and sexuality. Crisis prevention and intervention will also be discussed. Students interested in careers in psychology, childcare, education, and human services are encouraged to take this course.
(Grades 10, 11, 12)

FACS785 Independent Living Semester course

This course will provide the student with a variety of skills necessary for living as an independent young adult. Career choices, values, and money management, decision-making will be explored. Students will also participate in hands-on activities designed to

give them food selection and preparation skills, basic sewing experience, and consumer awareness. **This course is for juniors and seniors.**

FACS787 Fiber and Textile Arts **Semester course**

This course will focus on a variety of techniques using fibers and textiles to create both wearable and decorative pieces of art. By applying the elements and principles of design, students will create unique and personal forms of self-expression. This hands-on course will include techniques such as fabric surface design and manipulation, weaving, felting, sewing, and needle arts.

PHYSICAL EDUCATION

PE502 Wellness **Year-Long course**

This course offers an integrated, holistic approach to health and lifetime physical fitness. This approach to overall wellness encompasses the physical, mental, social, and emotional well-being of the individual. By the end of this full year course, students will be able demonstrate the ability to apply principles of physical fitness, nutrition, weight control, stress management, alcohol/drug refusal, and disease prevention, to positively modify their own personal lifestyle. The content of the course includes several areas of study: Nutrition, Substance Use and Abuse, Mental/Emotional/Social Health, Sexuality/Family Life, and Personal Fitness. Each content area will be addressed in a classroom and/or physical activity setting. Personal goal setting, communication, and decision-making skills will be emphasized and integrated throughout the course along with a focus on accessing accurate information using technology. Students will acquire functional knowledge and skills necessary to make informed decisions regarding their health and recognize the long and short-term benefits of developing healthy habits now in order to maintain a high level of wellness throughout the stages of life.
*****This course will fulfill BOTH the .5 credit health and the .5 Foundations of Physical Education credit requirements *****

PE005 Non-Traditional Games **Semester course**

Students will demonstrate an understanding of the role of non-traditional sport activities in promoting active participation. Students will participate in a variety of leisure time activities that will include unique non-traditional games such as Omnikin ball, scooter games, Sabaki ball, Footy ball, Ultimate Frisbee, invasion games. Participation in physical activities can provide an opportunity for social interactions and an opportunity to display responsible personal and social behaviors. **Wellness is a prerequisite for this course. May be taken to fulfill the second Physical Education requirement or for elective credit**.

PE007 Total Fitness **Semester course**

At the completion of this course, students will have a better understanding of the meaning behind functional fitness. Students will be able to demonstrate proper technique when completing body movements as well as form and technique in a series of barbell movements. Mobility, nutrition and current fitness methodologies will also be discussed throughout the semester. The overall goal of this course will be to promote a healthy lifestyle for students at Alvirne High School.
Wellness is a prerequisite for this course. May be taken to fulfill the second Physical Education requirement or for elective credit.

PE009 Unified Physical Education **Year-long course**

Unified Physical Education is a one semester course that may be used to fulfill a student's second Physical Education requirement. This course will explore team and individual sports, cooperative activities, initiative and low ropes course elements and personal fitness at a novice level. Students will exhibit responsible personal and social behaviors to respect themselves and others in a physically active setting. Students will have the opportunity to experience relationships, learn from and help support their cognitively and physically challenged peers. At the completion of this course, students will be able to demonstrate skills explored at a novice or appropriate individual level.
Wellness is a prerequisite for this course. May be taken to fulfill the second Physical Education requirement or for elective credit.
Physical Education Department chair and teacher approval is required.

PE010 Fitness through MOVEMENT Semester course

Students will participate in physical activities that will promote health benefits to students and teach skills that support life-long physical fitness. Students will be involved in activities such as walking, yoga, Pilates, dance, functional fitness, snow shoeing, and goal setting. All students will gain the knowledge, skills, confidence and enjoyment needed to achieve lifelong physical fitness. **Wellness is a prerequisite for this course. May be taken to fulfill the second Physical Education requirement or for elective credit.**

PE011 Outdoor Education Semester course

This course is designed to increase student fitness level and self-confidence while enjoying the outdoors. Students will be encouraged to stretch their comfort zone by cooperating with others in ice breakers to develop a working relationship with others, while conquer obstacles through problem solving and team work. Students will be involved in activities to developed trust within themselves and group and develop skills in orienteering to better navigate the outdoors whether on local or remote trails. **Wellness is a prerequisite for this course. May be taken to fulfill the second Physical Education requirement or for elective credit.**

PE012 Team Sports Semester course

At the completion of this course, students will have a better understanding of the meaning behind team sports. Students will be able to demonstrate leadership, communication, and teamwork skills. Coaching, practice, and skill development methodologies will also be explored throughout the semester. The overall goal of this course will be to promote healthy competition and active lifestyle for students at Alvirne High School.
This course will cover the following team sports: flag football, soccer, volleyball, basketball, floor hockey, softball, and handball. May be taken to fulfill the second Physical Education requirement or for elective credit. **Wellness is a prerequisite for this course.**

PE013 Net Sports Semester course

This class is for the student who wish to advance their skills in the lifetime activities of net and racket sports such as tennis, badminton, pickleball, eclipse ball, and table tennis. Emphasis will be placed on skill development and competitive play. The course will include competition in singles, doubles and round robin tournaments.
Through the participation in several sports, students will gain the knowledge necessary to become an educated participant and spectator. Engagement in these life-long activities will provide an atmosphere that is enjoyable to the participants, promotes cooperation among peers, and develop a level of fitness necessary to participate
Wellness is a prerequisite for this course. May be taken to fulfill the second Physical Education requirement or for elective credit.

PE022 Physical Education Leaders Semester course

This elective opportunity offers students who have fulfilled their two-semester Physical Education requirements an opportunity to explore different leadership roles in a physically active setting. Permission of teacher and department head is required.
Wellness is a prerequisite for this course.

DRIVER EDUCATION

The program includes several components:

1. - Road work: The State of New Hampshire requires that every student be provided with a minimum of ten (10) hours of road work. While some students may require additional practice time, the first ten road lessons are included in one's tuition to Driver's Education. Additional road lessons may be provided if necessary.
2. - Class work: The State of New Hampshire requires a minimum of 30 classroom hours be spent in driver education, of which at least 4 hours must be spent in the area of alcohol and drugs and how they serve to impair driving.
3. - Observation: The State of New Hampshire requires that students observe a minimum of six (6) hours of other beginning driver's lessons as part of their participation in their driver education class. Classes are offered after school and during the summer vacation period (12 weeks)-fall, winter, spring and summer.

See - http://www.granitestatedrivingschool.com/ - for further information.

SPECIAL SERVICES PROGRAM

The Special Services Department at Alvirne High School is designed to provide support and/or services to students that meet specific criteria, determined through assessment or evaluation. Student's meeting the criteria are provided with specially designed instruction. In addition to specialized instruction, accommodations and/or modifications will be afforded to students with an educational identification. These accommodations/modifications afford students an opportunity to access the general curriculum.

The clear intent of the programming is to ensure that all students are challenged to excel, to progress within the mainstream curriculum, and to prepare for independence in adult life. This independence includes post-secondary education, employment, the armed forces, and/or volunteering. Each of the programs offered by the Special Services Department encompasses one or more of the components listed below:

1. Support services to enhance students' individual performance,
2. Development and refinement of social, interpersonal, and behavioral skills needed to function effectively in the school setting, social milieu, and society,
3. Tools to promote and strengthen self-advocacy strategies,
4. Transitional plans to facilitate a smooth progression from school to post-graduate opportunities.

The Special Services team uses three (3) integrated steps to ensure that the unique needs of the students are addressed. In addition, the team is bound by law to ensure full compliance with district, state, and federal requirements:

1. Eligibility Determination - Begins with the referral process and, if the criterion is met, ends with a thorough evaluation of the student in all areas of a suspected disability.
2. Development of the Individual Education Program (IEP) - If the team, including but not limited to the student and parents, general educators, evaluator(s) and special educators, finds the student eligible for special education, the elements of an IEP are discussed, planned and established in the written document. The evaluation and eligibility process occurs triennially.
3. Placement Decisions - Once the IEP is developed, placement in the least restrictive environment is determined by the team.

Library Media Center

The Alvirne High School Library Media Center collection (print, media and technology) reflects and supports the needs of Alvirne's curriculum and learning community. Our students and staff use the media center to access materials for research, borrowing print and other media, computer workstations and to read for pleasure. The Library Media Center staff's goal is to create a welcoming atmosphere and to make our students life-long learners in the 21st century. Our hours are: Monday, Tuesday, Thursday, and Friday from 7:15 to 3:30 p.m. Wednesday the Library closes at 2:10. Mrs. Deborah Cole, is the Library Media Specialist.

INVEST IN YOUR FUTURE

Career and Technical Education (CTE) Programs

Wilbur H. Palmer CTE Center at Alvirne High School

Provides students with the foundational knowledge and skills to jumpstart their career or postsecondary experience.

CTE program acceptance subject to review of school records and review of application. See link:
https://secure.infosnap.com/family/gosnap.aspx?action=31178&culture=en

Benefits to Students

- **Career pathways** that allow students the opportunity to engage in areas of study related to their interests.
- **Hands-on learning** delivered through a rigorous, relevant curriculum.
- Potential to earn **college credit** while in high school at a minimal cost.
- **Work-based learning** opportunities, such as job shadows and internships.
- **Career and Technical Student Organizations (CTSOs)** assist students with self-confidence and enhance public speaking, leadership, and teambuilding skills.
- An opportunity to learn about **technical, academic and workplace skills.**

View program videos at: https://cte.sau81.org/programs

CTE Center Facebook Page: https://www.facebook.com/AHSCTE

CTE Programs at Nashua and Milford-**Follow these links to view the programs located at these schools that Alvirne students can access**

AIR FORCE JROTC

The mission of Air Force Junior ROTC is to develop citizens of character dedicated to serving their nation and community. As such, the focus is on citizenship and the courses are not considered a military recruiting effort. Students will be held to a high standard of behavior and personal conduct. ***No student is under any obligation whatsoever to join the military if they enroll in Junior ROTC.*** **The Air Force Junior ROTC program is a 4-year program for high school students. Each year is divided into two broad fields of study: Aerospace Academics and Leadership Education. Aerospace Academics includes history, science, space, and global cultural studies. Leadership education include Air Force customs and courtesies, cadet group activities, study habits, time management, communication skills, life skills, leadership and management studies, and wellness and healthy lifestyles training. Students are required to wear military uniforms one day per week and participate in drill and ceremonies practice. The uniforms are provided by the Air Force, and students are only responsible for cleaning the uniform while it is in their possession. Upon graduation from high school, students who choose to enlist in any branch of the service and who have completed 2 years of Junior ROTC will be enlisted at a higher rank (E-2 versus E-1). Students who compete 3 years or more of Junior ROTC may enlist as an E-3 at the discretion of the military service. Students may also compete for scholarships to college through the services college-level ROTC programs or service academy appointments.**

CTE794 JROTC 1 Year-long course

This is the entry-level course for Junior ROTC, and first-time students are usually enrolled in this course regardless of their school status. Aerospace Academics focus on the history of aviation. The study of aviation pioneers and strong military leadership complements the history lessons. Leadership education is designed to help freshmen adapt to the high school environment, and include time management, fitness and wellness, flag etiquette, and customs and courtesies of the Air Force.

CTE796 JROTC 2 Year-long course

This is the second-year course for Junior ROTC and is still taught at an introductory level. Concurrent enrollment with other JROTC courses is allowed, however prior approval from the Senior Aerospace Science Instructor is required for concurrent enrollment. Aerospace Academics focus on the science of aviation, covering topics such as basic aerodynamics, aviation physiology, meteorology, and navigation. Additionally, topics in space studies are covered to include the solar system and the development of the U.S. Space Program. The Leadership Education is designed to improve student communication skills, and include speaking and writing assignments, study of individual and group behavior, and basic leadership concepts.

CTE797 JROTC 3 Year-long course

Successful completion of JROTC 1 and JROTC 2 are required to enroll in JROTC 3. This is the third-year course for Junior ROTC and is more academically challenging than JROTC 1 and 2. Concurrent enrollment with other JROTC courses is allowed, however prior approval from the Senior Aerospace Science Instructor is required for concurrent enrollment. Additionally, juniors and seniors who are in their first year of JROTC may be approved to take JROTC 3 on a case by case basis but must obtain permission from the Senior Aerospace Science instructor in order to do so. Aerospace Academics for this course is focused on Global Studies. This is a customized course about the world's cultures. The course is specifically created for the US Army, Marine Corps, Navy, and Air Force Junior ROTC programs. It introduces students to the world's cultures through the study of world affairs, regional studies, and cultural awareness. The course delves into history, geography, religions, languages, culture, political systems, economics, social issues, environmental concerns, and human rights. It looks at major events and significant figures that have shaped each region. Leadership academics are designed to study and improve student management skills, choosing a career path, how to apply for and fund college, skills inventory and resume writing.

*****Completing three years of JROTC meets the second .5 credit of physical education. *****

Completing JROTC III can be used to meet.5 credit of the social studies requirement for NH State Scholars.

CTE798 JROTC 4 Year-long course

This is the fourth-year course for Junior ROTC. JROTC 3 is a prerequisite for this class. Cadets in this class will be held to the highest academic and behavioral standards. Cadets in JROTC 4 will be charged with the management and leadership of the Alvirne High School cadet organization. Returning JROTC students must have an excellent academic record of performance, an exemplary record of behavior and classroom conduct, not only in JROTC but in all Alvirne classes, in order to enroll in JROTC. Students not meeting that standard may be denied enrollment in JROTC 4. The leadership Education academics are all designed to study and improve student management skills. Students from JROTC classes may be assigned to supervise JROTC 1 classes.

CTE788 JROTC SLS Week-Long Summer Leadership School

This course is taught during the summer and is open to students who have complete at least one year of JROTC with at least a B-grade. Students will learn about leadership and teamwork, participate in summer wellness programs, and conduct hands-on problem-solving activities. The course is different each summer, so a student could potentially attend three different Summer Leadership Schools during their time at Alvirne. Each course is worth one-half credit toward graduation on a pass-fail basis.

BUSINESS

ACCOUNTING

This program introduces students to the complete accounting cycle for a merchandising business. Students use a variety of computer software applications to master skills and apply financial concepts. Computerized Accounting projects are used to simulate real world applications and the Virtual Business software gives students an opportunity to build and manage their own business from the ground up. This program is strongly recommended for college-bound students planning to major in business.

COMP613 Accounting I Grades 10-12 Double Period  **Year-long course**

In this project-based class, students will be introduced to the complete accounting cycle for sole proprietorships, partnerships, and corporations. Online accounting software will be used instead of the traditional paper and pencil method. Students will use simulations and projects to apply concepts and master skills. For all who plan a career in business, finance, management, marketing, banking, accounting, or plan to run their own business, this course is a must.

This course contains embedded mathematics and may be used to fulfill the fourth-year math credit requirement.
Prerequisite: Successful completion of ICT Literacy or completion of middle school ICT requirements.

COMP615 Accounting II Honors Grades 11-12 Double Period  **Year-long course**

Accounting II is for students who wish to pursue an accounting or business career and have completed Accounting I. Further competence in accounting skills is emphasized in this course which includes departmentalized, corporate, and cost accounting concepts. Online accounting software will be used instead of the traditional paper and pencil method. Students who take this course are eligible to receive transferable college credits from Southern New Hampshire University. (Previously called College Accounting)
Prerequisite: Successful completion of Accounting I with a grade of C or better, or with instructor approval.

MARKETING

In the Marketing program, students have the opportunity to apply marketing skills in both the classroom and in a variety of retail as well as commercial lab settings. Learn the basics of planning, promotion, financial management, economics, people skills, technology, inventory control, and buying and selling as students practice the real-world skills of merchandising and marketing. Students are invited to join DECA, an organization of emerging leaders and entrepreneurs who are studying marketing, finance, hospitality, and management. This organization provides numerous leadership, networking, and professional development opportunities for student members.

CTE624 Marketing I Grades 10-12 Double Period Year-long course

Students will start this course learning the important role that marketing and business plays in society and how it impacts their daily lives. Learn about the types of business ownership, principles of entrepreneurship, management theories, strategies to motivate employees, business ethics and corporate social responsibility. As a result of understanding the role that the economic, global, legal, financial environments have on business operations and profits, students will then have opportunities to apply these concepts in various hands-on projects throughout the course. After learning the basics of business, students will then learn and apply the fundamentals of marketing. Students will learn all about the world of marketing, analyzing market opportunities, developing new products, distribution decisions, promotion and communication strategies, pricing objectives and the skills needed for a successful career in marketing.
Completion of year two of this program may be used to fulfill the four-year math requirement.

CTE626 Marketing II Honors Grades 11-12 Double Period  **Year-long course**

Students will further their development of marketing and business skills in this course. Students will expand their knowledge of marketing and business and continue to participate in numerous interactive business marketing projects. Students will learn not only how to develop but manage a global business plan, analyze consumer decision-making, devise B-to-B and nonprofit marketing plans, analyze supply-chain management and marketing channels, advertise, create sales promotions, price set, as well as strategize and implement social media marketing campaigns. Students will have increased opportunities to organize and lead real-world promotional campaigns along partner with businesses in the community to strengthen their marketing skills.
Prerequisite: Successful completion of Marketing I.
This course contains embedded mathematics and may be used to fulfill the four-credit math requirement.

ADDITIONAL ELECTIVES IN BUSINESS

COMP621 Personal Financial Literacy **Semester course**

This course is taught in a computer lab where students learn finance using a variety of electronic tools and resources. An important part of the class is the Virtual Business Finance simulation, a game-like environment used for teaching key personal financial skills. Using the simulation and other tools such as spreadsheets, students will learn to create a budget, manage their cash, examine financial services, explore retirement planning, discover ways to manage credit, keep their credit scores healthy, examine housing options, and buying and owning a vehicle. This course will provide a foundational understanding for making informed personal financial decisions.
Students may have the opportunity to earn 3 college credits through Manchester Community College for Personal Finance.
Prerequisite: ICT Literacy or its equivalent.
This course contains embedded mathematics and may be used to fulfill the fourth-year math credit requirement. (1/2 credit).

CAREERS IN EDUCATION

Do you enjoy working with children? If yes, then Careers in Education is the place to be! Students learn through a combination of multi-disciplinary instruction and hands-on learning experiences in classrooms throughout the school district. The goal of the Careers in Education program is to provide students with a variety of experiences to allow them to select a career path before entering college. By the end of the two-year program, students can earn 7 college credits which transfer to any college or university. All students participate in the Educators Rising student organization which includes training and service opportunities as well as a chance to compete in local, state and national competitions. Upon graduation, students are ready to make a lasting difference in the lives of those they teach and in the field of education.

CTE894 Careers in Education I Honors Grades 10-12 Double Period Year-long course

Do you want to have a long-lasting impact on the lives of students? This course will give you the chance to explore different avenues available in education, at all levels. Your time will be divided between classroom instruction and hands-on learning experiences with all grade levels. You will have the opportunity to serve as an intern in Preschool – High School classrooms throughout the school district to help you explore different grade levels. As part of the course, you will have the opportunity to earn 4 college credits which can be utilized at any college or university. The credits will assist with the college admissions process and reduce the overall cost of your teacher preparation program in college. You will also participate in Educators Rising, which will provide you with training opportunities as well as a chance to compete in local, state, and national competitions. **Formerly Foundation in Education**

CTE896 Careers in Education II Honors Grades 11-12 Double Period Year-long course

Do you want to learn how to meet the specialized needs of students in the classroom? In this course you will learn how to effectively teach students with a variety of different abilities, challenges, and talents. Your time will include instruction in the classroom and hands-on internships in classrooms throughout the school district. You will have the opportunity to earn college credits which can be utilized at any college or university. The credits will assist with the college admissions process and reduce the overall cost of your teacher preparation program in college. You will also participate in Educators Rising, which will provide you with training opportunities as well as a chance to compete in local, state, and national competitions. **Formerly Teacher Preparation**

CTE899A Internship in Education Grade 12 Double Period Year-long course

Would you like additional hands-on experience working directly with students in the classroom? This course will provide you with an extended internship in a field site of your choice. Are you trying to decide between two different levels or subject areas? You will have the opportunity to divide your time between two different classroom placements to help you determine your preference for your first teaching position. The course will be split between your internship classroom and the Careers in Education classroom. The Careers in Education classroom instruction will include lesson development and collaboration with other interns. You will also participate in Educators Rising, which will provide you with training opportunities as well as a chance to compete in local, state, and national competitions.
Required Preparation - Careers in Education I Honors and Careers in Education II Honors

ADDITIONAL ELECTIVES IN EDUCATION

CTE893H **Working with Children Honors** **Semester course**

Are you interested in working with children while in high school or beyond? This course will prepare students for several different jobs available to high school students who enjoy working with children. Students will learn skills essential to successful work with children including safety, developmentally appropriate activities, and supervision. They will learn how to apply for jobs as babysitters, camp counselors, assistants at after school programs, childcare, and sports official positions. Students will work towards certifications in babysitting, CPR and First Aid.

COMPUTER SCIENCE

Learn fundamental concepts and processes of computer science through fun learning experiences that include graphical and computational programming. Students will learn and apply programming techniques utilizing multiple programming languages and tools to prepare them for a Computer Science major in college or entry level jobs in computer programming.

COMP627 **Computer Science I** **Grades 10-12** **Double Period**  **Year-long course**

Computer Science 1 is intended to be a great place for those new to programming as well as those with prior knowledge who wish to continue their exploration and learning. Students will learn computer program development techniques, computational thinking, troubleshooting, algorithm development, data structures, and graphics using languages current to the industry. They will learn how to develop a software product from concept definition to requirements and testing methods. Students will learn computer organization, how the Internet works, and the societal impacts of computer science.
Prerequisites: Successful completion of Algebra I and ICT Literacy or middle school Computer Science.

COMP635 **Computer Science II** **Grades 11-12** **Double Period**  **Year-long course**

Students will learn the fundamentals of cybersecurity. Students will learn foundational cybersecurity topics including networking fundamentals, software security, system administration and the basics of cryptography and programming. This is not a coding intensive course, but students will learn basic SQL and JavaScript, and will utilize basic HTML and JavaScript within specific contexts while being provided with support within those contexts. Students will modify existing code and run it in the browser, investigate cyber related topics and reflect on them and discuss them, create digital presentations, and engage in in-person collaborative exercises with classmates. Students will be able to modify text-based programs in HTML, JavaScript, SQL and simulate shell commands. Students will also participate in simulated cyber-attacks on safe sites in order to learn how to mitigate cyber-attacks. Students will be able to document their processes and discuss best practices for preventing cyber-attack The course is highly visual, dynamic, and interactive, making it engaging for those new to computer science.
Prerequisites: Successful completion of Computer Science I

ADDITIONAL ELECTIVES IN COMPUTER SCIENCE

COMP632 **Coding and Gaming** **Grades 9-12**  **Semester-long course**

Coding and Gaming is aimed at the novice computer user; it is designed to be a rewarding and fun learning experience for students who have no prior programming knowledge. Students will explore the fundamental introductory concepts and processes to computer programming. They will learn the building blocks for coding in a variety of ways including building their own computer games. Students will investigate multiple computer programming tools. This class will help students feel confident in their ability to write small programs that allow them to accomplish useful goals while providing them with a solid background of standard computer logic to enhance problem-solving skills.
Prerequisite: Successful completion of ICT Literacy or Middle School Equivalent and Algebra I.

CONSTRUCTION

Exciting careers in construction begin with the skills students learn as part of Construction. Students learn to estimate materials and perform the layout and construction themselves. This two-year program includes site selection, surveying, excavation, design, foundation work, framing, insulation, plumbing, wiring, dry wall, painting, and finish trim work. Students leave with skills that can put them way ahead of the competition for construction jobs. Students have the opportunity to participate in the OSHA 10 training and become certified.

CTE883 Construction I Grade Levels 10-11 Double Period Year-long course

In this course, students will practice their construction skills on small utility buildings or small houses. These future tradesmen will attend demonstrations, lectures, Skills USA and will also receive hands-on experience through building construction. All phases of the housing industry will be explored. Guest speakers will help students discover what employment opportunities await them after graduation. Students should leave this course with the ability to construct sheds and other small buildings, as well as perform basic household repairs. Upon teacher recommendation and successful completion of all competencies student can move on to Construction II.

CTE885 Construction II Grade Levels 11-12 Double Period Year-long course

In this course, students will be led through the different phases of construction. Students will learn about site preparation, footings and foundations, framing, roofing, and interior and exterior finish. Students will be introduced to basic topics in concrete work, masonry, electrical wiring, and plumbing. Upon successful completion of this course, students will have the entry-level skills necessary to begin a carpentry career or progress to a postsecondary institution. Preparation: Construction I. Students will participate in OSHA 10 training and receive their OSHA 10 card upon successful completion of the program.
This course contains embedded mathematics and may be used to fulfill the four-credit math requirement.

ADDITIONAL ELECTIVES IN CONSTRUCTION

CTE701 Woodworking Semester course

Students will learn the safe use of hand tools, small power tools, the band saw, jig saw, and lathe. Finishing techniques will also be covered, allowing students to complete independent projects. Students will be able to utilize these skills to assist them in basic home repairs. To be successful in this course, an understanding of how to perform basic math computations is essential. Woodworking is an exploratory course for grades 9 & 10. Priority will be given to freshmen and sophomores during the scheduling process. Juniors and seniors will be given consideration on a space available basis.

CULINARY ARTS

The Culinary Arts program prepares students for an exciting career in the food service industry. Students learn cooking and baking techniques; creating a balanced menu; and executing customer service skills at The Palmer Center's brand new "Barnyard Cafe". In this two-year program, students learn about proper storage and sanitation procedures, nutrition, and basic knife skills. Students have the opportunity to become ServSafe certified while in high school. Students have the knowledge and confidence needed to succeed in the workplace or to further their education in Culinary Arts.

CTE890 Culinary Arts I Grades 10-11 Double Period Year-long course

The Culinary Arts I program prepares a student for a career in the food service industry. Students train in the basics of planning, purchasing and preparing food in quantity. Students learn cooking techniques and preparation, selection and use of utensils and equipment and safety and sanitation techniques involved in food preparation. Provide students with entry-level career skills and basic knowledge of how professional kitchens are set up and managed. Demonstrating your skill, knowledge and professionalism in the food service industry gives you a competitive edge over other chefs.
Students MUST successfully complete all year one competencies to advance to year two.
Completion of year two of this program may be used to fulfill the four-year math requirement.

CTE891 Culinary Arts II Honors Grades 11-12 Double Period Year-long course

Culinary Arts II students study kitchen design and layout, food costs, inventory management and cost controls. Students will further develop their understanding of skills and theories by applying what they learned in Culinary Arts 1. Instruction will include sanitation standards and procedures, baking, mother sauces, classical cuisine, and garde manger. They learn how to plan for and serve at banquets. They receive assistance during the year in making postsecondary plans and/or obtaining employment in the food service industry. This assistance will continue after graduation if needed.
Students will have the opportunity to earn up to 6 college credits through Nashua Community College for Basic Food Preparation and Food Safety & Sanitation as well as nationally recognized ServSafe certification.
Prerequisite: Successful completion of Culinary Arts I.
This course contains embedded mathematics and may be used to fulfill the four-credit math requirement.

DIGITAL MEDIA

In the digital media program, students develop a good theoretical understanding of the systems and equipment used in the graphics and web technology design industry. Students work with a variety of programs used to create digital media including Photoshop; Illustrator; InDesign; Dreamweaver; Flash; HTML5; CSS33 and an introduction to digital music mixing and movie creation.

COMP623 Digital Media I Grades 10-12 Double Period Year-long course

This year-long course introduces students to some of the basic graphic design techniques used by commercial, visual, print, web, online game and app designers. Digital Media 1 provides in-depth instruction in Adobe Photoshop and Illustrator. Students will learn how to use the fundamentals of layout, design, typography and composition in the digital realm. They will integrate a variety of drawing, painting, editing, and retouching tools with special emphasis on how to create/achieve sophisticated, real-world results including posters, programs, logos and brochure designs. It will encourage students to use flexibility and imagination in their growing repertoire of computer skills, providing better productivity, and therefore, employability. Real-world critical thinking and implementation are a hallmark of this course. As such, each student will be required to create both a physical as well as an electronic portfolio of accomplishments throughout this course.
Prerequisite: Successful completion of ICT Lit.
Successful completion of Digital Media I will meet the fine arts requirement for graduation

COMP624 Digital Media II Grades 11-12 Double Period Year-long course

By completing this year-long capstone course students are preparing to continue their passion of becoming a user/developer of media technologies, for print and digital graphic design, illustration, and audio-visual production. DM2 provides students a chance to experience the day to day life of being a creative. Students will learn how to integrate the skills they have learned thus far in Photoshop, Illustrator, InDesign, Premier Pro, and many other cutting edge Adobe Creative Suite programs to develop layout and design spaces for both print and web as well as visually engaging audio/visual creations. Students will continue to build on their image, illustration, audio/visual editing, and text skills to achieve professional design variations for multiple forms of digital media. Students will also explore communication with outside clients to create custom works. Students will explore advanced integration of multiple media technologies utilized in advertising and marketing agencies, production houses, and media-focused departments within larger corporations. Real-world critical thinking and implementation are a hallmark of this course. As such, each student will be required to continue to add to both a physical as well as an electronic portfolio of accomplishments that they started in DM1.

Prerequisite: Successful completion of Digital Media I.

ADDITIONAL ELECTIVES IN DIGITAL MEDIA

COMP607 Introduction to Digital Media: Semester course

This semester course in the Digital Media realm is for students who want to explore computer technology through movies and music. Students will explore the making of movies using Adobe Premiere. Students will be exposed to the introductory issues relative to the visual development of ideas as well as how the audio affects the visual. Not only will they be exposed to script and storyboard generation, creation and editing of movie clips to create a final product, but also the creation of music using existing clips and their own musical compositions in Garage Band.
Prerequisite: MUST have successfully completed ICT Lit.

DRAFTING AND DESIGN

Learn basic and advanced drafting skills using the following software: AutoCAD, Inventor and REVIT. Manufacture designs with our 3D printer using 3D Parametric software. Students design innovative projects that incorporate structural design and advanced technological design. Students are prepared for college and entry level careers in drafting, mapping, construction, manufacturing, or engineering.

CTE702 Drafting & Architectural Design I Grades 10-12 Double Period First Semester

This introductory level course in drafting covers the use of Inventor 3D parametric modeling software & REVIT Architectural Modeling Software. The students will be introduced to techniques used by drafters & engineers. Students will be able to visualize parts and spatial relationships as well as design pictures utilizing multi-views and the four basic shapes. This course provides a basic understanding of drafting for any student interested in a career in architecture, drafting, mapping, construction, manufacturing, or engineering. Students will examine drafting techniques as it relates to auxiliary views, sectional views, fasteners, gears, and working drawings. This course is also valuable for students wishing to obtain jobs in the machine, electronic, sheet metal, and building industries. Also, students will learn how to measure and reverse engineer parts. To be successful in this course, an understanding of how to perform basic math computations is essential.

Prerequisite: Successful completion of ICT Literacy.
Students successfully completing Drafting and Design I & II are eligible to earn 3 college credits for Technical Drawing at Nashua Community College.

CTE704 Drafting & Architectural Design II Honors Grades 10-12 Double Period Second Semester

This course broadens the scope of working with architectural drafting REVIT (AutoCAD™) as it relates to designing a single-family house. Computers, essential to drafting in the 21st century, will be incorporated into the design aspects of the course. This course will help students advance their drafting skills while focusing on architectural and interior design applications. Students will benefit from learning to generate basic home designs to assist in home remodeling or placement of furniture within a home. A scale model will be drawn and physically constructed to demonstrate the students' practical application of mechanical drawing skills. Students will continue their draftsmen skills development by completing individualized projects incorporating structural and advanced technological design. Engineering skills will be stressed. Software used in this course include Inventor™ & REVIT. This is a project-based curriculum and students will be required to work independently.

Prerequisite: ICT Literacy and successful completion of Drafting & Design I with a B average or better or permission of the Department Chair. This course contains embedded mathematics and may be used to fulfill the four-credit math requirement.

ENGINEERING (PROJECT LEAD THE WAY)

Project Lead The Way (PLTW) is a national program where students understand the relevance of math and science by engaging in hands-on, real world projects. Students understand how the skills they are learning in the classroom can be applied in everyday life. Students develop many of the skills professionals need to succeed in today's economy. Some examples include problem solving, research and design, and data collection and analysis skills. It also provides study skills for time management as well as resource management. Students gain an understanding of the potential impact their ideas and products may have on society. It is a solid foundation for college study in Engineering.

CTE755 Introduction to Engineering Design Grade 10-12 Double Period First Semester

Students will develop three-dimensional solid models by sketching simple geometric shapes and using a solid modeling computer software package. Students will work within a problem-solving design process and learn how it is used in industry to manufacture a product. Use a Computer-Aided Design System (CAD) & Inventor™ (CSG) to analyze and evaluate the product design. The techniques learned and equipment used is state-of-the-art and currently being used by engineers throughout the US.
Prerequisite: Successful completion of ICT Literacy and Algebra 1. Note: Freshmen are eligible if they have completed the middle school PLTW courses and with department chair approval.

CTE756 Principles of Engineering Grade 10-12 Double Period Second Semester

Students will develop the basic skills used in the engineering field to solve problems. They will use a Computer-Aided Design System (CAD) & Inventor™ (CSG) to analyze and evaluate the product design. The techniques learned and equipment used is state-of-the-art and currently being used by engineers throughout the US. The use of math as well as modeling skills will be employed to solve problems along with skills honed from IED.
Prerequisite: Successful completion of Algebra 1 and Introduction to Engineering Design ICT Successful completion of this yearlong course will satisfy one elective science requirement for graduation.

HEALTH SCIENCE

The Health Science program requires entering students to have strong math and science skills. It is a two-year program designed to introduce potential future health professionals to theory and skills in preparation for careers in the field. Year two is an Honors-level course where continuing students should expect more rigor. Students explore infection control, safety measures, health information technology, healthcare history, careers, legal and ethical issues, communication skills, anatomy, physiology, and pathophysiology. Students may participate in the Licensed Nursing Assistant Certification Program and become eligible to work upon graduation as a certified and licensed LNA. Students may choose a general clinical experience where students observe professionals at community facilities while accruing valuable observation time relative to the student's fields of interest (examples not limited to nursing, physical therapy, occupational therapy, medical assisting, and dental hygiene). CPR certification if offered and medical terminology is embedded throughout the course. Eligible students may earn college credits. Students may interact with elders attending the Gateways Adult Day Service Program located at the Palmer Center. HOSA Future Health Professionals, a co-curricular organization that is 100% healthcare, reinforces team building, leadership, and soft skills necessary in healthcare. HOSA FHP members may become eligible to attend and compete at state and international levels events. Upon successful completion of the Health Science Program, students are well prepared to further pursue healthcare careers and/or employment.

CTE886 Health Science I Grades 10-12 Double Period Year-long course

Health Science I is designed for junior high school level students as an introductory course for students interested in healthcare fields. Students will be introduced to topics such as the history of healthcare, healthcare delivery systems, technology trends, healthcare economics, safety practices, infection control, and significant medical terminology. Anatomy, physiology, and pathophysiology are be covered, while more extensively in level II. Healthcare skills are introduced and practiced in our new lab facility. Curriculum topics and skills prepare students for careers in areas such as nursing, physical and occupational therapy, medicine, and other careers of interest. Students will have hands -on opportunities to assist disabled and elderly clients in cooperation with our on-site Adult Day Service Program. Students may be certified in CPR/AED during this year. Leadership, team building, community service, and soft skills are reinforced as members of HOSA-Future Health Professionals. Students may be eligible to participate and/or compete using their knowledge and skills at the HOSA leadership and competitive events conferences at state and international levels.
This course is designed for Juniors. Students' math and science grades are considered in the acceptance process.
Prerequisites: A grade of B- or better in Biology is required. An excellent attendance record and an overall GPA of 3.00 or better will also be considered for acceptance into the program. Students must have a B-, instructor's approval, and successfully complete all competencies to continue on to year two.

CTE888 Health Science II Honors Grades 11-12 Double Period Year-long course

Health Science II Honors continues to expand knowledge and experience with significant anatomy, physiology, pathophysiology, medical terminology, and real-world clinical experiences. Medical terminology continues to be embedded in the program, and students may become eligible for college credit. Level II students may take one of two experiential tracts offered, LNA or General Clinical. Licensed Nursing Assistant Program completers may earn certification, become eligible to sit for the NH State Licensing written and practical exams prior to graduating, and become employment eligible immediately following graduation. General Clinical students may intern with healthcare professionals at local community healthcare facilities as positions become available relative to their paths of interest (not limited to physical therapy, sports medicine, exercise science, medical assisting, athletic training, dental hygiene, or nursing). Students may continue to practice their skills at the Gateways Adult Daycare Facility at the Palmer Career and Technical Center. CPR certification is through the American Red Cross. Soft skills, leadership, and teambuilding skills are learned in class and reinforced through school and community projects, fundraising efforts, and officer positions offered through our co-curricular CTE organization, HOSA Future Health Professionals. HOSA State and international level competitive event eligibilities increase through knowledge and experience gained in level II of the program.
Prerequisites: Due to the academic rigor and competitive nature of the program it is recommended applicants have an overall GPA of 3.00 or higher. Students must earn a grade of B- or better in year 1 and satisfactorily complete all competencies to continue on to year two

ADDITIONAL ELECTIVES IN HEALTH SCIENCE

CTE901 Care and Support Single Period Semester course

Are you interested in working with the elderly or individuals with intellectual/developmental disabilities while in high school or beyond? This course will prepare students for several different jobs available to high school students who enjoy working with others with needs. Students will learn skills essential to successful work including safety, developmentally appropriate activities,

and supervision. You will learn how to apply for jobs as caretakers, assistants, and direct support professionals. Direct support professionals work one-to-one and in small groups to support individuals with intellectual or developmental disabilities and/or senior citizens.
Students who successfully complete this course will be certified by Gateways as a Direct Support Professional, allowing them to apply for positions at local Gateways facilities, supporting others in need.

HEAVY DUTY MECHANICS

Prepare to tackle countless mechanical challenges on the job and in everyday life. Learn useful skills in gas and arc welding, hydraulics, and engine overhaul. Using both hand and power tools, investigate the areas of engines, transmissions, power trains, cooling systems, ignition wiring, and fuel systems as students explore preventive maintenance, troubleshooting techniques, and equipment repair on gas and diesel equipment. In the second year of the program students troubleshoot diesel engines with a state-of-the-art diagnostic computer. With a solid experience in mechanics, students are better prepared to continue their education or go right to work after graduation. Students have the opportunity to participate in the OSHA 10 training and become certified.

CTE836 Heavy Duty Mechanics I Grades 10-11 Double Period Year-long course

This course is designed to give students an understanding of large diesel and gasoline engines, as related to construction and agricultural equipment. Subject areas include equipment operation and maintenance, theory of engine operation, engine overhaul, hydraulics, power train, operation, welding, diagnostics, and troubleshooting. Safety will be stressed in all aspects of the course. Students will apply what they learn by gaining practical experience in the heavy equipment shop. Students can apply what they learn to help them with careers in mechanics, agriculture, construction, or trucking.
Students MUST successfully complete all year one competencies to advance to year two.
Completion of year two of this program may be used to fulfill the four-year math requirement.

CTE838 Heavy Duty Mechanics II Grades 11-12 Double Period Year-long course

This course allows students to apply and expand upon skills and knowledge gained in the first year of the program. Students will work on construction and agricultural equipment performing repair, overhaul, diagnostics, and troubleshooting. Students will become independent through projects requiring record keeping, disassembly, analysis, replacement of parts, and final reassembly to a working condition. Students will troubleshoot basic diesel engine malfunctions using the latest computer technology. This course will help prepare students for an entry level job in heavy equipment maintenance or a technical school program in mechanics.
Prerequisite: Successful completion of Heavy-Duty Mechanics I.
Upon successfully completion of Small Engines, Welding I and II, and Heavy-Duty Mechanics I and II with a C average or better students may be eligible for credit waivers at White Mountain Community College.
This course contains embedded mathematics and may be used to fulfill the four-credit math requirement

ADDITIONAL ELECTIVES IN MECHANICS

CTE829 Small Engines Semester course

This course will introduce students to the maintenance and repair of small gasoline engines, such as those found on lawnmowers, roto-tillers, and snow blowers. This course will benefit the future homeowner as well as the individual seeking a career in mechanics. Major topics to be covered will include principles of operation, small engine specialty tools, engine disassembly and assembly, applications of small engine power, and the use of parts and repair manuals. Grade 9 & 10 students will be given priority when scheduling. Grades 11 & 12 will be allowed to take the course if there is room. Exception: Grade 11 or 12 student matriculating to White Mountains Community College.

NATURAL RESOURCES

If students choose to enter a career in the outdoors upon graduation, they are ready with an understanding of natural resource management and conservation, forest ecosystem processes, environmental law and economics, forest health issues, and forest and wildlife ecology. The program utilizes the 100 plus acres of Alvirne's registered tree farm as a laboratory for operating forest equipment, managing, and studying forest ecosystems. Graduates are well prepared to gain entry level work in resource conservation or arboriculture, or to continue their education at the postsecondary level in forest and wildlife management, or environmental science and conservation.

CTE862 Forest and Wildlife Management I Double Period Year-long course
Grade Levels 10-11

This course is designed for students with an interest in a career in the outdoors. Through real-world hands-on projects, student will actively manage Alvirne's 126-acre registered NH Tree Farm. Course activities will immerse students in forest ecosystem science and management activities including tree and shrub identification, forest health issues, wildlife studies, natural resource inventories, recreation and habitat improvements, and the harvesting and production of forest products including maple syrup production, lumber, and cordwood. Operation and maintenance of machinery is a significant component of this course and includes chainsaws, tractors, portable sawmill, grapple loader, wood splitter, and wood chipper. Other topics cover history of conservation, environmental laws, and career readiness activities through involvement in the FFA. Considerable amount of time will be spent outdoors in this course and steel toed boots are required. This course prepares students for entry level work or further education in a variety of outdoor occupations in the broad field of environmental conservation science and management, and the tree care industry.

CTE864 Forest and Wildlife Management II Double Period Year-long course
Grade Levels 11-12

This course is a continuation of Forest & Wildlife Management I. In year two, second year students will be required to demonstrate foundational skills and knowledge and build upon them through completion of more independent learning projects. Year two students will be involved in the development and implementation of the Tree Farms Forest Management Plan and community wide conservation projects, including conducting natural resource inventories, remote sensing and satellite image interpretation, resource mapping with drones, Geographic Information Systems (GIS), global positioning systems (GPS), and other cutting-edge technologies used in the field of forest and wildlife management.
*** Successful completion of year two of this program may be used to fulfill the fourth-year math requirement.**

CTE870 Natural Resources I Grades 10-12 Double Period Year-long course

To conserve, manage, and protect the biodiversity of our planet is critical for human survival. The management of Earth's natural resources is essential to keeping our communities safe from need in the 21st century, ensuring we have water to drink, food to eat, air to breathe, and materials for shelter. Activities covered in this course include identification and classification of plants and animals, forest & wildlife ecology & management, invasive species, biodiversity & habitat loss, climate change, and alternative energies. Considerable class time will take place outdoors where students will be involved in hands-on learning in Alvirne's 126-acre registered NH Tree Farm. Students will be introduced to a variety of tools and technologies used in natural resource management and conservation, including remote sensing with satellites and drones, computer-based mapping with Geographic Information Systems (GIS), and handheld Global Positioning Systems (GPS).

ADDITIONAL ELECTIVES IN NATURAL RESOURCES

CTE842 & 843 Retail Florist I and II Semester 1 & 2 course

In these courses students will learn the basics of floral design. Students will learn the principles of design that will enable them to create floral arrangements including triangle, round, long and low, and holiday pieces. The basic corsage and wedding bouquet designs used in the floral industry will also be introduced. The students will be provided the opportunity to perfect design skills and gain practical knowledge to help them succeed in working in, managing, or establishing a flower shop.
Successful completion of both semester courses will satisfy the art requirement for graduation.
Retail II prerequisite: Successful completion of Retail I

CTE845 Growing Your Future Semester course

This exciting new course is designed to introduce concepts of modern farming. Students will work with their hands and explore growing methods that can include hydroponics, aquaponics, or aeroponics. They will design and build the systems for growing in this burgeoning field. You will also work with our new chicken coop and harvest fresh eggs. This class is for students who like to work with their hands and enjoy, or want to explore, growing plants and learning about raising chickens.

CTE846 Advanced Floral Design **Semester course**

This course is designed for students who have successfully completed Retail Florist I and II. In this course students will have the opportunity to plan, construct, and perfect their design skills. This course is designed to examine floral design in relation to contemporary designs, business practices, specialty items, creativity, and careers in the floral industry. Designs will include holiday and wedding arrangements. Students will also explore the varied management practices and approaches to running a business while operating Blooming Bronco's Flower Shop.

Prerequisite: Retail Florist I and II

VETERINARY SCIENCE

The Veterinary Science program requires entering students to have strong math and science skills. As a fast-paced and academically challenging program, Veterinary Science prepares students for further education or employment in the small and large animal health care field such as veterinary assisting, technology, and medicine. Students will gain knowledge in areas such as safety, the veterinary profession, medical terminology, animal behavior, patient/client relationships, and record keeping. More advanced topics include anatomy and physiology, animal health/disease, nutrition, and immunology. Hands-on experience is obtained in our small animal veterinary clinic as well as our school farm in areas such as handling/ restraint techniques, kennel management, dehorning, laboratory veterinary skills, and physical exams. Students will also acquire skills during our annual vaccine and spay/neuter clinics held in our veterinary clinic. Students enrolled in the Veterinary Science Program will have the opportunity to earn both high school credits and college credits through Great Bay Community College and SUNY at Cobleskill.

CTE822 Veterinary Science I Grade Level 10-11 Double Period Year-long course

The first year of this two-year program introduces students to the applied principles and practices used in small and large animal related business with a special emphasis on veterinary medicine. Students will explore concepts through hands-on experiences working with kennel animals such as chinchillas, rabbits, guinea pigs, ferrets, rodents, and birds along with our large animal species including donkeys, dairy cattle, and horses. Topics will also include safety, animal behavior, breed and species identification, animal health, welfare and client relations. Through continuous exposure to animals on the school farm and small animal facility, students will develop hands on skills in handling, restraint, grooming, feeding, cleaning/ disinfection, training, and record keeping. Students will develop skills in professional telephone etiquette and customer service. Students will also be required to complete 12 hours of community service in an animal related service project. Students enrolled in the Veterinary Science Program will have the opportunity to earn both high school credits and college credits simultaneously through Great Bay Community College and SUNY at Cobleskill. The Veterinary Science curriculum will also enable students to develop their leadership skills and veterinary skills and opportunities through their involvement in the State and National Youth FFA organization including participation the Veterinary Science Career Development Event (Competition). This course will provide students with entry levels skills and knowledge for employment as veterinary assistants, pet shop workers, humane society assistants or assistant groomers.

***Prerequisites- Successful completion of Biology or teacher approval required.**
Sophomores considering taking Vet Science <u>must</u> have teacher approval prior to enrolling.
Algebra 1 skills will be required in this program.
Students MUST successfully complete all first-year competencies to advance to the second year of this program.

CTE826 Veterinary Science II Honors Grade Level 11-12 Double Period Year-long course

In the second year of the Veterinary Science program, students will continue to build on their knowledge and skills gained in the first year. Using the kennel's small animals and large animal species, advanced topics in veterinary science II will include nutrition and anatomy, health and disease and veterinary medical terminology and entrepreneurship. Hands-on skills will be developed in feed selection, laboratory procedures (i.e., fecal analysis, blood and urine analysis), animal health and disease prevention, such as vaccinations, deworming, grooming, physical exams, office skills, equipment identification and business management. Students will also be required to complete 12 hours of community service in an animal related service project. Students enrolled in the Veterinary Science Program will have the opportunity to earn both high school credits and college credits simultaneously through Great Bay Community College and SUNY at Cobleskill. The Veterinary Science curriculum will also enable students to develop their leadership skills and veterinary skills and opportunities through their involvement in the State and National Youth FFA organization including participation the Veterinary Science Career Development Event (Competition). With the completion of this program, a student's potential for success in post-secondary education /an entry level job and/or in an animal science field is greatly enhanced. Students successfully completing Veterinary Science I and II with a C+ or better can earn 2 college credits at Great Bay Community College through Project Running Start or may earn articulation credits toward SUNY at Cobleskill.
Prerequisites- Successful completion of Veterinary Science I.

A chemistry course taken previously or concurrently is <u>strongly</u> recommended for Veterinary Science II.

ADDITIONAL ELECTIVES IN VETERINARY SCIENCE

CTE809 Canine Science **Semester 1 course**

This course introduces students to the wide world of dogs. Included topics are handling and restraint, history and breeds, instinctive and learned behavior, anatomy, selection and responsible ownership, as well as an introduction to grooming. The course will be taught with many projects and demonstrations. Hands on participation in safe attire (pants and closed toe shoes) is required during class. Some students will be required to stay after class to work with instructor's animals for projects if they can't access a pet at home.

CTE813 Pet Care (Companion Animal Science) **Semester course**

Do you own a pet or hope to some day? Would you know what to look for in a healthy and happy pet or where the best place is to find one? Do you know how to give the best care possible to your family addition whether they are cats, guinea pigs, rodents, birds, fish, reptiles, rabbits, chinchillas, or ferrets? Take this opportunity to learn how to choose and care for small animals, and meet the animals in the Agri-pet kennel

CTE816 Equine Science **Semester 2 course**

Do you love horses? How about the relatives of horses? In this semester long course, students will have the opportunity to work with Angel, Alvirne's Haflinger horse, and Alvirne's Mediterranean Miniature donkeys: Albie, Skylar, Bernie and Wally. Throughout the semester, students will be exploring such topics as equine evolution, history, future industry trends and equine careers. As part of the management team, students will be learning and applying their knowledge about safety, handling, training, anatomy, selection/conformation, and equine health. As we proceed throughout the class, students will practice what they learn by performing health evaluations, parasite prevention, vaccinations and proper hoof care. Students will have the opportunity to test their knowledge and skills along with other students from different schools in the state at the annual FFA horse-judging competition which is held every spring. Come and discover more about our beautiful, magnificent companions that so many people have come to love.

WELDING AND FABRICATION

CTE835 Welding & Fabrication I **Grades 10-12** **Double Period** **Year-long course**

Students will learn to arc weld in the flat position, utilize an oxy-acetylene torch for cutting metal and learn basic MIG skills. Through various exercises students will select the proper welding materials and demonstrate appropriate techniques. This course is useful for any student planning a career in the fields of mechanics, engineering, agriculture, construction, machine trades, or civil technology. Students MUST successfully complete all competencies to advance to Welding II. Grade 10 & 11 students will be given priority when scheduling.

CTE837 Welding & Fabrication II **Grades 11-12** **Double Period** **Year-long course**

In year two of the welding program students will delve into advanced MIG, TIG, and stick welding skills. Using torch and plasma cutters students will develop their own self-directed projects to encourage growth of welding skills and to connect program contents to real life applications. Students will use oxy-fuel, shielded metal arc, metal inert gas, gas tungsten arc, gas metal arc, and plasma metal arc equipment to develop real-world skills in a controlled environment. Students will build partnerships with business and community members to help master skills.
Prerequisites: Successful completion of Welding I

ADDITIONAL ELECTIVES IN WELDING

CTE832 Introduction to Welding **Grades 9-12** **Semester course**

This semester course introduces students to the basics of welding through the use of stick welding and cutting torches. Students will work on developing skills through a series of projects that can prepare them to advance into the welding program.

AREA CTE Opportunities

Alvirne High School students can attend Career and Technical Education (CTE) courses at Nashua North, Nashua South, or Milford High School. These courses typically run at the beginning and at the end of the school day. Please review the links below to see what programs are available at each site.

Nashua CTE Programs

https://www.nashua.edu/Page/1596

Milford CTE Programs

https://mhs.milfordk12.org/apps/pages/ATC/CTE

ALVIRNE HIGH SCHOOL COUNSELING DEPARTMENT

NATIONAL COLLEGIATE ATHLETIC ASSOCIATION (NCAA)
Eligibility Center

Prospective Student-Athlete Fact Sheet

Any student planning to enroll in a Division I or Division II College or University and intends to participate in athletics must register with the NCAA Eligibility Center.

Go to https://web3.ncaa.org/ecwr3/
Click Enter Here in the NCAA College Bound Student Athlete section
Check the Registration link on the left side of the page
Complete the registration form listed as Student Release Form or Registration Form for US Students and pay the required fee.
The Alvirne High School Code is **300-280**
You must request that an official transcript be sent from the Counseling Office.
You must have your official SAT scores sent to the NCAA using the code ***9999.***

The suggested time to initially complete this on-line registration form is after the student's junior year of high school.

It is the responsibility of the high school student to know which high school courses have been approved by the NCAA Eligibility Center. Approved Alvirne courses are listed at the NCAA Eligibility Center website.
https://web3.ncaa.org/hsportal/exec/hsAction?hsActionSubmit=searchHighSchool
Use school code 300-280 and review all courses that have been accepted and/or denied. If a student does not enroll in the appropriate core courses, he may become ineligible to participate in athletics at the college/university level. (For example: **All workshop level courses, Visual Communications through Screens, Scripts, and Social Media, Pre-Algebra, and Essentials of Geometry and Algebra 1** are not approved NCAA recognized courses. If an Alvirne senior enrolls in this course as one of his/her two semester English courses, the student must take a third semester of English at Alvirne during his senior year to be eligible for college/university athletics in Division I or II Institutions.)

Courses approved by the NCAA will have this symbol next to them:

For more information, see your School Counselor

Alvirne High School
200 Derry Road
Hudson, NH 03051
603.886.1260
603.816.3513 fax
www.sau81.org/ahs