



NEWBURGH FREE ACADEMY

# CHARTING YOUR COURSE

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## Counselors by Building

<b>NFA MAIN CAMPUS 845-563-5500</b>	<b>NFA NORTH CAMPUS 845-563-8410</b>	<b>NFA WEST CAMPUS 845-568-6560</b>
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The NFA Counseling Web Site may be found at <http://www.newburghschools.org/schools/nfa/guidance.php> for all general information, course offerings contact information. click on Charting Your Course within the Counseling and Guidance home page for complete NFA course listings.

# Our Campuses

Newburgh Free Academy is a comprehensive high school offering several elective opportunities. In addition to a New York State Regents Diploma, many of these electives offer students opportunities to take New York State licensing exams. NFA Main and North campuses offer advanced placement and honor-level courses. Regardless of campus choice, all NFA students may participate in all interscholastic sports and club activities as per district policy.

## **NFA MAIN CAMPUS**

The Campus is located at 201 Fullerton Avenue in the City of Newburgh. NFA Main offers a comprehensive set of rigorous coursework including early college experiences such as Advanced Placement courses, the Marist College Smart Scholars Program, and coursework through Mercy College and SUNY Albany. Additionally NFA Main Campus houses Career and Technical Education (CTE) courses and specialized programs as follows:

Architectural/Engineering Design, Automotive, Barbering, Ceramics, Cosmetology, Culinary Arts, Fashion, Lifetime Wellness and Fitness, Performing Arts, Visual Arts, Welding, & AFJROTC.

## **NFA NORTH CAMPUS**

The Campus is located at 301 Robinson Avenue in the City of Newburgh. NFA North offers a comprehensive set of rigorous coursework including early college experiences such as P-TECH, Advanced Placement courses, and coursework through Mercy College and SUNY Albany. Additionally NFA North Campus houses Career and Technical Education (CTE) courses and specialized programs as follows: AFJROTC, Criminal Justice, Health Related Services.

## **NFA WEST CAMPUS**

NFA West seeks to cultivate student self-esteem by offering a non-traditional, educational experience. NFA West Campus is a school of choice. Honoring student choice paves the way for students to take charge of their education. The Goal of this campus is to provide positive learning experiences that are flexible and personalized. Not all students are successful in a traditional environment. We strive to provide opportunities for academic success through non-traditional approaches to learning in a supportive environment.

## **NFA EVENING CAMPUS**

NFA Evening Campus provides additional opportunities and flexibility for students who may have fallen behind in their coursework or are interested in accelerating their coursework by taking additional courses. Students in the Evening Campus can attend as a stand alone experience or may be dually enrolled in both day and evening programming. Students who attend the Evening Campus can participate in credit accrual, credit recovery, and quarterly recovery opportunities that are customized to meet the individual goals of each scholar. Additionally students may work toward a high school equivalency TASC credential. Other benefits of the evening school include:

- Flexible schedule for those scholars who need it (i.e. work, interest, personal commitments, etc)
- Increased access to AP, College, CTE, and recovery opportunities
- Extended block periods allow for in depth study of the subject and establishing strong faculty relationships
- Student centered focus on academic and life plans and mentorship opportunities
- Graduation portfolios
- Students as active community partners
- Student self-awareness and active partners in their educational plan

# Understanding Programs of Study

The Program of Studies has been designed to support academic, career and college planning by delivering clear descriptions of course offerings. It is organized by subject with a special section describing in detail the various Career and Technical Education opportunities that NFA has to offer its scholars. Scholars and parents should review this guide carefully, with the intention of exploring their interests and abilities and furthering their educational and vocational goals through their selected academic program. Through careful reflection and personalized, thoughtful course selection, students can realize the school's mission of Inspiring students to become tomorrow's leaders beyond Academy Field.

## **COURSE SELECTION**

In January, counselors will start to meet with students to review their current academics, personal goals, and career plans. During this meeting, students will review their course choices with counselors. Counselors will work with students to align their choices with their future career interests and encourage them to select an academically rigorous course load based on academic performance. If parent(s)/guardians would like to participate in this process, please contact your child's school counselor. Some courses may or may not be offered based upon enrolment. Not all requests will always fit in a given schedule. In this case, students will prioritize choices and identify options if a specific course cannot fit in their schedule.

## **PREREQUISITES**

Course offerings often build upon one another's course content. Scholars need to establish a firm foundation before moving onto more advanced work, certain courses require prior preparation. Scholars should be sure they have the prerequisites for a course before selecting that course.

## **VALEDICTORIAN/SALUTATORIAN**

Only students in attendance for a minimum of two years at Newburgh Free Academy are eligible for consideration.

## **SENIOR RANK**

- A. Based on all final grades of high school courses earned until the end of Grade 11 (six semesters, including Gr. 8 accelerated courses and summer school)
- B. All students will be ranked with the exception of newly entering seniors if their rank would be in the top two students and/or sending grades cannot be verified.
- C. Students accelerating from grade 10 to grade 12 will be ranked and designation on the list made accordingly.

## **FINAL RANK**

- A. At the end of the 3rd marking period of grade 12 by computing all grades: final grades for half year courses completed as well as the average of three quarterly grades for full year courses and the quarterly grade for half year courses in progress.
- B. Final rank will be used for the final transcript in June and will determine the number of day school candidates for graduation.

## **NON-GRADUATES**

- A. Students returning for the full year will not be ranked with the new graduating class.
- B. January graduates will not be ranked.

## **NEW ENTRANTS**

- A. Students entering after the Official Rank is determined in the Fall will be ranked unofficially (approximately) until the Final rank after the third marking period when they will be included as per above.

# Grade Level Requirements

The Newburgh Enlarged City School District Board of Education established the following grade level requirements.

GRADE LEVEL CLASSIFICATION AND REQUIRED CREDITS FOR PROGRESSION  
COURSE LOAD- ALL STUDENTS SHOULD CARRY A MINIMUM OF 5 CREDITS PER YEAR EXCLUSIVE OF P.E.

9th Grade	10th Grade	11th Grade
Physical Education (0.5)	Physical Education (0.5)	
(1) Credit from: English 9 or Global Studies or U.S. History  AND (1) Credit from any of the following English 9 Mathematics Science U.S. History	(6) Credits from: English 9 Global Studies I and II Mathematics Science  AND (4) Elective Credits	(2) Credits each from: Mathematics Science
(2.5) Credits Total	(10) Credits Total	15.5 Credit Total

## APPEAL PROCESS FOR HONORS/AP COURSES

Currently NECSD has established criteria for participation in Honors/AP course of study. Students whose performance does not meet or exceed the criteria for Honors/AP/College courses may appeal this decision. A student wishing to appeal should complete the Course Appeal Form and return it to his/her Building Principal. These forms are available in the Guidance Office. Please note: To be reconsidered for Honors/AP/College courses it is important that you demonstrate commitment and improvement. If your performance remains the same or declines, your appeal will not likely be successful for the following school year. All appeals will be decided after Final grades have been posted.

## HONOR ROLL

### DETERMINATION

- A. After each marking period exclusive of the fourth.
- B. All grades are calculated.
- C. Compiled after student request for grade corrections are completed by building administration.

### QUALIFICATION

- A. Honor Roll - 84.5 - 89.4
- B. High Honor Roll - 89.5 - 100

# College Credit Offerings

In preparing for Beyond the Academic Field, it is important for scholars to select courses that display their academic potential and interest. NFA offers its scholars various opportunities to participate in college level courses offerings during their regular school day at reduced rates. Tuition rates can vary based on colleges and universities programs. As part of NECSD's commitment to equity, all scholars should be encouraged to participate in these accelerated courses as they are designed to promote college readiness skills while allowing students to gain college credit while still in high school. Please see your counselor for more information on any of the following programs and requirements.

## **MERCY COLLEGE**

Experience the rigor of college courses while attending NFA can better prepare students for the next level of academics. The Mercy College High School Achievement Program allows eligible high school juniors and seniors the opportunity to better understand and experience the expectations and rigor of college. Mercy College provides an opportunity for students to jump-start their college career by offering college credit for select advanced placement (AP) and college level courses. Taught at the high school during the academic year by approved Newburgh Free Academy faculty, these college credit-bearing courses can be used as transfer credits at Mercy College as well as many other colleges and universities. Please see your School Counselor for details.

## **UNIVERSITY AT ALBANY (SUNY)**

SUNY Albany offers high school students the opportunity to begin their college education at an affordable cost, thereby providing a bridge from high school to college. The University in the High School Program at the University at Albany was established in 1983 within the former College of Humanities & Fine Arts, now part of the College of Arts & Sciences. UHS Program courses provide students with the academic challenges of college-level curricula during their final year(s) of high school. As a "bridging" experience to college, UHS courses can help students begin to develop the skills and experience necessary for academic success in higher education. Enrollment in UHS courses may provide future opportunities to students, such as the ability to enroll in higher-level college courses or to complete a four-year degree in a shorter amount of time.

## **SUNY ORANGE**

Students are able to take Dual enrollment high school/college classes as part of the SUNYOrange Community College in the High School Program (<https://sunyorange.edu/cchs/>) As a "bridging" experience to college, CCHS courses can help students begin to develop the skills and experience necessary for academic success in higher education. Enrollment in CCHS courses may provide future opportunities to students, such as the ability to enroll in higher-level college courses or to complete a four-year degree in a shorter amount of time.

SUNY Orange's P-Tech program, is a new model for teaching and learning that brings together high school, college, and the world of work in order to prepare students for the complex and ever-changing global workforce in information technology. Students in the P-Tech graduate with an Associates in Applied Science degree from SUNY Orange, in addition to their high school diplomas. They also obtain the skills and knowledge they need to continue their studies or step seamlessly into well-paying, high-potential jobs in the Computer Information Technology industry. P-Tech's curriculum will offer project based learning experiences and real-world applications of science, technology engineering, and math. Students will develop important academic and career skills as they learn through projects developed in collaboration with IBM. Due to the accelerated pace of learning in P-Tech, the length of the school day and the school year is longer for enrolled students.

## **THE NECSD MARIST ECHS**

The Newburgh Enlarged City School District has partnered with Marist College to create a seamless and innovative program focused on workplace learning and STEM academic content, with a focus in computer science. The NECSD Marist ECHS program will be open to 30 current 9th grade students for the inaugural year and 30 rising 8th grade scholars who are eligible for 9th grade the remaining years. In the event that there are more than 30 applicants for NECSD Marist ECHS program, a weighted random lottery will take place. Selection will identify students as members of subgroups that are historically underrepresented in higher education and STEM fields.

# Advanced Placement Course Offerings

Advanced Placement (AP) Courses are rigorous, college-level classes in a variety of subjects that give students an opportunity to gain the skills and experience colleges recognize. Nationally, the AP program is administered by the College Board, which develops the course curriculum for each course, trains teachers and designs and administers AP examinations. Currently NFA offers 20 AP courses. The availability of these course offerings may vary from year to year because of the faculty certification and student interest.

Any student interested in an AP course should discuss it with their current teacher, school counselor and parents. The necessary documentation should be completed and submitted to the content Director for approval. As part of NECSD's commitment to equity, all scholars would be encouraged to discuss a course of study that includes AP courses to better prepare them for college beyond Academy Field.

English	Social Studies	Mathematics	Science	Other Subjects
AP English Literature and Composition	AP Macroeconomics	AP Calculus AB	AP Biology	AP Italian Language and Culture
AP English Language	AP Psychology	AP Calculus BC	AP Chemistry	AP Spanish Language and Culture
	AP United States Government and Politics	AP Computer Science A	AP Environmental Science	AP Studio Art: 2-D Design Portfolio
	AP United States History	AP Computer Science Principles	AP Physics 1	AP Studio Art: Drawing Portfolio
	AP World History		AP Physics C: Electricity and Magnetism	AP Music Theory
	AP Human Geography		AP Physics C: Mechanics	

## Academic Intervention Services (AIS)

Academic Intervention Services are designed to assist students achieve grade level expectations in the areas of English Language Arts and Mathematics in grades K-12. These services include additional instruction that supplements the general education curriculum. The intensity of these services vary depending on student need. Currently the NECSD offers a model of intervention that provides students intervention within the content area. An additional teacher provides ongoing intervention and strategy support within the content areas. These services may be provided in a push-in model within the core classroom by an AIS teacher or through a pull-out model where students are scheduled for an AIS class". Students qualify for AIS services based on various criteria that is outlined in the NECSD AIS Plan.

# Graduation Requirements

Subject Areas	Credits Needed For Regents and Local Diploma	Credits Needed For Regents with Advanced Designation
<b>English</b>	4.0	4.0
<b>Social Studies</b> Distributed as Follows: U.S. History (1) Global History and Geography (2) Participation in Government (1/2) Economics (1/2)	4.0	4.0
<b>Science</b> Distributed as Follows: Life Science (1) Physical Science (1) Life Science or Physical Science (1)	3.0	3.0
<b>Mathematics</b>	3.0	3.0
<b>LOTE</b>	1.0*	3.0
<b>Art or Music</b>	1.0	1.0
<b>Physical Education (0.5 credits earned per year)</b>	2.0	2.0
<b>Health</b>	0.5	0.5
<b>Electives</b>	3.5	1.5
<b>Total</b>	22.0	22.0

Exams for Regents Diploma	# of Exams	Passing Scores **
<b>English Language Arts</b>	1	65
<b>Social Studies</b>	1	65
<b>Science</b>	1	65
<b>Mathematics</b>	1	65
<b>Plus One Pathway:</b> <ul style="list-style-type: none"> <li>• Pass an additional math Regents examination in a different course</li> <li>• Pass an additional science Regents examination in a different course</li> <li>• Pass an additional social studies Regents examination in a different course</li> <li>• Pass a NYSED approved CTE pathway assessment (Please see approved pathways noted in CTE Section)</li> <li>• Pass a NYSED approved pathway assessment in the Arts</li> <li>• Pass the Spanish and Italian Checkpoint B Examination (<i>Oneida Herkimer-Madison BOCES, given after Spanish 3, Italian 3, &amp; Spanish for Native Speakers</i>) or any other NYSED approved pathway assessment in a Language other than English (LOTE)</li> <li>• Career Development and Occupational Studies CDOS-Students who complete all the components of the CDOS commencement credential option one (program) or option two (assessment) may use that credential to meet the +1 pathway requirement toward a local or Regents diploma. Note: CDOS may also be earned as a standalone credential for those students unable to meet the other requirements of a Regents or local diploma. Please see your counselor for more information.</li> </ul>		

# Graduation Requirements (continued)

## Regents with Advanced Designation Exam Requirements

Depending on the pathway a student chooses, the Regents diploma with advanced designation assessment requirements using pathways listed below.

<b>Traditional Combination</b>	ELA, Global History and Geography, US History and Government, 3 math, 2 science (1 must be life science and 1 must be physical science) = 8 assessments. In addition, the student must choose either 2 additional credits in LOTE and the locally developed Checkpoint B LOTE exam OR a 5 unit sequence in the arts or CTE
<b>Pathway Combination (other than STEM)</b>	ELA, 1 social studies, 3 math, 2 science (1 must be life science and 1 must be physical science), 1 pathway (other than Science or math) or complete the requirements for the CDOS Commencement Credential = 7 or 8 assessments. In addition, the student must choose either 2 additional credits in LOTE and the locally developed Checkpoint B LOTE exam OR a 5 unit sequence in the arts or CTE
<b>STEM (Mathematics) Pathway Combination:</b>	ELA, 1 social studies, 4 math, 2 science (1 must be life science and 1 must be physical science) = 8 assessments. In addition, the student must choose either 2 additional credits in LOTE and the locally developed Checkpoint B LOTE exam or a 5 unit sequence in the arts or CTE
<b>STEM (Science) Pathway Combination:</b>	ELA, 1 social studies, 3 math, 3 science (1 must be life science and 1 must be physical science) = 8 assessments. In addition, the student must choose either 2 additional credits in LOTE and the locally developed Checkpoint B LOTE exam OR a 5 unit sequence in the arts or CTE

## SPECIAL DIPLOMA ENDORSEMENTS

<b>HONORS ENDORSEMENT</b>	A student earns a computed average of at least 90 on the Regents examinations applicable to either a Regents diploma or a Regents diploma with advanced designation. No more than 2 Department approved alternatives can be substituted for Regents examinations and the locally developed Checkpoint B LOTE examination is not included in the calculation
<b>MASTERY IN MATH AND/OR SCIENCE ENDORSEMENT</b>	A student meets all the requirements for a Regents Diploma with Advanced Designation AND earns a score of 85 or better on 3 math Regents examinations and/or 3 science Regents examinations.
<b>TECHNICAL ENDORSEMENT</b>	A student meets the requirements for either a local diploma, a Regents diploma or a Regents diploma with advanced designation AND successfully completes a Department approved CTE program including the 3 part technical assessment.
<b>NEW YORK STATE SEAL OF BILITERACY</b>	<p>The State Seal of Biliteracy was established to recognize high school graduates who have attained a "high level of proficiency in listening, speaking, reading, and writing in one or more languages, in addition to English." Students who successfully meet the requirements will receive a New York State Seal of Biliteracy on their diplomas.</p> <ol style="list-style-type: none"> <li>1. Students wishing to receive the New York State (NYS) Seal of Biliteracy must complete all requirements for graduating with a NYS Regents diploma*; and</li> <li>2. In addition to the above minimum requirement, students wishing to receive a NYS Seal of Biliteracy must earn three (3) points in each of the two (2) areas determined by the NYSED. Please see your counselor or visit: <a href="http://www.nysed.gov/common/nysed/files/criteria_for_nyssb.pdf">http://www.nysed.gov/common/nysed/files/criteria_for_nyssb.pdf</a></li> </ol>

\* Exceptional Learners may be excused from the requirement for 1 unit of credit in LOTE if so indicated on the IEP. They still must earn 22 Graduation credits

# Graduation Requirements (continued)

**English Language Learners**-English Language Learners Students who are identified as English language learners pursuant to Part 154 Regulations of the Commissioner of Education, and who first entered school in the United States in grade 9 or above, may appeal to graduate with a local diploma if they have taken the required Regents examination in English language arts at least twice and earned a score on this exam between 55 and 59. Such students may also appeal a score within 5 points of passing (60-64) on one additional examination and graduate with a local diploma. English Language Learners are required to achieve 22 high school credits regardless of when they entered the district or the country. Credits earned prior to entering NECSD, including credits from the student’s country of origin can be used to demonstrate credits toward a New York State Diploma.

**Exceptional Learners** - NYSED required all students to earn 22 credits for graduation. However, NYSED has created a safety net for students with disabilities to meet their testing requirements for graduation. Please speak with your counselor for more information.

Diploma Safety Nets for Students With Disabilities	
<b>Local Diploma via Safety Net for SWDs/504-Plan with Safety Net Eligibility documented in their plan.</b>	22 Credits AND <ul style="list-style-type: none"> <li>• Low Pass 55-63 on Regents exams</li> <li>• Appeals of scores of 52-54 for SWDs</li> </ul>
<b>Compensatory Option</b>	<ul style="list-style-type: none"> <li>• Student may score 45-54 on one or more of the required exams (excluding ELA and Math) if they compensate with scores 65 or higher on other exams AND meet district attendance and course requirements (get course credit)</li> <li>• English and math scores must be 55 or higher</li> </ul>
<b>Superintendent Determination</b>	Students with IEPs may score below 55 on Regents exam(s) and pass, if the superintendent determines that the student has otherwise demonstrated proficiency in the subject area by completing designated procedure and documentation.

<b>Credentials</b>		
<p><b>Career Development &amp; Occupational Studies Commencement Credential For ALL STUDENTS (effective March 2016)</b></p>	<ul style="list-style-type: none"> <li>● Provided in conjunction with diploma</li> <li>● Sole exiting credential for some students with disabilities. Students must be provided appropriate opportunities to earn diploma</li> </ul> <p><b>OPTION 1</b></p> <ul style="list-style-type: none"> <li>● Career Plan completed annually</li> <li>● Minimum 2 units (216 hours) of study in CTE coursework, including at least 54 hours of Work-Based Learning</li> <li>● Completion of Employability Profile</li> </ul> <p><b>OPTION 2</b></p> <ul style="list-style-type: none"> <li>● Attainment of a nationally recognized work readiness credential</li> </ul>	<p><b>Benefits of the CDOS Credential</b></p> <ul style="list-style-type: none"> <li>● Develops entry level employment skills through work-based learning</li> <li>● Community Experience</li> <li>● Employability Profile can be shared with employers and adult agencies</li> </ul> <p><b>Barriers of the CDOS Credential</b></p> <ul style="list-style-type: none"> <li>● The CDOS is not a diploma and does not meet the requirements for college entrance and military enrollment.</li> <li>● May not meet hiring requirements with employers.</li> <li>● May not meet requirements for entry into vocational training</li> </ul>
<p><b>Skills and Achievement Commencement Credential</b></p>	<ul style="list-style-type: none"> <li>● NYSAA eligible and assessed students</li> <li>● Attended 12 years excluding K, or end of year attains age 21</li> <li>● CDOS learning standards instruction including community and work-based learning</li> <li>● Accompanied by designated comprehensive Student Exit Summary document</li> </ul>	<p><b>Benefits of the Skills Credential</b></p> <ul style="list-style-type: none"> <li>● Community Experience (work sites, field trips, volunteer opportunities)</li> <li>● Work Skill Development</li> </ul> <p><b>Barriers of the Skills Credential</b></p> <ul style="list-style-type: none"> <li>● This is not a diploma</li> <li>● Majority of students will be entering into programs (day habilitation, pre-vocational, supported employment) following exit</li> </ul>

Source: [www.nystransitionpartners.org](http://www.nystransitionpartners.org)

# NCAA & Athlete Eligibility

## NCAA APPROVED COURSES

If you want to play sports at an NCAA Division school, start by registering with the NCAA Eligibility Center at [www.eligibilitycenter.org](http://www.eligibilitycenter.org)

Please visit the following webpage for an up to date list of [NCAA APPROVED COURSES FOR NEA](#)

## ACADEMIC REQUIREMENTS

To play sports at a Division I or II school, you must graduate from high school, complete 16 NCAA-approved core courses, earn a minimum GPA, and earn an ACT or SAT score that matches your core-course GPA.

## CORE COURSES

This simple formula will help you meet Divisions I and II core-course requirements and I. 4 x 4 = 16

+ 4 English courses (one per year)	+ 4 math courses (one per year)
+ 4 science courses (one per year)	+ 4 social science courses (one per year)

For more information in the requirements on GPA and SAT please see [ncaa.org/student-athletes/future/test-scores](http://ncaa.org/student-athletes/future/test-scores).

## THE ROLE OF THE STUDENT

<p><b>Freshman - Grade 9-Plan</b></p> <ul style="list-style-type: none"> <li>Start planning now! Take the right courses and earn the best grades you can.</li> <li>Ask your counselor for a list of your high school's NCAA core courses to make sure you take the right classes. Or, find your high school's list of NCAA core courses at <a href="http://www.eligibilitycenter.org/courselist">www.eligibilitycenter.org/courselist</a>.</li> </ul>	<p><b>Juniors - Grade 11-Study</b></p> <ul style="list-style-type: none"> <li>Check with your counselor to make sure you are on track to graduate on time.</li> <li>Take the ACT or SAT, and make sure we get your scores by using code 9999.</li> <li>At the end of the year, ask your counselor to upload your official transcript.</li> </ul>
<p><b>Sophomores - Grade 10-Register</b></p> <ul style="list-style-type: none"> <li>Register for a Certification Account or Profile Page with the NCAA Eligibility Center at <a href="http://www.eligibilitycenter.org">www.eligibilitycenter.org</a>.</li> <li>If you fall behind on courses, don't take shortcuts to catch up. Ask your counselor for help with finding approved courses or programs you can take.</li> </ul>	<p><b>Seniors - Grade 12-Graduate</b></p> <ul style="list-style-type: none"> <li>Take the ACT or SAT again, if necessary, and make sure we get your scores by using code 9999.</li> <li>Request your final amateurism certification after April 1.</li> <li>After you graduate, ask your counselor to upload your final official transcript with proof of graduation.</li> </ul>

# Course Planner

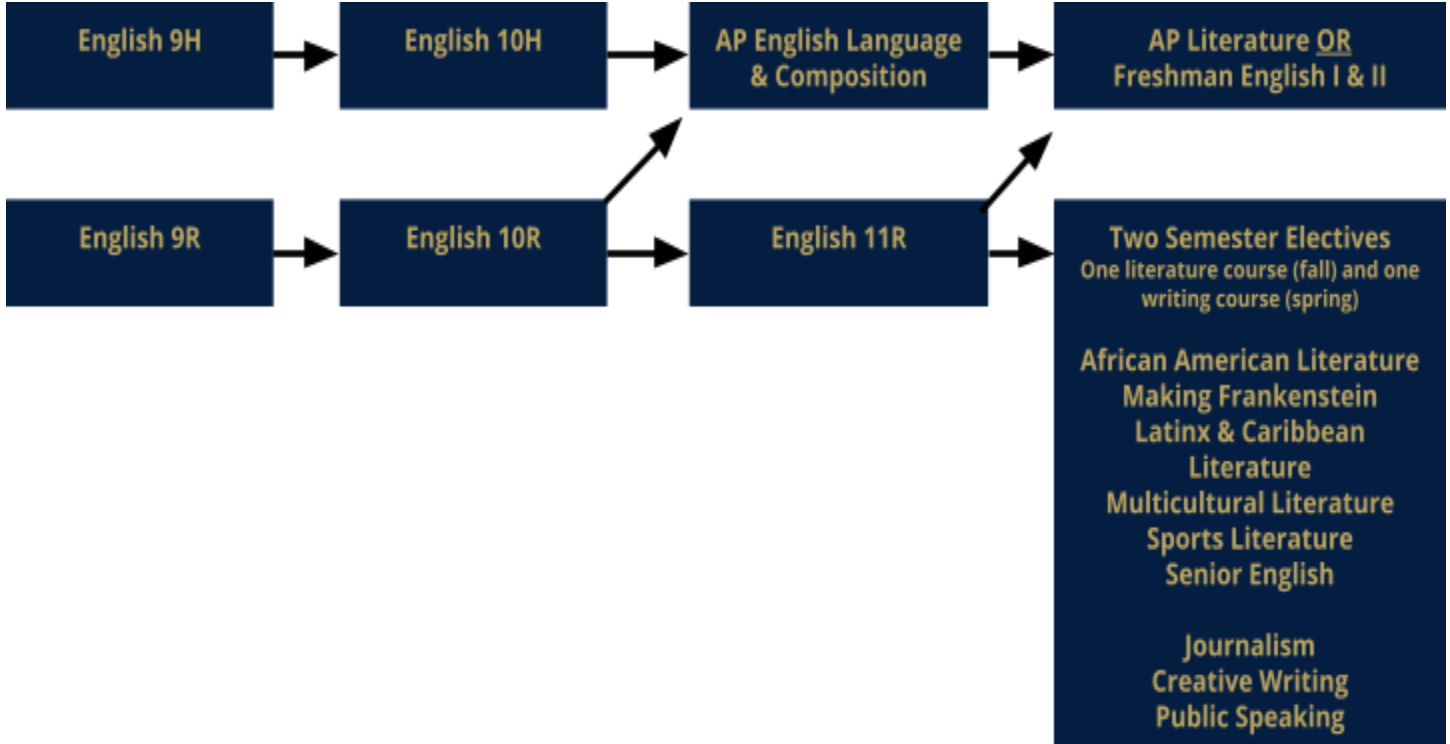
This chart will assist you in planning your course. This will only satisfy your minimum graduation requirements. A rigorous course offering includes additional courses Mathematics, Science, World Language and other electives.

Department	Grade 9 / Credits	Grade 10 / Credits	Grade 11 / Credits	Grade 12 / Credits
English	✓ 1.0	✓ 1.0	✓ 1.0	✓ 1.0
Social Studies	✓ 1.0	✓ 1.0	✓ 1.0	✓ 1.0
Mathematics	✓ 1.0	✓ 1.0	✓ 1.0	
Science	✓ 1.0	✓ 1.0	✓ 1.0	
PE	✓ 0.5	✓ 0.5	✓ 0.5	✓ 0.5
Health		✓ 0.5		
Fine Art	✓ 1.0			
World Language	✓ 1.0			
Electives	✓ 1.0	✓ 1.0	✓ 1.0	✓ 1.0

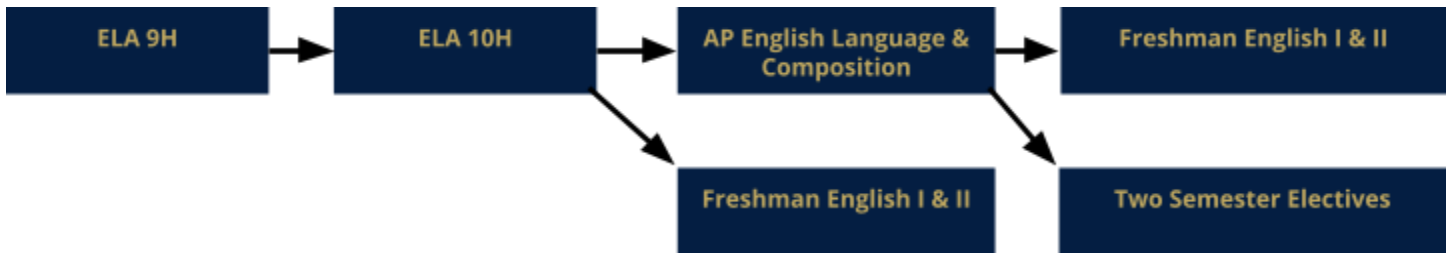
# English Language Arts

Potential Sequence of Study for English Graduation Requirements:

## ENGLISH LANGUAGE ARTS PROGRESSION



## P-TECH



- A written examination and/or a student portfolio will be used to provide a "final exam" mark in all English courses.
- The ELA (Common Core) Regents Examination is administered in Grade 11R or Grade 10 Honors as a stand-alone test. Students completing Grade 11 who pass the course and the Regents exam are scheduled for 1 credit of English 12 courses. Grade 12 students who need to pass the NYS Common Core Regents exam will take the NYS Common Core English Exam in January of their senior year.

The general course requirements along with the writing and learning outcomes for all courses are outlined in more detail on the grade level scope and sequence.

# English Language Arts Courses

## English 9 Honors - CRS 1002

 1.05  1.0

This course has a faster pace than its Regents counterpart. Students will study major authors through a variety of genres and participate in written and oral discussions regarding the works. Students skills in reading, writing, listening and speaking should enable them to read with excellent comprehension, think critically about and analyze more difficult text and literature. Through frequent composition and literary essays evaluated through rubrics, the importance of correct grammar and writing techniques are reinforced. Vocabulary, literary analysis, communication, and collaboration skills are essential components. The extensive work in writing includes the preparation of an inquiry-based learning project.

**Prerequisites:** Successful completion of English 8 and district requirements for honors level courses.

**Requirements:** A research paper is required for this course.

## English 9 Regents - CRS 1001

 1.0

This course builds the foundations of reading, writing vocabulary acquisition and communications skills needed for successful completion of a sequence in English. Students will study major authors through a variety of genres and participate in written and oral discussions regarding the works. The extensive work in writing may include the preparation of an inquiry-based learning project.

**Requirements:** A research paper is required for this course.

## English 10 Honors - CRS 1012

 1.05  1.0

This course continues to build upon the foundations of English 9 and English 9 Honors. Through composition and literary essays, the importance of correct grammar and writing techniques are reinforced. Vocabulary, literary analysis and communication are emphasized. The extensive work in writing includes the preparation of an inquiry-based learning project.

**Prerequisite:** Successful completion of English 9 Honors or at least an 85% average in English 9R

**Requirements:** A research paper is required for this course.

**Note:** Students will take the ELA (Common Core) Regents exam as a stand-alone examination at the end of this year of study.

## English 10 Regents - CRS 1011

 1.0

The course continues to build upon the foundations of English 9 Regents. Students will study major authors through a variety of genres and participate in written and oral discussions regarding the works. There is extensive work in expository writing, literary analysis, and argument-based writing. Fundamentals of grammar, spelling, vocabulary and speech are emphasized.

**Requirements:** A research paper is required for this course.

## English 11 Regents-CRS 1021

 1.0

The course continues to build upon the foundations of English 10 Regents. There is extensive work with expository writing and literary analysis of a variety of genres. Fundamentals of grammar, spelling, vocabulary and speech are emphasized.

**Requirements:** Students are required to take the ELA Common Core Regents Exam as a stand-alone examination. A research paper is required for this course.

## Advanced Placement English Language & Composition

### CRS 1101

 1.05  1.0

AP English Language and Composition is designed to cultivate critical literacy skills for academic success at the collegiate level and for responsive civic engagement. This course includes the critical reading of diverse prose to develop an understanding of how language communicates authors' intentions and elicit readers' responses, and the study of the writing process. Students will study prose from various fields and periods primarily in American Literature. The reading and writing assignments will feature expository, analytical, and argumentative essays from a variety of authors and historical contexts.

**Note:** Students are required to take the AP exam.

**Prerequisites:** Successful completion of English 10 Honors or a minimum of 85% in English 10R and a passing score on the NYS Common Core English Exam.

**Requirements:** One essay on each literature unit, several essays on unique literary forms, two term papers, and participation in extensive class discussions are required.

## Advanced Placement English Literature & Composition

### CRS 1102

 1.05  1.0

A combination of sophisticated literature and writing experiences, this course is designed for students who wish to encounter college level materials, instruction and responsibilities. Understanding and analysis of writing styles will be emphasized. Aspects of literary criticism, interpretation, and form generate discussions on social and ethical issues as well as create a sophisticated format for written thought. In-depth study of selected authors and time periods develops the critical thinking skills necessary for commentary on modern issues. Special time will be allocated for in-depth preparation of the AP Exam.

**Note:** Students are required to take the AP exam.

**Prerequisite:** Successful completion of AP English Language & Composition or a minimum of 85% in English 11 Regents and a passing score on the ELA Common Core Regents Exam.

**Requirements:** One essay on each literature unit, several essays on unique literary forms, two term papers, and participation in extensive class discussions are required.

**Freshman English I (ENG 101)**

CRS 1111

 1.05  1.0***This course can be taken for 3.0 college credits.***

This first course in the Freshman English sequence introduces college-level writing and revision, construction of expository essays, and research skills. Reading and class discussion center on the formal and informal essay. Research essay is required. (GE 10 when combined with COM 101)

**Prerequisites:** Successful completion of English 11R or 11H, a passing score on the NYS Common Core English Exam, and meet the requirements set by the college or university offering the course.

**Requirements:** The partnering college requires a fee for dual credit enrollment.

**Note:** Students who have placed into any developmental reading or writing courses must complete them before taking Freshman English 1.

**Freshman English II (ENG 102) CRS 1112** 1.05  1.0***This course can be taken for 3.0 college credits.***

In this second course in the sequence, students learn to read critically, to organize supporting details, and to develop coherent oral and written arguments. Fiction, drama and poetry are used as common texts. An analytical research paper is required. (GE 7)

**Prerequisite:** Freshman English I

**Requirements:** The partnering college requires a fee for dual credit enrollment.

# English Language Arts Electives

These courses are interest and enrollment-driven and will only be offered if at least 15 students are enrolled. Seniors and juniors (when applicable) are eligible to enroll. Elective courses can be used to fulfill a 12th-grade English Language Arts Requirement. Students who do not elect to take a full year English course during senior year must take two single-semester courses. Students are encouraged to select one course for each semester. One selection must be a multi-genre literature course, a course that requires multiple types of literature such as poetry, essays, novels, dramas, etc.. The second selection must be a writing intensive course to fulfill the 12th-grade English Language Arts requirement.

## Multi Genre Literature Courses

### African-American Literature - CRS 1151 0.5

This multi-genre literature course scans the major contributions of African-American writers. The course will focus primarily on the autobiographies, novels, dramas, short stories, and poetry dealing with the internal and external struggles of the black American in the period from the early 1900's to the present.

**Requirements:** A research paper is required for this course.

### Latinx & Caribbean Literature and Culture CRS 1121 0.5

This course will examine literary and cultural production of Latin from the Spanish-speaking Caribbean while addressing the dual goal of improving scholars' written and oral expression. Issues of migration, transnationalism, and transculturation will be explored through the analysis of texts by Puerto Rican, Cuban-American, and Dominican-American authors.

**Requirements:** A research paper is required for this course.

### Making Frankenstein - Myths, Monsters, and Modern Science CRS 1211 0.5

This literature course explores intersections between twenty-first-century medicine and biotechnology and contemporary autobiography, fiction, cinema, poetry, graphic narrative, and television. We will examine the structures of authority and cultural dynamics involved in doctor-nurse-patient-family relationships; we will think about what it means to live in light of death, to struggle with depression or bipolar tendencies, and to be disabled by one's environment. We will consider the bioethics of new genetic testing and editing tools as well as their influence on the very shapes of stories we tell about the "self" and the "soul:"we will wrestle with epistemological questions about subjectivity, objectivity, intuition, faith, and knowledge.

**Requirements:** A research paper is required for this course.

### Multicultural Literature - CRS 1161 0.5

This multi-genre literature course is based on the belief that is important to honor the heritage of all scholars and to provide an awareness of all cultural groups within the school population. Every effort has been made to include literature from thirty cultures that reflect the composition of the population of the Newburgh Enlarged City School District. Classical authors will be paired with new voices in an overview of many genres of literature for studies intended for students of all levels of ability. Participation in class discussion, journal entries, development of a portfolio of student work, essays, quizzes, and tests are requirements.

**Requirements:** A research paper is required for this course.

### Senior English - CRS 1141 0.5

This course will include: high quality literature, reader response essays, personal essay (including college admissions essay), compare contrast, persuasive essays, creative writing, poetry as literature, poetry writing, grammar, usage and an inquiry-based learning project or research paper. In addition to studying high quality literature, students will prepare for successful completion of the ELA Common Core Exam.

**Requirements:** A research paper is required for this course.

### Sports Literature- It's more than a game CRS 1201 0.5

Sports is one of the central discourses of American culture with a unique blend of positive themes such as heroism, pride, identity and negative themes of cheating, scandal and disappointment. This literature course will examine the way the discourses surrounding sports are expressed in writing. Specifically, we will look at the various themes that arise in both fiction and non-fiction writing about American sports and American sports figures.

**Requirements:** A research paper is required for this course.

## Writing Intensive Courses

### Journalism - CRS 1181

 0.5

This course is designed to develop and refine the skills and techniques for writing in journalistic style for newspapers and magazines. Techniques in gathering, analyzing, and writing news articles and features articles, editorials, and other journalistic styles will be studied and applied in order to create a profile portfolio. The student will learn the fundamentals of editing, identifying sources, organizing materials, planning, and outlining the story. Specific historical eras may be examined. A team project on ethics and an individual paper on censorship may be required. Students must demonstrate a good understanding of rules related to spelling and grammar and meet deadlines.

### Creative Writing - CRS 1171

 0.5

This course is designed to open the realm of creative writing to the student. Opportunities for creative writing include, but are not limited to: autobiographical entries, play writing, sketches, poems, short stories, journal entries, and art and music interpretations. The student will be evaluated as much on the effort put forth as on the completed products. Additional topics discussed are future prospects in creative writing and its technology, digests, publishing markets, the scope of writings, and sharing of work with peers.

### Public Speaking - CRS 1191

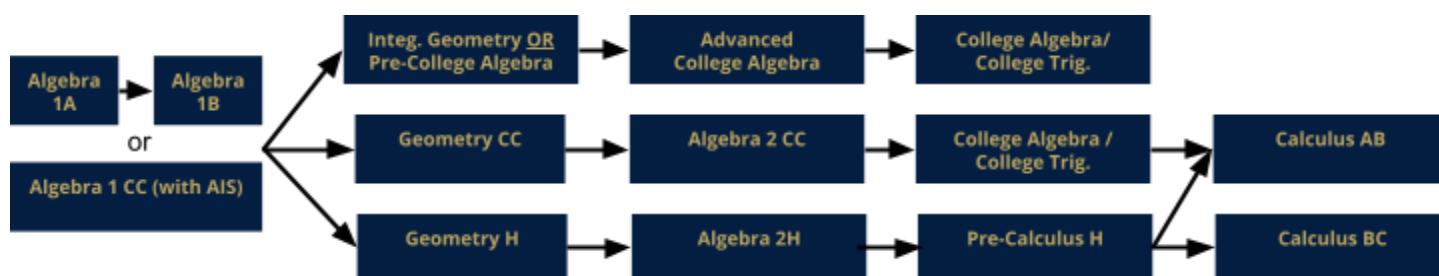
 0.5

This course is an introduction to speech communication which emphasizes the practical skill of public speaking, including techniques to lessen speaker anxiety, and the use of visual aids to enhance presentations. Civility and ethical speech-making are the foundations of this course. Its goal is to prepare students for success in typical public speaking situations and to provide them with the basic principles of organization and research needed for effective speeches.

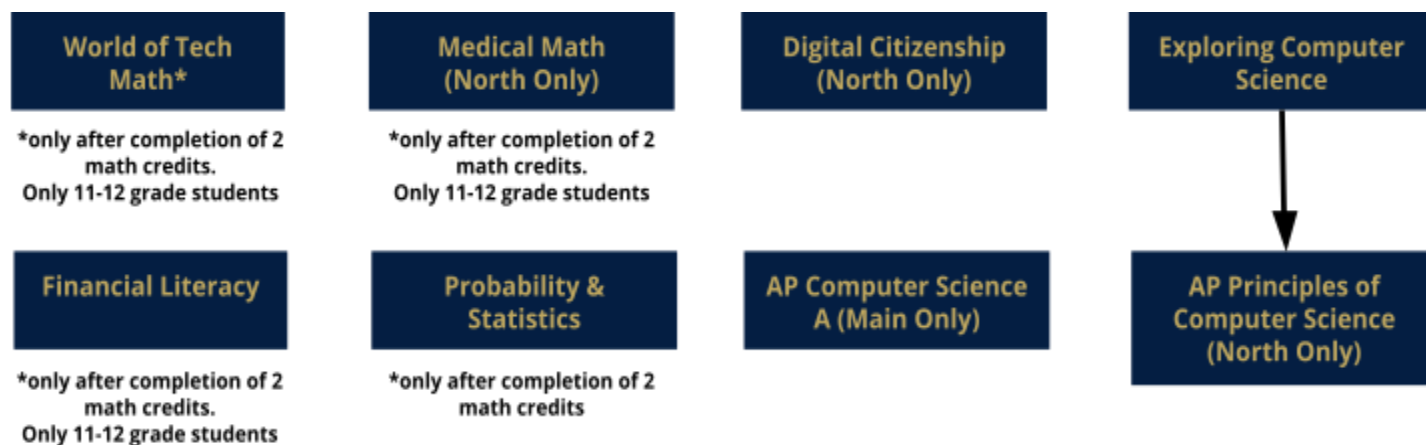
# Mathematics

## Sequence of Study for Mathematics Requirements

Students that wish to obtain an advanced Regents Diploma must successfully complete Algebra I Common Core, Geometry Common Core and Algebra II Common core. All “appropriate electives” can be used to fulfill the number of credits mandated by NYS Ed above and beyond the minimum graduation requirement of 3 credits. It is the expectation of the mathematics department that **all students expecting to enroll in a 2 or 4-year post-secondary institution** attain at least 4 credits of mathematics.



## Mathematics Electives



\*In consultation with their school counselor, student's sequence of courses can be individualized to meet their specific needs

# Mathematic Courses

## Algebra 1A Common Core (9) - CRS 300 1.0

Students will follow the NYS Algebra 1 Common Core Curriculum. This course is the first year of a two-year course of study to complete Algebra 1 Common Core. Students enrolled in this course will take the Algebra 1 Common Core Exam in June of the second year of the course. This first year covers foundational skills embedded within the Algebra 1 Common Core Curriculum.

**Course Requirements:** All tests, quizzes, and assignments

## Algebra 1B Common Core (10,11) - CRS 301 1.0

Students will follow the NYS Algebra 1 Common Core Curriculum. This course is the second year of a two-year course of study to complete Algebra 1 Common Core. Students enrolled in this course will take the Algebra 1 Common Core Exam in June. This second year covers foundational skills embedded within the Algebra 1 Common Core Curriculum while completing the curricular requirements to take the Regents Examination in June.

**Prerequisites:** Successful completion of Algebra 1-A

**Course Requirements:** All tests, quizzes, assignments and Algebra 1 Regents Exam must be completed

## Algebra 1 Common Core (9) - CRS 302 1.0

Students enrolled in this course will follow the NYS Common Core Curriculum Standards. They will develop skills and processes using a variety of techniques to successfully solve problems in a variety of settings. Problem situations will include linear equations in one variable, quadratic functions with integral coefficients and roots as well as absolute value and exponential functions. Coordinate geometry will be used to make connections between analytical and geometric representations. Measurement in problem solving will include calculating rates using appropriate units and converting within measurement systems. Data analysis will include measures of central tendency, correlation, causation, and using lines of best fit to make predictions. Elementary probability and statistics theory will be used to determine probability of independent, dependent, and mutually exclusive events.

**Course Requirements:** All tests, quizzes, assignments and NYS Algebra I Regents must be completed.

## Pre-College Algebra (10,11,12) - CRS 311 1.0

This course is designed for students to acquire and maintain the skills to successfully pass the college placement exam to ensure that when they enter their first year of College they will be able to test into credit bearing math courses. It will cover algebraic topics intended to preview the course work that students will be exposed to in Actual College Algebra. In addition, students will take practice placement exams to indicate their readiness and areas of weakness.

**Prerequisites:** Successful completion of NYS Algebra I Common Core Course and participation in the Regents Exam.


**Course Requirements:** All tests, quizzes, assignments and local final exam must be completed

## Advanced College Algebra (11,12) - CRS 320 1.0

This is a non-calculator based course designed as a 3rd or 4th credit for students planning to attend a two or four year college, but will not major in mathematics, sciences or engineering. It will cover algebraic topics intended to preview the course work that students will be exposed to in Actual College Algebra.

**Prerequisites:** Successful completion of Pre-College Algebra or Integrated Geometry

**Course Requirements:** All tests, quizzes, assignments and local final exam must be completed

**Integrated Geometry (10,11,12) - CRS 310**  1.0

The course examines set theory and rules with applications to segment and angle congruence. Students will apply an integrated approach to the study of geometric relationships and properties of geometric figures. It will include methods of proving triangle congruence, rules involving triangles, parallel lines, quadrilaterals, regular polygons, circles, right triangle trigonometry, similarity, transformations, and area.

**Prerequisite:** Successful completion of NYS Algebra I Common Core Course and participation in the Regents Exam.

**Requirements:** All tests, quizzes, assignments and local final exam must be completed.

**Geometry Common Core (9,10,11,12) - CRS 313**  1.0

This course follows the NYS Geometry Common Core Curriculum Standards. Students will apply an integrated approach to the study of geometric relationships and properties of geometric figures. Topics will include congruence and similarity of triangles, transformations including rotations, reflections, translations, glide reflections, and coordinate geometry. The course is meant to lead students to verify conclusions from hypotheses using formal and informal methods of proof.

**Prerequisites:** Successful completion of Algebra I Common Core Course and participation on the Algebra I Common Core Regents Exam.

**Course Requirements:** All tests, quizzes, assignments and Regents Examination must be completed.

**Geometry Common Core Honors (9,10) - CRS 3132** 1.05  1.0

This course parallels the Geometry Common Core Curriculum, however, students will cover the material in greater depth, and are exposed to advanced topics and enrichment topics.

**Prerequisites:** Successful completion of Algebra 1 Common Core Course and successful completion of the Algebra Regents exam

**Course Requirements:** All tests, quizzes, assignments and Regents Examination must be completed.

**Algebra 2 Common Core (10,11,12) - CRS 323**  1.0

This course will follow the NYS Algebra II Common Core Curriculum Standards. This course will deeply expand upon the algebraic concepts experienced in Algebra I Common Core. Course will build on work with linear, quadratic, and exponential functions, students will extend knowledge and understanding to polynomial, rational and radical functions. Students will expand their abilities to model situations and solve equations over the set of complex numbers. Students will apply their knowledge to solving exponential equations using the property of logarithms.

**Prerequisites:** Successful Completion of Geometry Common Core Course and participation on the Geometry CC Regents exam

**Requirements:** All tests, quizzes, assignments, and Regents Exam must be completed.

**Algebra 2 Common Core Honors (10,11,12) - CRS 3232** 1.05  1.0

This course will follow the NYS Algebra II Common Core Curriculum Standards, but the topics studied are of greater depth than the regular common core course. This course will deeply expand upon the algebraic concepts experienced in Algebra I Common Core. Course will build on work with linear, quadratic, and exponential functions, students will extend knowledge and understanding to polynomial, rational and radical functions. Students will expand their abilities to model situations and solve equations over the set of complex numbers. Students will apply their knowledge to solving exponential equations using the property of logarithms.

**Prerequisites:** Successful Completion of Geometry Common Core Course and successful completion of the Geometry CC Regents exam

**Requirements:** All tests, quizzes, assignments, and Regents Exam must be completed.

**Pre-Calculus Honors (11,12) - CRS 3322** 1.05  1.0

This course can be taken for 3 Mercy College Credits (at Main only) upon meeting all college requirements. Topics include Relations and Functions, Algebra of Functions, Composite Functions, Polynomial Functions, Exponential and Logarithmic Functions, Trigonometric Functions, Parametric Equations, Polar Equations, Conic Sections, Theory of Equations, Vectors, Matrices, and Determinants, Series and Sequences, Limits. This course uses a graphing calculator and has practical applications of science and math.

**Prerequisites:** Successful completion of Algebra 2 Common Core Honors course and Algebra 2 Regents exam (or by teacher recommendation).

**Course Requirements:** All tests, quizzes, assignments and local final examinations must be completed.

**Probability and Statistics (11,12) - CRS 351** 1.0

This course can be taken for 3 Mercy College credits (OCCC credits at North) upon meeting all college requirements. This course is designed to provide the student with an understanding of the persuasiveness of probability and statistics in today's society and the means to use the concepts and formulas to problem solve. Topics included are expected values, conditional probability, binomial distribution, data analysis (random sampling and sampling distribution), and measures of association. Methods of instruction will range from demonstrations, cooperative learning activities, and individual work to lecture, research, and projects. It is beneficial to anyone planning to go on to higher learning as well as the student who simply wants to problem solve.

**Prerequisites:** Successful completion of the Algebra 1 Common Core course and Regents Exam, Geometry Common Core and Algebra 2 Common Core courses.

**Course Requirements:** All tests, quizzes, assignments and local final examinations must be completed.

**AP Calculus AB (11,12) - CRS 340**
 1.05  1.0

This course can be taken for 4 Mercy College credits (at Main only) upon meeting all college requirements. Topics studied include elementary functions, differential calculus, applications of the derivative, integral calculus, techniques of integration, the definite integral, and applications of the integral. This course meets for an extra period every other day.

**Prerequisites:** Successful completion of Pre-Calculus or Pre-Calculus Honors course (or by teacher recommendation).

**Course Requirements:** All tests, quizzes, assignments and local final examinations must be completed.

**AP Calculus BC (12) (Main Campus Only) - CRS 342**
 1.05  1.0

This course can be taken for 8 Mercy College credits upon meeting all college requirements. This is an intensive course in the calculus of functions of a single variable. In addition to the topics covered in Calculus AB, the Calculus BC course includes other topics such as infinite series and polar coordinates, parametric equations, and vectors. This course meets for an extra period every other day.

**Prerequisites:** Successful completion of Pre-Calculus Honors and teacher recommendation.

**Course Requirements:** All tests, quizzes, assignments and local final examinations must be completed.

**AP Computer Science Principles (10,11,12) - CRS 362**
 1.05  1.0

This course follows the new AP content as an introduction to computers, computing, the internet, logical reasoning, logic strings, and drawing conclusions from trends.

**Prerequisites:** Successful completion of Expl. Comp. Science.

**Course Requirements:** All tests, quizzes, assignments, and local final exam must be completed.

**Financial Literacy (11,12) - CRS 350**
 1.0

This course offering is to provide students with a basic understanding of mathematics as it is applied to the post high school world. Topics include, budgeting, Interest Rates as applied to banking, credit cards, mortgages, car loans, monthly payments, managing personal finances, employment and other topics. This course is not intended for students that are pursuing the Common Core three-year sequence track in mathematics.

**Prerequisites:** Successful completion of the Algebra 1 Common Core course and Regents Exam.

**Course Requirements:** All tests, quizzes, assignments and local final examinations must be completed.

**Introduction to Statistics (11) - CRS 356**
 1.05  1.0

This course can be taken for 3 Marist College credits upon meeting all college requirements. This course is designed to provide the student with an understanding of various statistical techniques using examples from various disciplines. Three distinct areas of statistics will be the focus: producing data, analyzing data, and making inferences from data. Topics include: descriptive statistics; hypothesis testing; confidence intervals; correlation, regression; and, contingency tables and non-parametric methods.

**Prerequisites:** Students must be participants in the Marist ECHS program.

**Course Requirements:** All tests, quizzes, assignments and local final examinations must be completed.

**AP Computer Science A - CRS 363**
 1.05  1.0

Computer science embraces problem solving, hardware, algorithms, and perspectives that help people utilize computers to address real-world problems in contemporary life. AP Computer Science A is equivalent to a first-semester, college-level course in computer science. The course introduces students to computer science with fundamental topics that include problem solving, design strategies and methodologies, organization of data (data structures), approaches to processing data (algorithms), analysis of potential solutions, and the ethical and social implications of computing. The course emphasizes both object-oriented and imperative problem solving and design using Java language. These techniques represent proven approaches for developing solutions that can scale up from small, simple problems to large, complex problems. The AP Computer Science a course curriculum is compatible with many CS1 courses in colleges and universities.

**Prerequisites:** Successful completion of Algebra 2

**Course Requirements:** All test quizzes, assignments, and projects must be completed.

**Medical Mathematics (10,11,12) (North Campus Only)**

CRS - 352

 1.0

North Campus- This course prepares students in the LPN program to strengthen the fundamental mathematics skills that are essential to the nursing field. Completion of this course will help students prepare for the TAPE and TEAS exams as well as for the foundational mathematics they will encounter in the nursing field. Topics include: reading measurements, basic operations, ratio/proportion, solving equations, percentages, military time units, rounding and place value, exponents, unit conversions, exponential growth, formula manipulations, budgeting, estimations, data analysis, interpreting graphs, etc.

**Prerequisites:** Successful completion of two math credits one being Geometry Common Core

**Course Requirements:** Successful completion of two math credits. Must be enrolled in the nursing program.

**Digital Citizenship (9, 10, 11,12) - CRS 360**  1.0

This course offering is to provide students with a basic understanding of how the internet works, the proper way to use it and ways to cultivate and manage their digital information. Topics would include cyber-bullying, phishing, identity theft hacks, digital footprints, virtual private networks, digital citizenship, etc.

**Prerequisites:** None

**Course Requirements:** All tests, quizzes, assignments, and projects must be completed.

**Exploring Computer Science (9,10,11,12) - CRS 361**  1.0

Exploring Computer Science is designed to introduce students to the breadth of the field of computer science through an exploration of engaging and accessible topics. Topics focus on the conceptual ideas of computing and help students understand why certain tools or languages might be utilized to solve particular problems. Topics include: programming languages (Scratch and Arduinos), computer hardware/software, networks, data analytics, engineering process, etc.

**Prerequisites:** None



**Course Requirements:** All tests, quizzes, assignments, and projects must be completed.

**College Algebra (11,12) – CRS 330**  1.05  0.5

Exploring Computer Science is designed to introduce students to the breadth of the field of computer science through an exploration of engaging and accessible topics. Topics focus on the conceptual ideas of computing and help students understand why certain tools or languages might be utilized to solve particular problems. Topics include: programming languages (Scratch and Arduinos), computer hardware/software, networks, data analytics, engineering process, etc.

**Prerequisites:** Successful completion of Algebra 2 Common Core course and participation on the Algebra 2 Regents exam or completion of Advanced College Algebra Course.

**Course Requirements:** All tests, quizzes, assignments, and projects must be completed.

**College Trigonometry (11,12) – CRS 331**  1.05  0.5

College Trigonometry is for students to continue the path toward the study of Calculus. Topics include trigonometric functions, graphing techniques, right triangle applications, trigonometric identities, inverse functions, and oblique triangles.

**Prerequisite:** Successful completion of College Algebra (CRS 3200)

**Course Requirements:** All tests, quizzes, assignments, and final exam.

# Science

Level	Grade 9	Grade 10	Grade 11	Grade 12
AP/College Electives			<ul style="list-style-type: none"> <li>• AP Biology</li> <li>• AP Chemistry</li> <li>• AP Environmental Science</li> <li>• AP Physics 1</li> <li>• AP Physics C: Mechanics</li> <li>• AP Physics C: Electricity &amp; Magnetism</li> <li>• College Astronomy</li> <li>• Forensic Science</li> <li>• Science Research in the High School</li> </ul>	<ul style="list-style-type: none"> <li>• AP Biology</li> <li>• AP Chemistry</li> <li>• AP Environmental Science</li> <li>• AP Physics 1</li> <li>• AP Physics C: Mechanics</li> <li>• AP Physics C: Electricity &amp; Magnetism</li> <li>• College Astronomy</li> <li>• Forensic Science</li> <li>• Science Research in the High School</li> </ul>
Honors	<ul style="list-style-type: none"> <li>• Living Environment H</li> <li>• Earth Science H</li> </ul>	<ul style="list-style-type: none"> <li>• Living Environment H</li> <li>• Chemistry H</li> <li>• Earth Science H</li> </ul>	<ul style="list-style-type: none"> <li>• Chemistry H</li> <li>• Earth Science H</li> <li>• Anatomy &amp; Physiology</li> </ul>	<ul style="list-style-type: none"> <li>• Chemistry H</li> <li>• Earth Science H</li> <li>• Anatomy &amp; Physiology</li> </ul>
Regents	<ul style="list-style-type: none"> <li>• Living Environment</li> <li>• Earth Science</li> </ul>	<ul style="list-style-type: none"> <li>• Living Environment</li> <li>• Earth Science</li> <li>• Chemistry</li> <li>• Physics</li> </ul>	<ul style="list-style-type: none"> <li>• Living Environment</li> <li>• Earth Science</li> <li>• Chemistry</li> <li>• Physics</li> </ul>	<ul style="list-style-type: none"> <li>• Living Environment</li> <li>• Earth Science</li> <li>• Chemistry</li> <li>• Physics</li> </ul>
Electives		<ul style="list-style-type: none"> <li>• Astronomy &amp; Meteorology</li> <li>• Creative Solutions Through Science</li> <li>• Environmental Science</li> <li>• Field Biology</li> <li>• General Chemistry</li> <li>• Human Body</li> <li>• Independent Study</li> <li>• Intro to Forensic Science</li> <li>• Network Science Research</li> <li>• Science Research in the High School</li> <li>• Urban Ecology</li> </ul>	<ul style="list-style-type: none"> <li>• Astronomy &amp; Meteorology</li> <li>• Creative Solutions Through Science</li> <li>• Environmental Science</li> <li>• Field Biology</li> <li>• General Chemistry</li> <li>• Human Body</li> <li>• Independent Study</li> <li>• Intro to Forensic Science</li> <li>• Network Science Research</li> <li>• Science Research in the High School</li> <li>• Urban Ecology</li> </ul>	<ul style="list-style-type: none"> <li>• Advanced Field Biology</li> <li>• Astronomy &amp; Meteorology</li> <li>• Creative Solutions Through Science</li> <li>• Environmental Science</li> <li>• Field Biology</li> <li>• General Chemistry</li> <li>• Human Body</li> <li>• Independent Study</li> <li>• Intro to Forensic Science</li> <li>• Network Science Research</li> <li>• Science Research in the High School</li> <li>• Urban Ecology</li> </ul>

# Science Courses

## Advanced Placement Biology (11,12) CRS 5033 1.05 1.0

Advanced Placement Biology is a college course articulated with Mercy College or SUNY Orange. Course credit is given with a C average or better. The AP Biology curriculum is structured around four Big Ideas: Evolution, Energy Processes, Information and Interactions. These ideas encompass the core principles and theories of all living systems. The curriculum provides a basis for students to develop a strong conceptual understanding in biology and the opportunity to integrate that knowledge through inquiry-based activities and laboratory investigations. Students meet double period/single period/double period cycles every other day.

**Prerequisites:** Successful completion of Honors Biology and Regents Chemistry, and written permission of the instructor. Students should also have completed Physics or plan to take Physics concurrently. Excellent work habits and self-motivating behavior is a must.

**Course Requirements:** Completion of all prescribed laboratory work. The Advanced Placement examination is scheduled for mid-May, after which is the School/College level final exam for all students enrolled in the course.

## Living Environment Honors (9,10) - CRS 5002 1.05 1.0

Students will understand and apply scientific concepts, principles and theories relating to the physical setting and living environment and will recognize the historical development of ideas in science. A major goal of this course is for students to understand that we are interconnected with other life forms on this planet. Other major objectives are to understand why and how we are both alike and different from other living things; to understand the inner workings of various animals and humans; and to understand how plants and animals interact with their environment. Focus will also be on the student's ability to explain, analyze and interpret biological processes and phenomena. In addition, students will be introduced to the scientific writing process and be able to produce reports for laboratory investigations. The course is designed to cover topics & components to prepare students for the Biology SAT II.

**Topics include:** Unity and Diversity Among Living Things, Adaptations and Survival of Living Things, Human Physiology, Reproduction and Development, Genetics, Ecology and Evolution.

**Course Meets:** Meets every day with labs on alternating days.

**Prerequisites:** 1. Students must have successfully completed Regents Algebra I and should be enrolled in Geometry. (Some exceptions may apply) 2. Students must have successfully completed Regents Earth Science, or Physical Science (Grade 8) with a teacher/guidance counselor recommendation into the Honors program.

**Course Requirements:** 1. Students must successfully complete the NYS Regents laboratory requirement and demonstrate proficiency in all mandated skills. 2. Regents examination. 3. Maintain an 85 or above in the course.

## Living Environment Regents (9, 10, 11, 12) - CRS 5001

 1.0

Students will understand and apply scientific concepts, principles and theories relating to the physical setting and living environment and will recognize the historical development of ideas in science. A major goal of this course is for students to understand that we are interconnected with other life forms on this planet. Other major objectives are to understand why and how we are both alike and different from other living things; to understand the inner workings of various animals and humans; and to understand how plants and animals interact with their environment. Focus will also be on the student's ability to explain, analyze and interpret biological processes and phenomena.

**Topics include:** Unity and Diversity Among Living Things, Adaptations and Survival of Living Things, Human Physiology, Reproduction and Development, Genetics, Ecology and Evolution.

**Course Meets:** Class meets every day with double-period labs on alternating days.

**Prerequisites:** Students must have completed Regents Algebra I, or plan to take it concurrently.

**Course Requirements:** Students must successfully complete the NYS Regents laboratory requirement and demonstrate proficiency in all mandated skills. Regents examination.

## Advanced Placement Chemistry (11, 12) - CRS 5153 1.05

 1.0

Advanced placement college chemistry is the traditional first year college course in general and inorganic chemistry. This course revisits the topics covered in Regents Chemistry in greater depth, and with a more intensive mathematical treatment. The course prepares the student for higher level college chemistry and biochemistry courses. Upon successful completion of the course curriculum, students will have the option of taking the Advanced Placement Exam in Chemistry in May, the American Chemical Society International Chemistry Olympiad Exam in April, and/or apply for college credit through Mercy College.

**Prerequisites:** Students must have successfully completed Regents Living Environment, Regents or Honors Chemistry, Regents Algebra I, and Geometry with grades on the Regents Exams of at least 80%, or permission of the instructor. It is highly recommended, but not required, that students be concurrently enrolled in Pre-Calculus. This is a math intensive course and will require strong math skills for successful completion of the course.

**Course requirements:** Students must successfully complete the course laboratory component, and take a final exam in June in order to earn high school credit. Students must pass the AP Exam or meet Mercy College requirements to earn college credits.

**Chemistry Advanced-Honors (10, 11, 12) - CRS 5412**

1.05 1.0

Advanced Chemistry is designed to prepare the serious science student for AP and college science courses. This is a math-based science course that covers all the Regents Physical Setting - Chemistry topics, plus the advanced chemistry topics recommended by the College Board and the American Chemical Society. Students who successfully complete this course will be prepared to take the Regents exam, as well as the SAT II exam in chemistry.

**Prerequisites:** Students must have completed Regents Algebra I, Regents Living Environment, Regents Earth Science, and have taken or concurrently taking Regents Geometry. Recommended Regents exam scores are 80% or higher, or course grade over 90%. This is a math intensive course and will require strong math skills for successful completion of the course.

**Course requirements:** Students must successfully complete the NYS Regents laboratory requirement and turn in acceptable reports on their work; must complete quarterly projects, and it is strongly recommended that students sit for the June Regents Chemistry exam. Students are strongly encouraged to sit for the June SAT II exam in chemistry.

**Chemistry Regents (10, 11, 12) - CRS 5141**

1.0

Topics include phases of matter, energy, atomic structure, the periodic table, bonding, mathematical concepts of chemistry, kinetics and equilibrium, acid-base theories, electrochemistry, thermochemistry, oxidation/reduction reactions, organic chemistry, and nuclear chemistry, in addition to laboratory activities. Students meet daily on an alternating single/double period schedule.

**Prerequisites:** Students must have completed Regents Algebra I, and concurrently enrolled in Regents Geometry. It is strongly recommended that students have scored a minimum of 75% on all Regents Science and Math Regents exams.

**Course requirements:** Students must successfully complete the NYS Regents laboratory requirement and turn in acceptable reports on their work.

**General Chemistry (10,11, 12) - CRS 5131**

1.0

The objective of this course is to provide the student with a broad overview of chemistry that will be meaningful and useful in daily life, and in the decision making of an informed consumer and citizen. Although there is no designated lab period and lab hour requirement as in Regents Chemistry, students will participate in regular laboratory exercises and are expected to become proficient in basic lab skills. Topics are focused on areas of chemistry as they are applied to everyday life. Students meet five periods per week, which include both lecture and lab. Students may not use this course for Regents credit in science. This course is not open to students who have passed Regents Chemistry.

**Prerequisites:** Concurrent enrollment or successful completion of Regents Algebra I, Advanced Algebra or Pre-College Algebra. Students must have successfully completed Regents Living Environment. Students must also have successfully completed Regents Earth Science or Meteorology and Astronomy or be concurrently enrolled in either.

**Course Requirements:** School final examination.

**APC Mechanics (11, 12) - CRS 5183**

1.05 0.5

Main Campus - The Advanced Placement Physics C course articulated with Mercy College forms the first part of the college sequence for students majoring in the physical sciences, computer sciences, engineering and pre-med. It includes an in-depth study of mechanics. The sequence is usually paralleled by mathematics courses that include calculus. Methods of calculus are taught and used whenever appropriate in formulating physical principles and in applying them to solve physics problems. The sequence is more intensive and analytic than the Advanced Placement Physics 1 course. Students meet double period/single period/double period on alternating days.

**Prerequisites:** Successful completion of Regents Geometry and Regents Algebra 2. Students are encouraged to complete Regents Living Environment, Regents Chemistry, and AP Physics 1 before electing the Advanced Placement C course in Physics. Concurrent registration in Calculus is strongly recommended. Written permission of the instructor is required.

**Course Requirements:** Successful completion of the lab requirement and demonstration of proficiency in all mandated skills as prescribed by the College Board. School final is the AP Physics C Examination. This is a math intensive course and will require strong math skills for successful completion of the course. This is a semester course that must be taken in sequence with APC Physics: Electricity and Magnetism, during the same school year.

**Advanced Placement Physics 1 (11, 12) - CRS 5173**

1.05 1.0

AP Physics 1 is an algebra-based, introductory college-level physics course that explores topics such as Newtonian mechanics (including rotational motion); work, energy, and power; mechanical waves and sound; and introductory, simple circuits. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. The course encompasses core scientific principles, theories, and processes that cut across traditional boundaries and provide a broad way of thinking about the physical world. This course requires that 25 percent of the instructional time will be spent in hands-on laboratory work, with an emphasis on inquiry-based investigations that provide students with opportunities to apply the science practices.

**Prerequisites:** Successful completion of Regents Geometry and Regents Algebra 2. Written permission of the instructor is required. Students are encouraged to complete Regents Living Environment and Regents Chemistry, before electing an Advanced Placement course. Meets double period/single period/double period on alternating days.

**Course Requirements:** Successful completion of the lab requirement, AP Physics 1 final examination, and demonstration of proficiency in all mandated skills as prescribed by the College Board. This is a math intensive course and will require strong math skills for successful completion of the course.

**APC Electricity & Magnetism (11, 12) - CRS 5193**

1.05 0.5

Main Campus - The Advanced Placement Physics C course articulated with Mercy College forms the first part of the college sequence for students majoring in the physical sciences, computer sciences, engineering and pre-med. It includes an in-depth study of electricity and magnetism. The sequence is usually paralleled by mathematics courses that include calculus. Methods of calculus are taught and used whenever appropriate in formulating physical principles and in applying them to solve physics problems. The sequence is more intensive and analytic than the Advanced Placement Physics 1 course. Students meet double period/single period/double period on alternating days.

**Prerequisites:** Successful completion of Regents Geometry and Regents Algebra 2. Students are encouraged to complete Regents Living Environment, Regents Chemistry, and AP Physics 1 before electing the Advanced Placement C course in Physics. Concurrent registration in Calculus is strongly recommended. Written permission of the instructor is required.

**Course Requirements:** Successful completion of the lab requirement and demonstration of proficiency in all mandated skills as prescribed by the College Board. School final is the AP Physics C Examination. This is a math intensive course and will require strong math skills for successful completion of the course. This is a semester course that must be taken in sequence with APC Physics: Mechanics, during the same school year.

**Earth Science Regents (9, 10, 11, 12) - CRS 5101**

1.0

This course is a laboratory-centered program involving small group interpretation of data using the scientific method. The areas of study include Geology, Meteorology, Climate Change and Astronomy. Students meet alternately single and double periods for the full school year.

**Prerequisites:** Passing of Junior High School science or Regents Living Environment. Successful completion of Regents Algebra I or Grade 8 Math.

**Course Requirements:** Students in this course must successfully complete the NYS Regents laboratory requirement of 1200 minutes of satisfactory lab reports in order to take the Regents exam. Failure to meet the NYS Lab requirement will result in being unable to sit for the Regents Earth Science exam (barred) and students will receive no credit for the course. The course ends in a Regents Examination and credit in this course can be counted toward the Regents diploma.

**Earth Science Honors (9, 10, 11, 12) CRS 5102** 1.05 1.0

This course is a laboratory-centered program involving small group interpretation of data using the scientific method. The areas of study include Geology, Meteorology, Climate Change, Astronomy and Oceanography. Students meet alternately single and double periods for the full school year.

**Prerequisites:** 85% final average in Junior High School science course (Grade 8) OR Living Environment Honors course and corresponding NYS Regents exam. 85% final average in Grade 8 Math course OR Regents Algebra I course and corresponding NYS Regents exam.

**Course Requirements:** Students in this course must successfully complete the NYS Regents laboratory requirement of 1200 minutes of satisfactory lab reports in order to take the Regents exam. Failure to meet the NYS Lab requirement will result in being unable to sit for the Regents Earth Science exam (barred) and students will receive no credit for the course. The course ends in a Regents Examination and credit in this course can be counted toward the Regents diploma.

**Astronomy & Meteorology (10, 11, 12) - CRS 5111** 1.0

Astronomy & Meteorology is a two-semester elective course in the Physical Setting for science that allows the successful student to earn one non-Regents science credit towards graduation. Astronomy & Meteorology students will study topics in Astronomy such as the Solar System, Planet Earth, Comets, Asteroids, Star Formation and Galaxies during the first semester. During the second semester, topics in Meteorology will cover Weather Systems, Climate and Energy Systems. The course is designed using a project-based curriculum that integrates computer technology and weather stations.

**Prerequisites:** Successful completion of Grade 8 Science.

**Course Requirements:** Students must successfully complete laboratory work, projects, homework assignments, tests, quizzes and an in class final exam in June.

**College Level Astronomy (11, 12) - CRS 5121**  1.05  1.0

Main Campus - This is an introductory college-level course designed to give the student a total overview of Astronomy. Topics covered are: Celestial orientation; Planetary motions; Time; Stars and Constellations; Instrumentation; Problems in space travel and unusual objects such as pulsars, black holes, etc. Students also have the opportunity to receive instruction on the use of the planetarium and may personally design programs as well as operate the various instruments. Students cannot receive Regents credit for this course. Meets for five lecture periods a week. Full year.

**Prerequisites:** Students must have successfully completed Algebra 1 and Geometry. Students must also have successfully completed Earth Science, Chemistry or Physics. Written permission of the instructor is required. This is a math intensive course, strong math skills and determination are necessary for success.

**Honors Anatomy & Physiology (11, 12) - CRS 5052** 1.05  1.0

Human Anatomy and Physiology is an honors level course designed for both 11th and 12th grade students interested in learning more about the human body and/or may be interested in pursuing careers in the health sciences. The course is designed to introduce and expand the students' knowledge of the structure and function of the human body. This course will study basic biochemistry, cytology, histology, the maintenance of homeostasis, all body systems, and common diseases/disorders. An emphasis will be placed on the diagnosis, treatment, and the effects of various diseases on the human body using real life scenarios. An intense laboratory investigation program is built into the course allowing students to apply and exhibit their conceptual knowledge through hands-on applications. Double lab period on alternate days.

**Prerequisites:** Successful completion of Regents Living Environment and Regents Chemistry courses. Juniors and Seniors meeting these requirements are eligible for enrollment.

**Course Requirements:** Students must successfully complete all laboratory activities, chapter tests, case studies, and essays. Participation in class presentations and collaboration with peers is also required. A comprehensive final exam will be administered at the completion of the course.

**Independent Study in Science Internship (10,11,12)**

CRS 5221

 0.5

Students may elect this course to become familiar with the basic skills of scientific inquiry. They will have an opportunity to complete either an empirical research study or a theoretical research study. The empirical research study is a study in which a student defines a problem; develops a research design to pursue the problem; creates, obtains and/or develops instrumentation; generates and analyzes data, and reaches conclusions. The theoretical research study is a study in which a student identifies a problem; undertakes an extensive search of the literature on the topic; does appropriate reading and study, and through creative thought and reasoning, develops his/her ideas and conclusions. Students will be encouraged and assisted in the writing and submission of entries for science competitions, such as the New York State Energy, Research and Development Program, the Siemens-Westinghouse Science Scholarship Program, the Junior Science and Humanities Symposium, etc. Students may also elect this course to do an internship at a business or industry science-related site. Students must complete a minimum of 60 hours at the site per semester. Students must maintain a daily written journal and someone at the site must agree to mentor the student while he/she is there. Students do not have to undertake both a research project and an internship. Successful completion of either the research or the internship will earn one-half credit.

**Prerequisites:** Students must have completed and passed at least two Regents science courses and the corresponding Regents exams. Written permission of the instructor and the Science Department Chair is required.

**Course Requirements:** Students are required to complete a written proposal of study at the beginning of the course, maintain a research notebook during the course, and submit an original, comprehensive research paper at the conclusion of the course.

**Science Research in the High School (10, 11, 12) - CRS 5201**

1.05 1.0

North Campus - This is a three-year course starting in the sophomore year in which students learn research methodology in the natural and social sciences. Students will access scientific databases, use on-line bibliographic search techniques, consult doctoral-level research scholars, develop hypotheses and perform experiments under the guidance of a scientist mentor, and write research papers. Seniors will also submit their research to national and regional science competitions. At the end of each year, all students will present their research at the NFA annual science symposium. Students may apply for college credit during a student's junior and senior years through SUNY Albany.

**Prerequisites:** Permission of the instructor after submission of application essay and subsequent summer assignment; successful completion of one-year approved science course. Advancement to the next year is contingent upon symposium presentation and successful completion of each year's goals.

**Intro to Forensic Science (10, 11,12) - CRS 5071**

1.0

North Campus - Intro to Forensic Science is a full year high school level New York State standards-based course that allows the student to earn one non-regents science credit toward graduation. The course meets for five periods per week. Students participate in regular laboratory exercises and are expected to become proficient in basic lab skills applied to Forensic Science. Intro to Forensic Science challenges students with biochemical studies in forensic science. General chemistry topics are included and focus on areas of chemistry required for understanding Forensic Science techniques. Knowledge, understanding and skills acquired in this course prepare students for the Forensic Science College course.

**Prerequisite:** Successful completion of Regents Living Environment. Concurrent enrollment or successful completion of Common Core Algebra I.

**Course Requirements:** School final examination.

**Field Biology (10,11, 12) - CRS 5011**

1.0

Field Biology students examine Mid-Hudson Valley wildlife and their roles in the ecosystem. Through visits to different field locations and classroom examinations of living and preserved specimens, students identify plant and animal species that are both typical as well as unique to Newburgh. Students gain further familiarity with wildlife by data analysis, article readings and current events. Since a number of class periods are spent outdoors, students are required to participate in moderate hiking and climbing. Students are also required to maintain a field notebook. Course meets daily for five periods per week.

**Prerequisites:** Concurrent enrollment or successful completion of Regents Algebra I. Students must have successfully completed Regents Living Environment, Regents Earth Science or Astronomy and Meteorology or be concurrently enrolled in Regents Earth Science or Astronomy and Meteorology.

**Course Requirements:** Comprehensive final exam

**Forensic Science College (11, 12) - CRS 5081**

1.05 1.0

This course follows a College Level Syllabus and may be used as the 3rd unit of science to meet diploma requirements for a Regents Diploma. This course may not be used for Regents credit. It is a college-level course articulated with a local college/university. The course meets for five periods per week. Hands-on laboratory requirements are built into the time framework. Forensic Science is a study of the scientific techniques of crime scene analysis. Students will be exposed to actual cases involving the laboratory study of trace, pattern, conditional and transitional evidence. Students will be exposed to laws governing the admissibility of evidence by the court, searching for evidence by investigators, the accreditation and behaviors expected of expert witnesses. Topics will include, but are not limited to: Toxicology, Firearms and Ballistic, Arson, Serology, Physiology of Death, Hair, Fingerprinting and DNA Fingerprinting. Students will be expected to attend a field experience at a local Crime Lab and are expected to complete two assessment projects. Grade is based on the successful completion of the lab requirement and the school final examination.

**Prerequisite:** Successful completion of Regents Living Environment and either General Chemistry, Regents Chemistry, or AP/Honors Chemistry. Successful completion of Regents Algebra I and Geometry are also required. Written permission of the instructor; Senior Preference.

**Environmental Science (10,11, 12) - CRS 5061**

1.0

Environmental Science is an ecology-based course where students study the natural environment, societal issues, and the effects of society's behavior on the environment. The goals of this course will be met through lecture, individual and group research, and hands-on activities in the form of mini-labs. Meets five periods per week and satisfies the requirement for the third science credit.

**Prerequisites:** Successful completion of Regents Living Environment with passing grade for the Living Environment Regents Exam. Regents Algebra I recommended.

**Course Requirements:** Comprehensive final exam.

**AP Environmental Science (11, 12) - CRS 5063**

1.05 1.0

This course is articulated with Mercy College. College credit pending review by college. AP Environmental Science is a college course that surveys Earth Systems and resources, the Living World, Population, Land and Water Use, Energy Resource Consumption, Pollution and Global Change. Lectures from guest speakers, off site visits and research projects are part of this course design.

**Prerequisites:** Successful completion of Regents Living Environment, Regents Chemistry and Regents Algebra I Regents exams.

**Course Requirements:** Teacher recommendation and Two Saturday Black Rock forest field trips are required. Lab work and course assessments are to be completed.

**Creative Solutions Through Science & Technology****(10,11,12) - CRS 5091** **1.0**

North Campus - Creative Solutions through Science & Technology provides an introduction to various components within the Science, Technology, Engineering, and Mathematics curriculum. Classes will focus on the integration of real world, project-based activities involving: hydroponics, composting and water filtration. Additional activities will include solar technologies, alternative energies, the building of: bridges, earthquake proof structures, solar vehicles, and robotic arms and hands. Students who successfully complete this course will earn 1.0 credit in Science, Math or Technology.

**Prerequisites:** Concurrent enrollment or successful completion of Living Environment or Regents Earth Science.

**Course Requirements:** Comprehensive final exam.

**Network Science Research (10,11, 12) CRS 5212** **0.5**

Main Campus - This course is an interdisciplinary course, focused on the emerging science of complex networks and their real-world applications. The material includes the mathematics of networks, their applications to biology, sociology, technology and other fields, and their use in the research of real complex systems in nature and in man made systems. The students will learn about the ongoing research in the field, and apply their knowledge in the analysis of real network systems, as the main objective of their final research project.

**Prerequisite:** Successful completion of both Living Environment Course and Living Environment Regent Exam are required.

**Course Requirements:** Special permission is granted with instructor approval.

**Network Science (11, 12) - CRS 5211** **0.5**

Main Campus - This course is an interdisciplinary course, focused on the emerging science of complex networks and their real-world applications. The material includes the mathematics of networks, their applications to biology, sociology, technology and other fields, and their use in the research of real complex systems in nature and in man made systems. The students will learn about the ongoing research in the field, and apply their knowledge in the analysis of real network systems, as the main objective of their final research project.

**Prerequisite:** Successful completion Network Science Research (5801)

**Course Requirements:** Special permission is granted with instructor approval.

**Advanced Field Biology (11,12) - CRS 5021** **1.0**

Main Campus - This course is designed to familiarize students with topics and careers in field biology. Topics may include ecology, entomology, herpetology, botany, population biology, taxonomy, physiology, wildlife and fisheries biology, microbiology and others. Field biologists are employed by county, state, and federal agencies as wildlife biologists, fisheries biologists, entomologists, range managers, pollution control technicians, environmental health officers, environmental education specialists, toxicologists, soil scientists, naturalists, and many others. Many of these types of careers involve research and some may be involved in the regulation and enforcement of environmental laws.

**Prerequisite:** Successfully completed the Regents Living Environment course and Regent exam.

**Course Requirements:** Since a number of class periods are spent outdoors, students must be able to participate in moderate hiking and climbing. These activities will occur during mandatory full day field trips to Black Rock Forest Preserve to complete laboratory exercises in the field. 2 Overnight trips (all day Friday return Saturday noon)

**Human Body (10,11, 12) - CRS 5041** **1.0**

Students will learn about the cells, tissues, and organs that make up the human body. They will learn to identify all of the parts of the human body and their functions. Knowledge about the human body will be applied to practical applications as seen in case studies, health articles, multimedia resources. Hands-on laboratory activities will provide an opportunity for students to visualize and understand the processes that occur within their bodies allowing them to stay alive. Students will leave this course having gained an understanding of the structures and functions of the human body, illness, and appropriate treatments which can be applied to their future health and medical well beings and experiences.

**Prerequisite:** Successful completion of both Living Environment Course and Living Environment Regent Exam are required.

**Course Requirements:** Students must successfully complete all laboratory activities, chapter tests, vocabulary quizzes, homework, and case studies. Participation in class presentations and collaboration with peers is also required. A comprehensive final exam will be administered at the completion of the course.

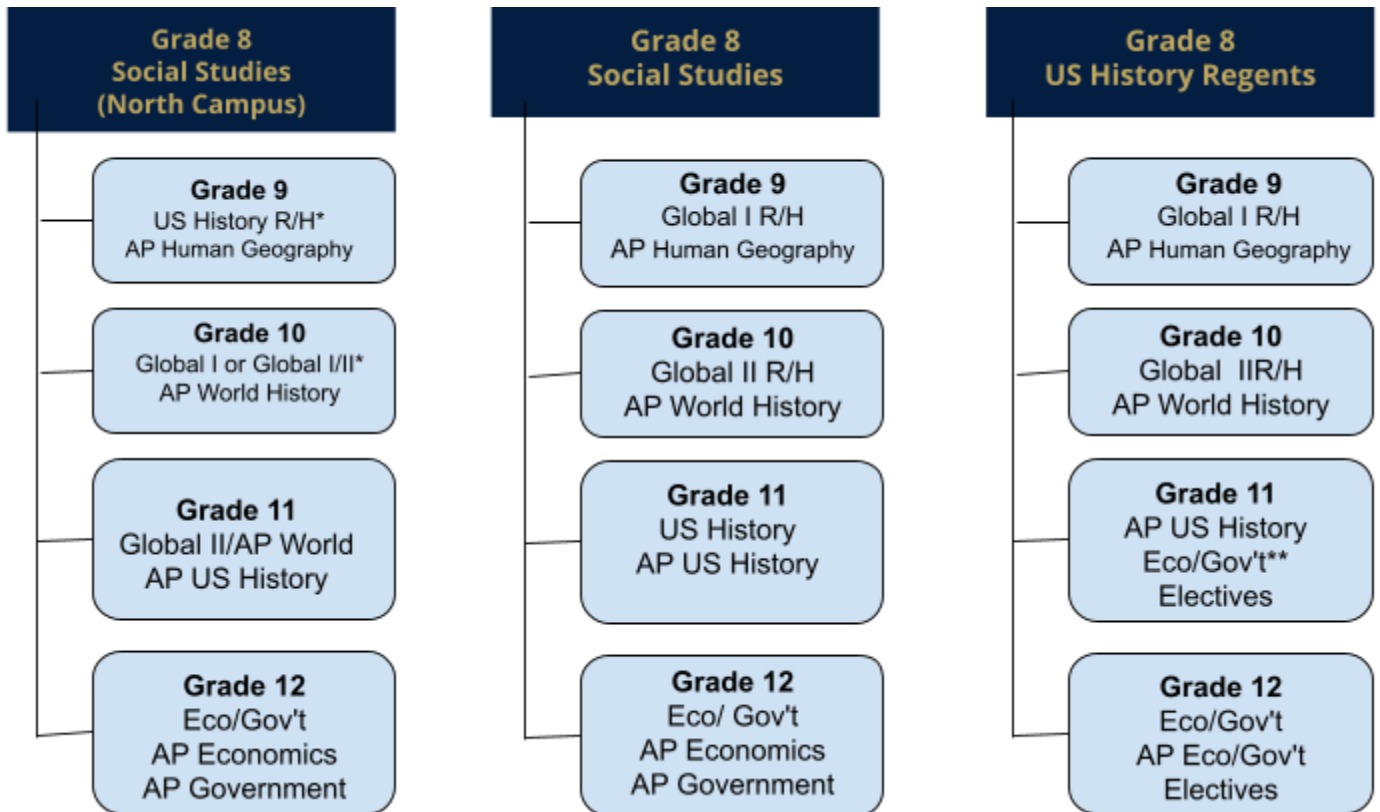
**Urban Ecology (10,11, 12) - CRS 5231** 1.0

Students will examine the city as an ecosystem. Principles of ecology will be reinforced as they compare city and rural ecosystems and study issues caused by a high population density of humans. Possible solutions will be explored as they take on the roles of environmentalists, city council members, scientists and engineers during research and project-based learning activities. Field trips within the city of Newburgh, to Black Rock, and to surrounding areas will help students study the use of resources and economic factors that are issues in the city environment. The lab component will include the use of GPS with GIS mapping, water testing, population sampling, energy usage, nutrient cycles, investigations into human/environmental interactions, uses of green technology, urban farming and sustainable city planning. The course culminates in the students planning their ideal city which incorporates the ideas learned throughout the year.

**Prerequisite:** Successful completion of Regents Earth Science or Regents Living Environment.

**Course Requirements:** Students must successfully complete laboratory and project work, homework assignments, tests, and a comprehensive Final Exam. Students need to be able to do moderate hiking and enjoy the outdoors.

# Social Studies



\*NFA North Only

\*\*Early Graduation Path (please speak with your school counselor for more information)

## Electives

Psychology  
 Introduction to Criminal Justice  
 Sociology  
 History of Sports  
 Beginning Debate  
 Advanced Debate I, II and III  
 Introduction to African American History  
 U.S. Government & Politics with Economics  
 Facing History Humanity  
 History of Newburgh  
 Facing History Civil Rights

## Advanced Placement Courses

Macroeconomics with Government  
 Government & Politics: U.S.  
 Psychology  
 Macroeconomics  
 World History  
 Human Geography  
 U.S. History and Government

# Social Studies Courses

## Global History and Geography I Honors - CRS 4012

The Global History and Geography core curriculum is a two-year program (Grades 9 and 10) based on the five practices of the New York State Social Studies Framework. It is designed around eight historical units and focuses on common themes that occur across place and time. The curriculum provides students with the opportunity to explore the developments of political systems around the world and to analyze the roles of significant individuals and groups during important periods of time and key turning points in global history. The Honors Course is a rigorous course that requires analysis and evaluation of historical documents. Honors classes generally incorporate more reading, writing and discussion and at a higher level; use more challenging instructional materials; and take more challenging assessments throughout the year.

**Prerequisites:** Successful completion of Grade 8 studies, USH and/or recommendation by the Grade 8 social studies teacher

**Course Requirements:** per course syllabus

## Global History and Geography I Regents - CRS 4011

The Global History and Geography core curriculum is a two-year program (Grades 9 and 10) based on the five practices of the New York State Social Studies Framework. It is designed around eight historical units and focuses on common themes that occur across place and time. This curriculum provides students with the opportunity to explore the development of political systems around the world and to analyze the roles of significant individuals and groups during important periods of time and key turning points in global history.

**Prerequisites:** None

**Course Requirements:** per course syllabus

## AP Human Geography - CRS 4013

The AP Human Geography course is equivalent to an introductory college-level course in human geography. The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of Earth's surface. Students employ spatial concepts and landscape analysis to examine socioeconomic organization and its environmental consequences. They also learn about the methods and tools geographers use in their research and applications. This course is designed for freshmen and supplants Global History & Geography I Honors.

**Prerequisites:** successful completion of grade 7 & 8 Social Studies, teacher/counselor/administrator recommendation

## Global History and Geography I/II Honors CRS 4012/4022 (North Campus only)

A block scheduled one year course that covers both Global I and II curriculum; Significant emphasis is placed on investigating and explaining in-depth document-based questions in Global History. Designed for students demonstrating marked proficiency in Social Studies in regard to reading and writing skills, ability to think, analyze and discuss in the abstract and deal with complex concepts. The course is based on the six practices of the New York State Social Studies Framework. Designed for students demonstrating marked proficiency in Social Studies in regard to reading and writing skills, ability to think, analyze and discuss in the abstract and deal with complex concepts. Students should also possess a high level of Social Studies vocabulary and be able to work independently in the library. The final evaluation is the Regents exam.

**Prerequisites:** teacher/ counselor/ administrator recommendation

**Course Requirements:** per course syllabus

## AP World History - CRS 4023

A continuation of Global History and Geography I incorporating material from the various Social Studies disciplines in understanding themes and concepts. Significant emphasis is placed on investigating and explaining in-depth document-based questions in Global History. Designed for students demonstrating marked proficiency in Social Studies in regard to reading and writing skills, ability to think, analyze and discuss in the abstract and deal with complex concepts. Students should also possess a high level of Social Studies vocabulary and be able to work independently in the library. Students will study 6 in-depth themes with a chronological examination of the major movements, ideas, and events in World History. Students will complete simulations, give oral presentations, explore critical analysis of primary documents and conduct significant historical research. Thesis writing is emphasized. Students will take the Global History and Geography Regents, a final course evaluation and/or the AP Examination in May.

**Prerequisites:** Successful completion of Global History I with recommendation from teacher or departmental approval. Pre-AP Summer Assignment.

**Course Requirements:** per course syllabus

**Global History and Geography II Honors - CRS 4022**

1.05 1.0

A continuation of Global History and Geography I incorporating material from the various Social Studies disciplines in understanding themes and concepts. The course is based on the six practices of the New York State Social Studies Framework. Significant emphasis is placed on investigating and explaining in-depth document-based questions in Global History. Designed for students demonstrating marked proficiency in Social Studies in regard to reading and writing skills, ability to think, analyze and discuss in the abstract and deal with complex concepts. Students should also possess a high level of Social Studies vocabulary and be able to work independently in the library. The final evaluation is the Regents exam.

**Prerequisites:** Successful completion of Global History and Geography I with at least an 85 average and a recommendation from the Global History I teacher.

**Course Requirements:** per course syllabus

**Global History and Geography II Regents - CRS 4021**

1.0

A continuation of Global History I incorporating learning from the various Social Studies disciplines in understanding various cultures and value systems. The course is based on the five practices of the New York State Social Studies Framework. Emphasis is placed on investigating cultural development and social change in Global History. Similar to Honors in requirements, with greater emphasis on the use of study aids. The Regents examination is the final evaluation.

**Prerequisites:** Successful completion of Global History and Geography I.

**Course Requirements:** per course syllabus

**AP U.S. History - CRS 4113**

1.05 1.0

This is a full year college level course. The course will be divided into two semesters. The fall semester will cover Colonial History through the Civil War with a school evaluation in January. The spring semester will cover Reconstruction through the present with a research assignment in May, serving as the second semester evaluation. All students will take the June United States History & Government Regents as the final course evaluation. The course traces the development of American social, political, cultural and economic patterns, as well as the history and formulation of foreign policy. The course is designed for students demonstrating marked proficiency in Social Studies in regard to reading and writing skills and in the ability to think and discuss in the abstract when studying complex issues and concepts. Students take the Advanced Placement American History Exam in May.

**Prerequisites:** Successful completion of Global History I & II, teacher recommendation, department approval

**Course Requirements:** per course syllabus

**United States History & Government Honors - CRS 4116**

1.05 1.0

This is a full year Honors level course which traces the development of American social, political, cultural and economic patterns, as well as, the history and formulation of foreign policy. Just like the New York State Core Curriculum, this course is designed to help the student focus on the key facts, themes, and concepts tested on the Regents Examination. This course will meet both the New York State learning standards, as well as, the national Standards for Social Studies. The course is based on the six practices of the New York State Social Studies Framework.

**Prerequisites:** Successful completion of Global History and Geography Honors

**Course Requirements:** per course syllabus

**United States History & Government Regents - CRS 4111**

1.0

This is a course in the history of the United States. The course is based on the five practices of the New York State Social Studies Framework. The course will include a chronological survey of United States history in general, but the emphasis will be on the United States as a developing and as a fully developed industrial nation. Constitutional and legal issues will be explored in depth, as well as the problems of a dynamic and industrial society in an increasingly complex and technologically-oriented world. The Regents Examination is the final evaluation.

**Course Requirements:** per course syllabus

**AP Macroeconomics - CRS 4203**

1.05 0.5

This is a semester, college level course consistent with a school final exam. This course examines the basic concepts and principles of economics, the major elements of economic systems and the roles of various components of those systems, including consumer, business, labor, agriculture and government. The major focus is on the economy of the United States, but attention will be given to the world economy as a whole and to other economic systems. There will be an emphasis on economic decision-making at all levels throughout the course. Designed for students demonstrating marked proficiency in Social Studies in regard to reading and writing skills, ability to think and discuss in the abstract when studying complex issues and concepts. Students take the Advanced Placement exam in May.

**Prerequisites:** Successful completion of U. S. History & Government and/or Participation in Government - College; must be in 12th grade.

**Course Requirements:** per course syllabus

**AP Macroeconomics with Government - CRS 4223**
 1.05  1.0

The AP Macroeconomics course provides students with a thorough understanding of the principles of economics and how economists use those principles to examine aggregate economic behavior. Students learn how the measures of economic performance, such as gross domestic product (GDP), inflation, and unemployment are constructed and how to apply them to evaluate the macroeconomic conditions of an economy. The course recognizes the global nature of economics and provides ample opportunities to examine the impact of international trade and finance on national economies. Various economic schools of thought are introduced as students consider solutions to economic problems. Students will study fiscal and monetary policies and international trade/finance. As part of the government section of this course, students will learn about the principles of American government political beliefs and behaviors, political parties and interest groups, institutions and policy processes of national government civil rights and civil liberties. At the conclusion of this course, students may be granted college credit or placement for this course based upon their performance in the nationally administered exam, which is required of all students. Students take the Advanced Placement exam in May.

**Prerequisites:** Successful completion of U. S. History & Government with an 85% or better on the Regents and/or teacher recommendation. Student must be in 12th grade.

**Course Requirements:** per course syllabus

**Economics - CRS 4201**
 0.5

This course deals with the basic concepts and principles of economics, the major elements of economic systems and the roles of various components of those systems, including the consumer, business, labor, agriculture and government. The major focus is on the economy of the United States, but attention will be given to the world economy as a whole and to other economic systems. There will be an emphasis on economic decision-making at all levels throughout the course. The course is based on the six practices of the New York State Social Studies Framework.

**Prerequisites:** Completion of the required Social Studies courses.

**Course Requirements:** per course syllabus

**AP Government and Politics: U.S. - CRS 4303**
 1.05  0.5

This is a single semester, college level course. The course will emphasize the interaction between citizens and government at all levels, and is designed to give students a critical perspective on politics and government in the United States. The course involves both the study of general concepts used to interpret American politics and the analysis of specific case studies. It also requires familiarity with the various institutions, groups, beliefs, and ideas that make up the American political reality. Topics include: constitutional underpinnings of American government; political beliefs and behaviors; political parties and interest groups; institutions and policy processes of national government; and civil rights and liberties. Designed for students demonstrating marked proficiency in Social Studies in regard to reading and writing skills and an ability to think and discuss in the abstract when studying complex issues and concepts. Students take the Advanced Placement exam in May.

**Prerequisites:** Successful completion of United States History & Government and/or Economics-College; must be in 12th grade.

**Course Requirements:** per course syllabus

**AP U.S. Government & Politics with Economics CRS 4333**
 1.05  1.0

This full year course combines the one-semester course in Economics with a one semester course in Advanced Placement American Government & Politics. This college-level course is designed to give students a critical perspective on government and politics in the United States. It involves both the study of general concepts used to interpret American politics and the analysis of specific case studies and current events. Students will study constitutional underpinnings of American Government, political beliefs and behaviors, political parties and interest groups, institutions and policy processes of national government, civil rights and civil liberties. As part of the economics component, students will study basic economic problems facing consumers in America. This includes consumer issues and economic literacy, economic decision making for individuals and businesses, long term investment and the history of economic policy and impacts (individual, local, state, nation, world). Students will study themes and concepts critical analysis. Significant research and thesis writing emphasized. Students may be granted college credit or placement for this course based upon their performance in the nationally administered exam, which is required of all students. Students take the Advanced Placement exam in May.

**Prerequisites:** American History 85% or better on the U.S. History & Government Regents and/or teacher recommendation, departmental approval, senior year status.

**Course Requirements:** per course syllabus

### Participation in Government CRS 4302 1.05 0.5 Honors: Current Topics

This course of study will focus on current social, political and economic issues that are both foreign and domestic concerns and interests of American citizens today. This honors level program meets the New York State Department of Education's commencement level standards for Grade 12 Participation in Government. The course is based on the five practices of the New York State Social Studies Framework. Students are required to research the historic background, identify essential questions leading to controversy or concern, then lead fellow classmates through thought provoking dialogue regarding their well formulated and informed position on the issues. Students will present their findings and position in several genres including position papers, speeches, debates, editorials, powerpoint or video presentations. A final cumulative examination will consist of

several essay responses to essential questions developed from the current issues discussed in the semester. Students taking this course will also complete ten hours of community service.

**Prerequisites:** Students must be in the 12th grade. Students should have successfully passed Global History and Geography, United States History & Government and passed the ELA Regents.

**Course Requirements:** per course syllabus

### Participation in Government Regents - CRS 4301 0.5

A required core subject that will emphasize the interaction between citizens and government at all levels: local, state and federal. The course will encourage students to understand and participate in the democratic process. Students taking this course will also complete ten hours of community service. The course is based on the six practices of the New York State Social Studies Framework.

**Prerequisites:** Completion of the required Social Studies courses and senior year status.

**Course Requirements:** per course syllabus

### Psychology - CRS 4401 0.5

This course will acquaint students with the fundamental areas of psychology such as the biological and sociological bases of behavior, personality and social development, motivation, learning perception, memory and thinking and cognitive development. The primary goal of the course is to provide students with an understanding of the scientific basis of psychology in order to increase their awareness of how this knowledge can be applied to understanding their own everyday environment.

**Prerequisites:** Completion of the required Social Studies courses; student must be in 12th grade.

**Course Requirements:** per course syllabus

### AP Psychology - CRS 4403 1.05 0.5

This is a college level course which traces the emergence of scientific psychology in the nineteenth century from its roots in philosophy and physiology and covers the development of the major "schools" of psychology. The historical introduction helps students gain an understanding of the principal twentieth century approaches to psychology: behavioral, biological, cognitive, humanistic, and psychodynamic. Students will learn how these approaches differentially guide research and practice in psychology. Additionally, the scientific nature of psychology is made clear through coverage of the methods psychologists use to answer behavioral to psychodynamic questions. Students take the Advanced Placement exam in May.

**Prerequisites:** Seniors only carrying an 85 or better overall average and/or teacher recommendation, department approval. **Course Requirements:** per course syllabus

### Sociology - CRS 4001 0.5

This course is designed to teach principles and concepts of sociology. While the substantive emphasis of the course is on American Society, attention is also given to the study of human societies in general, comparative analysis with other countries and issues related to the development of worldwide social systems. In addition, the major topics are: culture, interaction and social structure, deviance and control, stratification and power, ethnic relations, and social institutions.

**Prerequisites:** Completion of the required Social Studies courses. Although not required, it is recommended this course be taken concurrently or after the student has taken Psychology.

**Course Requirements:** per course syllabus

### Beginning Debate - CRS 4511 1.0

Main Campus - Debate is formal argumentation. Students enrolled in Beginning Debate will develop the skills necessary to compete nationally in interscholastic debate. While it is not necessary to join the Debate Team in order to take a debate class, it is strongly encouraged. All students can benefit from the skills of debate: public speaking, critical thinking, researching, organizing, writing, reading and listening. Students will debate a range of topics, including, but not limited to, the issues being debated nationally in both Policy and Lincoln-Douglas debate

**Prerequisites:** None

### Advanced Debate I - CRS 4521 1.0

Main Campus - This course is a continuation of Beginning Debate. Students will extend their development of the skills of debate: public speaking, critical thinking, researching, organizing, writing, reading and listening. Students will work collaboratively to develop arguments and improve their own abilities.

**Prerequisites:** Beginning Debate.

**Advanced Debate II - CRS 4531**

✎ 1.0

Main Campus - This course is a continuation of Advanced Debate I. Students will extend their development of the skills of debate: public speaking, critical thinking, researching, organizing, writing, reading and listening. Since the debate classes are often taught with various levels in the same classroom at the same time, students in Advanced Debate II are expected to assume leadership responsibility and to model necessary skills for less experienced students, in addition to advancing their own understanding of the topics discussed, and of debate theory.

Prerequisites: Beginning Debate, Advanced Debate I.

**Advanced Debate III - CRS 4541**

✎ 1.0

Main Campus - This course is a continuation of Advanced Debate II. Students will extend their development of the skills of debate: public speaking, critical thinking, researching, organizing, writing, reading and listening. Since the debate classes are often taught with various levels in the same classroom at the same time, students in Advanced Debate III are expected to assume leadership responsibility and to model necessary skills for less experienced students, in addition to advancing their own understanding of the topics discussed, and of debate theory.

**Prerequisites:** Beginning Debate, Advanced Debate I, Advanced Debate II

**Facing History and Ourselves: Crimes of Humanity CRS 4561**

✎ 0.5

The Crimes of Humanity course is an examination of racism, prejudice and anti-Semitism in order to promote the development of a more informed global citizenry. By studying examples of genocide students make the essential connection between history and the moral choices they confront in their own lives.

**History of Newburgh CRS 4571**

✎ 0.5

This course will explore the history of the City of Newburgh and the Town of Newburgh. The city and surrounding towns have long been considered as a reflection of America. The amendment considerations during police investigations, arrest in pre-trial procedures and while moving through the justice system.

**Prerequisite:** Successful completion of 1 high school Social Studies Course.

**Facing History and Ourselves: Civil Rights CRS 4551**

✎ 0.5

This course is an examination of civil rights in the United States. Students will explore key turning points in American History and how these historical events have shaped American Culture. Students will explore the complexities of history and make connections to current events, reflect on the choices they confront today and consider how they can make a difference.

**History of Sports CRS 4581**

✎ 0.5

Students will have the opportunity to examine the development throughout history. The course will concentrate on how sports have grown to play such a large role in the political, economic and social aspects of our everyday lives.








**Introduction to Criminal Justice CRS 4591**

✎ 0.5

Introduction to Criminal Justice is the study of agencies and processes involved in the criminal justice system, including the legislature, the courts and corrections and analysis of the roles and problems of the system in a democratic society with an emphasis on 4th, 5th and 6th psychology, conflicts, problem solving and decision making. The prevention as well as the physiological and psychological effects of mental illness, smoking, alcohol, drug abuse, and sexually transmitted diseases is all part of Health education. Finally, the topics of nutrition and how diet affects health, physical fitness are covered as well as a review of standard first aid.

**Prerequisites:** The 1970 Mandate from the Commissioner of Education requires health education as a constant for all pupils. This half credit health course is required for all students

## Fine and Performing Arts

Courses	Auditioned Performing Ensembles	Courses to Consider for Those Interested in Post-Secondary Arts Majors
<ul style="list-style-type: none"> <li>*Explorations in Music (.5 credit)</li> <li>*Beginning Piano (.5 credit)</li> <li>*Intermediate Piano (.5 credit)</li> <li>*Rock History (.5 credit)</li> <li>*Guitar (.5 credit)</li> <li>*Band (1 credit)</li> <li>*Orchestra (1 credit)</li> <li>*Chorus (1 credit)</li> <li>*Wind Ensemble</li> <li>*A Cappella</li> <li>Madrigals</li> <li>*Music Theory </li> <li>AP Music Theory </li> <li>Intro to Recording Tech</li> <li>*Performing Arts Laboratory</li> <li>*Technical Theater</li> <li>*Acting  1</li> <li>Acting 2 </li> <li>Acting 3 </li> <li>#Creative Movement</li> <li>#Modern Dance 1 </li> <li>#Modern Dance 2 </li> <li>#Advanced Dance</li> </ul>	<ul style="list-style-type: none"> <li>Band</li> <li>Orchestra</li> <li>Chorus</li> <li>Wind Ensemble</li> <li>Treble Chorus</li> <li>A Cappella</li> <li>Tenor/Bass Chorus</li> <li>Madrigals</li> <li>Advanced Dance</li>   <li>Jazz Ensemble</li> <li>Percussion Ensemble</li> <li>Keyboard Ensemble</li> </ul>	<ul style="list-style-type: none"> <li>Any Performing Ensemble</li> <li>Music Theory</li> <li>AP Music Theory</li> <li>Beginning Piano</li> <li>Intermediate Piano</li>   <li>Technical Theater</li> <li>Acting Courses</li>   <li>Modern Dance Courses</li> </ul>

\*Satisfies (full or in part) NYS Graduation Requirement for Arts Credit

# Arts credit; Physical Education credit can be earned using corresponding PE course code.

# Music Courses

## Music Theory - CRS 6601 1.0

Designed for students with previous music experience who are interested in developing songwriting skills. Explores traditional, electronic & progressive methods for composing.

**Prerequisite:** Participation in a performing group or permission of the instructor.

**Grades:** 9 – 12

Course meets NYS Regents mandate of one credit in the Arts.

## AP Music Theory - CRS 6602 1.05 1.0

Designed as a continuation of the skills gained in Music Theory with an emphasis on the study of figured bass and Schenkerian analysis. Musicianship skills including dictation and other listening skills, sight singing, and keyboard harmony are an integral part of the class. The course also prepares students to take the AP Music Theory exam.

**Prerequisite:** Successful completion of Music Theory or instructor permission.

**Grades:** 10-12

Course meets the NYS Regents mandate of 1 credit in Arts.

## Explorations in Music - CRS 6401 0.5

Develops students' understanding of music as it relates to itself and human culture. Offers students opportunity to work individually and in groups to complete projects tailored to their abilities.

**Prerequisite:** None

**Grades:** 9-12

Partial fulfillment of requirements for the NYS Regents Mandate for graduation.

## Rock History - CRS 6411 0.5

Offers a survey of the music, musicians, and historic events that contributed to the development of American Popular Music since the 1840's.

**Prerequisite:** None

**Grades:** 9 – 12.

Partial fulfillment of requirements for the NYS Regents Mandate for graduation.

## Beginning Piano-CRS 6321 0.5

Fundamentals of playing keyboard instruments, reading music, chord construction, and simple improvisation will be presented. Some creative experiences with electronic music devices will be included.

**Prerequisite:** No previous musical experience is needed. However, students should have a keyboard instrument available at home for individual practice.

**Grades:** 9 – 12

Partial fulfillment of requirements for the NYS Regents mandate of one credit of Art and/or Music for graduation.

## Intermediate Piano -CRS 6341 0.5

Continuation of the contents of "Beginning Piano" Emphasis on ensemble playing and keyboard/computer technology, and solo literature

**Prerequisite:** Successful completion of "Beginning Piano" or permission of the instructor. Students should have a keyboard instrument available at home for individual practice.

Partial fulfillment of requirements for the NYS Regents mandate of one credit of Art and/or Music for graduation.

## Guitar - CRS 6301 0.5

Fundamentals of reading music, chord construction, and familiar chord rhythmic accompaniments, various strumming techniques, and blues improvisation will be included

**Prerequisites:** No previous music experience is needed. However, the student must have a guitar for individual practice.

**Grades:** 9 – 12

Partial fulfillment of requirements for the NYS Regents mandate of one credit of Art and/or Music for graduation.

## Orchestra -CRS 6101 1.0

Continuation of individual skill development needed to perform orchestral music of all periods Opportunities for solos and smaller ensemble performance are provided at the local and state levels. Performance at concerts/events and attendance at weekly lesson groups (CRS 6511) is basic to meeting this criteria.

**Prerequisites:** Previous orchestral experience and an individual audition with the instrumental director to demonstrate performance skill levels.

**Grades:** 9-12

Course meets the NYS Regents mandate of one credit in the Arts.

## Concert Band - CRS 6100 1.0

Continuation of individual skill development needed to perform band music of all periods. Opportunities for solo and smaller ensemble performance are provided at the local and state levels. Performance at concerts/events including home football games and attendance at weekly lesson groups (CRS 6511) is basic to meeting these criteria.

**Prerequisites:** Previous band ensemble experience and an individual audition with the band director to demonstrate performance skill levels.

**Grades:** 9-12

Course meets the NYS Regents mandate of one credit in the Arts.

**Intro to Recording Technology - CR6421**  0.5

This course is designed to give students hands-on experience in recording and mixing with the culminating project being the production of a CD of individual and group assignments. During this course, students will learn the basics of acoustics, microphone selection and technique, use of signal processors, MIDI, digital and analog recording terminology, as well as visit studios and witness the professional skills and attitudes expected in commercial recording.

**Prerequisites:** None

**Grades:** 9-12

**Wind Ensemble - CRS 6002**  1.05 1.0

Continuation of individual skill development in band performance at a superior level. This select ensemble will perform Level 5 and Level 6 music as found in the current NYSSMA Manual. This ensemble offers the opportunity to perform more difficult literature. Performance at concerts/events, home football games and attendance at weekly lesson groups (CR 6511) is basic to meeting this criteria. Prerequisites: Previous band experience and an audition will be required for admission into this select ensemble, and membership in a related major performing organization. (Courses 6100, 6101, 6201, 6211, 6221).

**Grades:** 10-12

Course meets the NYS Regents mandate of one credit in the Arts.

Main Campus

**Instrumental/Vocal Lesson - CRS 6511/6521**

This weekly scheduled lesson with the ensemble director is to support students' skill development and participation within the performance ensemble. A rotating schedule is developed and distributed at the beginning of each year and make up options are offered to reduce instructional conflicts.

Prerequisites: Enrollment within a major performing ensemble.

**Grades:** 9 – 12

Credit earned via ensemble enrollment.

**A Cappella Chorus - CRS 6201**  0.5

Voice production techniques and music reading skill development are emphasized within this course. Opportunities for solo and smaller ensemble performance will be provided at the local and state levels. Performance at concerts/events and attendance at weekly lesson groups (CR 6521) is basic to meeting this criteria.

Prerequisites: Previous choral experience and individual audition with the choral director to demonstrate vocal skills and music reading ability.

**Grades:** 9 – 12

Main Campus

**Madrigal Singers - CRS 6202** 1.05 

1.0

Voice production techniques and music reading skill development through representative SATB choral literature are emphasized within this course. This select ensemble will perform Level 5 and Level 6 music as found in the current NYSSMA Manual. This ensemble offers the opportunity to perform more difficult literature. This small ensemble offers scholars the opportunity to perform in a variety of school, district and community venues. Class participation and attendance at all concerts/events scheduled for the ensemble is expected.

Prerequisites: Individual audition with the instructor and membership in a related major performing organization. (Courses 6100, 6101, 6201, 6211, 6221)

**Grades:** 10-12

**Treble Chorus - CRS 6211** 

0.5

Voice production techniques and music reading skill development through representative SSA choral literature are emphasized within this course. Special emphasis on ensemble blend and balance with opportunities for small group performance. Performance at concerts/events and attendance at weekly lesson groups (CR 6521) is basic to meeting this criteria.

Prerequisites: Individual audition with the choral director to classify voice.

**Grades:** 9-12

Partial fulfillment of requirements for the NYS Regents mandate of one credit of Art and/or Music for graduation.

Main Campus

**Chorus - CRS 6231** 1.0

Individual skill development to perform choral music of all periods. Opportunities for solo and smaller ensemble performance are provided at the local and state levels. Performance at concerts/events and attendance at weekly lesson groups (CRS 6521) is basic to meeting this criteria.

Prerequisites: Individual audition with the choral director to demonstrate performance skill levels.

**Grades:** 9-12.

Course meets the NYS Regents mandate of one credit in the Arts (music, art, dance or drama).

North Campus

**Tenor/Bass Chorus - CRS 6221**  0.5

Voice production techniques and music reading skill development through representative TBB choral literature are emphasized within this course. Special emphasis on ensemble blend and balance with opportunities for small group performance. Performance at concerts/events and attendance at weekly lesson groups (CR 6521) is basic to meeting these criteria.

**Prerequisites:** Individual audition with the choral director for voice classification.

**Grades:** 9-12 - Main Campus

## Performing Arts Courses

### Performing Arts Lab (PAL) - CRS 6741

 1.0

Course provides units of study exploring the utilization of music, dance, theater, stagecraft and music technology within the performing arts. There will be a final project utilizing all aspects of the Performing Arts Lab. Course meets requirements for NYS Regents Mandate for Graduation

**Prerequisite:** None  
Main Campus

### Technical Theatre - CRS 6701

 1.0

Introduction to the art of Stagecraft. Skill development, job exploration, and production experience, will provide students with experience in the behind-the-scenes world of the theatre. Units include basics of stage safety, theatrical design, construction, roles and responsibilities of set, lighting, sound, costume designers and practitioners. Students will make connections between the performing arts, academics, and the culture of their community through cross-curricular instruction and practical application. Instruction supported by guest artists and field experience. Students will utilize and apply the content acquired in class in at least one performance.

**Prerequisite** - PAL CRS 6741 or permission of instructor.  
**Grades:** 10 – 12  
Main Campus

### Modern Dance I - CRS 6801

 0.5

Detailed work in technique, choreography, and performance. Scholars develop the skills necessary for basic through intermediate levels of dance.

**Prerequisites:** Successful completion of Creative Movement or instructor permission.

**Grades:** 10-12.  
Arts elective credit (Course also available under PE Department Course CRS 9500)  
Main Campus

### Modern Dance II - CRS 6811

 0.5

Build on skills learned in Modern Dance 1. Scholars develop skills for intermediate through advanced levels of dance.

**Prerequisites:** Successful completion of Modern Dance I or instructor permission.

**Grades:** 11-12  
Arts elective credit (Course also available under PE Department Course CRS 9501)  
Main Campus

### Advanced Dance - CRS 6821

 1.0

Dance technique and performance with advanced dance training. Individual auditions are required to enroll in this course. Course concentration is on a variety of dance styles, jazz, ballet, modern and other.

**Prerequisites:** Audition; instructor permission  
**Grades:** 11-12 (Course also available under PE Department Course CRS 9502)  
Main Campus

### Creative Movement - CRS 6831

 0.5

This course is open to students of all dance levels to improve their technique, choreography, and performance skills. Participation in dance technique classes and successful completion of choreography/performance assignments is required.

**Prerequisite:** None  
**Grades:** 9-12

Arts elective credit (Course also available under PE Department Course CRS 9503)  
Main Campus

### Acting I - CRS 6711

 0.5

Introduction to and practice of appropriate behavior for an actor in rehearsal and performance. Basic acting course is designed for students to take the first steps toward acting on a serious basis. Exercises, improvisations and scenes encountered by the beginning actor

**Prerequisites:** None  
**Grades:** 9 – 12  
Main Campus

### Acting II - CRS 6721

 0.5

Advanced acting and beginning directing and playwriting experiences. Exercises in concentration, sense and emotional memory will require that only the most serious actors take this course

**Prerequisites:** Successful completion of Acting I or instructor permission.  
**Grades:** 10 – 12  
Main Campus

**Acting III - CRS 6731**

1.0

Actors move to the most advanced level of acting Preparation for college and professional auditions.

**Prerequisites:** Acting II

**Grades:** 11-12

Main Campus

**Prerequisites:** Individual audition and/or membership in a related major performing organization.(Courses 6100, 6101, 6201, 6211, 6221)

**Grades:** 9-12

**Jazz Ensemble**

This extra-curricular performing group explores the various styles of jazz music. Scholars are given the opportunity to also develop improvisation skills.

Performance at all concerts/events scheduled for the ensemble, in addition to class participation expectations.

**Prerequisites:** Individual audition and/or membership in a related major performing organization. (Courses 6100, 6101, 6201, 6211, 6221)

**Grades:** 9-12

**Electronic Keyboard Ensemble - CRS 6361**

This unique, extra-curricular performing group explores various styles of music arranged for keyboard instrumentation.

Performance at all concerts/events scheduled for the ensemble, in addition to class participation expectations.

**Prerequisites:** Individual audition and/or membership in a related major performing organization. (Courses 6100, 6101, 6201, 6211, 6221)

**Grades:** 9-12

**Percussion Ensemble**

This unique, extra-curricular performing group explores various styles of music arranged for percussion instruments.

Performance at all concerts/events scheduled for the ensemble, in addition to class participation expectations.

# Physical Education & Health Courses

## Physical Education and Health Courses

1. Team Sports
2. Individual Sport, Wellness and Recreation
3. Lifetime Fitness
4. Elite Fitness
5. Aquatics
6. Lifeguard Training
7. Health

### Team Sport - CRS 9451 0.5

Develop intermediate to advanced skill level in individual/team sport and fitness, Football, Volleyball, Basketball, Cross Country/Track & Field, Lacrosse as well as completing hands-only instruction in cardiopulmonary resuscitation (CPR) and instruction in the use of Automated External Defibrillators (AEDs, etc. First Aid)

### Individual Sport, Wellness, & Recreation - CRS 9331 (Coed) 0.5

Develop intermediate to advanced skill level in individual/team sport and fitness. Walking, Ping Pong, Badminton, Cooperative Games, outdoor games as well as completing hands-only instruction in cardiopulmonary resuscitation (CPR) and instruction in the use of Automated External Defibrillators (AEDs, etc. Basic First Aid, Community/School Service Project. Prerequisite: None

### Lifetime Fitness - CRS 9461 0.5

Become familiar with the latest trends in life-long fitness activities. Circuit Fitness, Bootcamp, Yoga, Pilates, Weight Training, Track Activities, Aerobics, Interval Training, P90X, Insanity. Prerequisite: None

### Elite Fitness - CRS 9351 0.5

Sport specific training geared towards increasing individual performance in sport. Weight Training, Cross Training, TRX, Cross Fit, Plyometric, Cardio Interval Training, Speed & Agility, Diet and Nutrition, Personal Fitness Assessments.

**Prerequisite:** Must be a member of a school team or successful completion of Lifetime Fitness

### Aquatics - CRS 903 (Coed) 903B (Boys) 903G (Girls) 0.5

Introduce and review basic swimming and survival skill. Treading, Front, back, breast, finning, butter flying, Aquatic Games, Interval Training, Distance Swimming, Individual Workouts. Will not be offered for the 20-21 school year due to pool repairs.

**Prerequisite:** None.

### Lifeguard Training (Coed) - CR 9371 0.5

Earn ARC Lifeguarding certification course. Recognizing hazardous situations and prevention of injury. Response to aquatic emergencies and rescue skills.

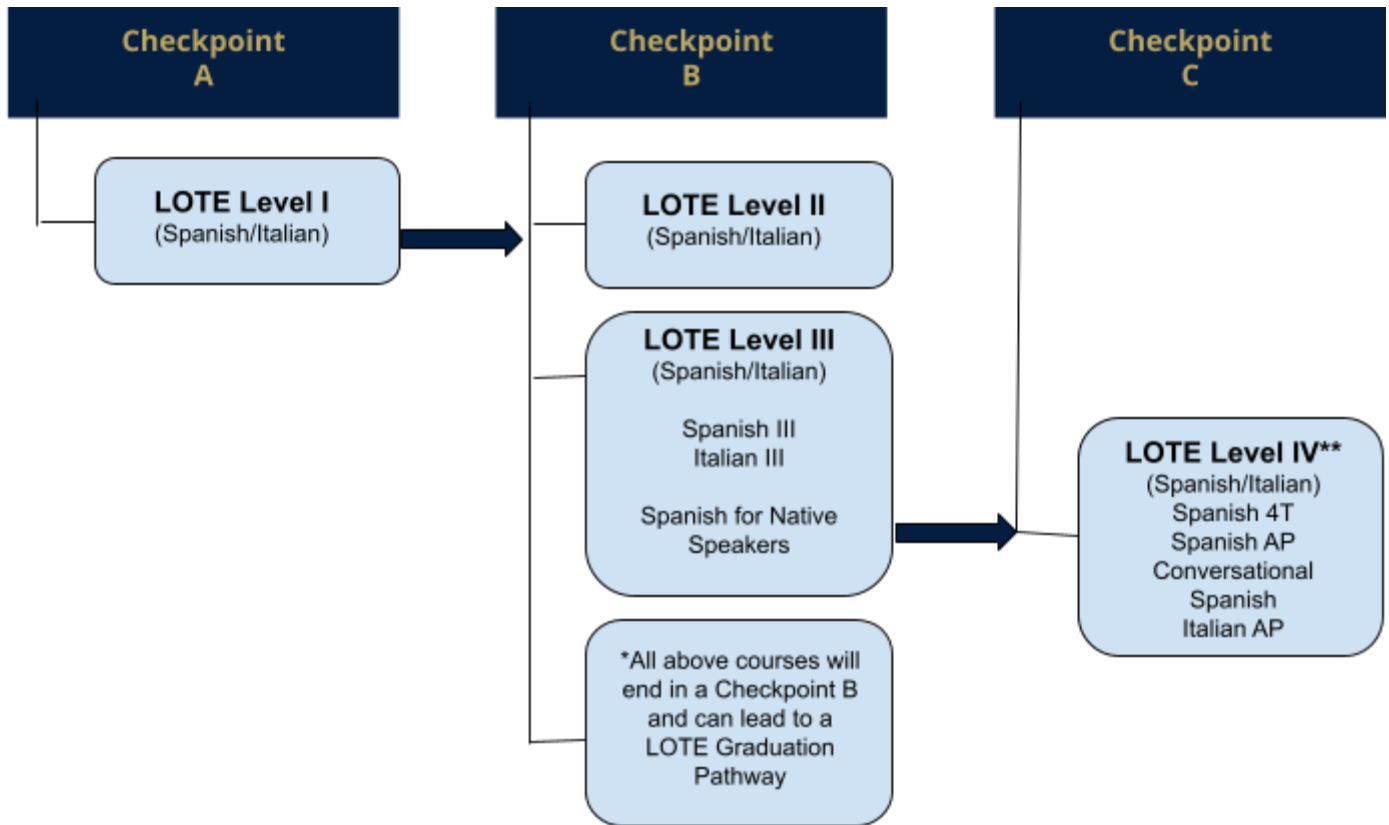
**Prerequisite:** Must be able to pass basic swim test

### Health - CRS 9216 0.5

Both Campuses - The Health course is founded on the principle of "wellness" and constructed to allow all students to make positive healthful decisions throughout their lives. The course consists of personality development, introduction course will emphasis on 4th, 5th and 6th psychology, conflicts, problem solving and decision making. The prevention as well as the physiological and psychological effects of mental illness, smoking, alcohol, drug abuse, and sexually transmitted diseases is all part of Health education. Finally, the topics of nutrition and how diet affects health, physical fitness are covered as well as a review of standard first aid.

**Prerequisites:** The 1970 Mandate from the Commissioner of Education requires health education as a constant for all pupils. This half credit health course is required for all students.

## World Languages



\*\* Checkpoint C Level Courses that can assist students in earning New York State Seal of Biliteracy. For more information on the Seal of Biliteracy please see page 8 or <http://www.nysed.gov/world-languages/new-york-state-seal-biliteracy-nyssh>

# Languages Other Than English (LOTE) Courses

## Italian I - CRS 2111

1.0

In the first year of study, a basic understanding of the target language is developed. Students learn to talk about themselves, their home and community, school, sports, weather, and time. Reading and writing as well as basic structure of the language are learned early in the first year of study. Readings and conversations also center on the lives and customs of the people living in countries that speak Italian.

**Prerequisites:** None.

**Course Requirements:** satisfactory notebook, culture project, school examination

## Intensive Italian-CRS 2101

1.0

This course is designed for students who are in between a Level 1 and Level 2 language proficiency. In this course of study, listening, speaking, reading and writing skills acquired the previous year are improved and expanded. Level 1 course work is reviewed. In addition, reading, guided composition and a study of basic structure are used to further develop the student's understanding and use of Italian. Language activities in the second year center on geography, travel, social customs and historical concepts unique to the countries that speak Italian.

**Prerequisites:** Completion of the first year of study and Checkpoint A Exam or District Administrator approval based on previous course final grade average.

**Course Requirements:** satisfactory notebook, culture project, school examination

## Italian 2 - CRS 2121

1.0

In the second year of study, listening, speaking, reading and writing skills acquired the previous year are improved and expanded. Reading, guided composition and a study of basic structure are used to further develop the student's understanding and use of Italian. Language activities in the second year center on geography, travel, social customs and historical concepts unique to the countries that speak Italian.

**Prerequisites:** Successful completion of the first year of study and Checkpoint A Exam or District Administrator approval based on previous course final grade average.

**Course Requirements:** satisfactory notebook, culture project, school examination

## Italian 3 - CRS 2131

1.0

In the third year, many areas of interest are explored through readings and practice with Italian. New vocabulary and additional grammatical structures are learned in order to

broaden the ability of students to express themselves in Italian. Some modern writers are introduced at this level.

**Prerequisites:** Successful completion of the 2nd year of study.

**Course Requirements:** satisfactory notebook, two culture projects, Regents examination

## AP Italian Language and Culture - CRS 2143

1.0

This course includes advanced grammar with special attention to problems of idiomatic expressions and literary style, themes, oral presentations, and translation, a constructive analysis of the phonology, morphology, and syntax of English and Italian; a survey of the main literary currents and major writers of each century, e.g. Dante, Petrarca, Boccaccio, da Vinci, Columbo, Vespucci, Mochiavelli, Michelangelo, Costiglians, Cellini, Galilei, Goldoni, Mestastasio, Manzoni, Garibaldi, Verdi, Verga, Pirandello, Marconi, Calvino. There is an option of applying for 3 college credits from SUNY Albany.

**Prerequisites:** Successful completion of Checkpoint B Exam. A cumulative average of 85% or above in both the course work and the examination is recommended.

**Course Requirements:** satisfactory notebook, research paper, school examination

## Italian 5 - CRS 2153

1.0

This is a Level C course, recommended for students who have taken AP Italian Language and Culture. In this course, students will research a topic of interest and create a culminating project that displays his/her skills, abilities and talents in English and the target language. The Italian V course prepares students to communicate authentically in Italian by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information, concepts, and ideas on a variety of topics, including connections to other subject areas.

**Prerequisites:** Successful completion of AP Italian Language and Culture and meeting all other criteria for the New York State Seal of Biliteracy.

**Course Requirements:** Commitment to completing all Seal of Biliteracy requirements, completion and presentation of research papers/projects in both languages.

## Spanish 1 - CRS 2211

1.0

In the first year of study, a basic understanding of the target language is developed. Students learn to talk about themselves, their home and community, school, sports, weather, and shopping in both the present and past tense.

Reading and writing as well as basic structure of the language are learned early in the first year of study. Readings and conversations also center on the lives and customs of the people living in countries that speak Spanish.

**Students who have repeatedly attempted to earn the 1 LOTE credit required for graduation may be enrolled in course 2210 (Language & Culture: Exploring Identity & Multiculturalism).**

**Prerequisites:** None

**Course Requirements:** satisfactory notebook, culture project, district-wide school examination

### Spanish 2 - CRS 2221

✎ 1.0

In the second year of study, listening, speaking, reading and writing skills acquired the previous year are improved and expanded. Reading, guided composition and a study of basic structure are used to further develop the student's understanding and use of Spanish. Language activities in the second-year center on geography, travel, social customs and historical concepts unique to the countries that speak Spanish.

**Prerequisites:** Successful completion of the first year of study and Checkpoint A Exam or District Administrator approval based on previous course final grade average.

**Course Requirements:** satisfactory notebook, culture project, district-wide school examination

### Spanish 3 - CRS 2231

✎ 1.0

In the third year, many areas of interest are explored through readings and practice with Spanish. New vocabulary and additional grammatical structures are learned in order to broaden the ability of students to express themselves in Spanish. Some modern writers are introduced at this level.

**Prerequisites:** Successful completion of the second year of study.

**Course Requirements:** satisfactory notebook, two culture projects, Regents examination

### Spanish for Native Speakers (G) - CRS 2237

✎ 1.0

Main Campus - This course is designed to capitalize on the fluency, which the student already has, and to meet his/her particular language needs. The focus is on increasing vocabulary and refining the use of correct Spanish. An important part of the course is the improvement of reading and writing skills with an emphasis on grammar. The student will also become aware of Hispanic contributions to world civilizations.

**Prerequisites:** The student must be enrolled in a Bilingual program and be a native speaker of Spanish with sufficient skills to speak and understand Spanish. (This course is a requirement for students enrolled in the bilingual program and it is the equivalent of Spanish 3 for Bilingual students).

**Course Requirements:** satisfactory notebook, culture project, Regents examination

### Spanish 4T - Transitional - CRS 2241

1.0

This course is a high school Level C Spanish course for students who would like to continue more advanced studies of the language. The T at the end of the course's name stands for the word "transition", meaning that the students who are going to take this course are between level three and a more advanced study of the Spanish language.

**Prerequisites:** Successful completion of Spanish 3 or Spanish for Native Speakers and Checkpoint B Exam or District Administrator approval based on previous course final grade average. A cumulative average of 85% or above in both the course work and the examination is recommended.

**Course Requirements:** Satisfactory knowledge of Spanish grammar, intensive vocabulary study, basic writing and reading skills, cultural related projects and a final examination.

### AP Spanish Language and Culture - CRS 2243

✎ 1.0

This course is an advanced study of the Spanish language at the intermediate level. In this course, students will further develop the four linguistic skills of language learning. They will acquire a higher level of proficiency in the language through the usage of relevant materials such as computer technology, up-to-date textbooks, newspapers, magazines, films and individual presentations of students in class. The reading and writing aspect of this course will be achieved through the study of current literature of the Spanish-speaking world dealing with issues relevant to today's world. An in-depth study of grammatical structures will be incorporated throughout this course.

**Prerequisites:** Successful completion of Checkpoint B Exam. A cumulative average of 85% or above in both the course work and the examination is recommended. For students who are native-speakers, an average of 90% or above in Spanish for Native Speakers is recommended.

**Course Requirements:** Successful completion of coursework, AP Spanish Language examination recommended.

### AP Spanish Literature - CRS 2263

✎ 1.0

This course is designed to provide students with a learning experience equivalent to that of a third-year college course in Peninsular and Latin-American literature. This course covers the major movements in Hispanic literature from the medieval period through the latest literary trends. It breaks down the barriers of national literature to illustrate the ties that exist between the cultural productions of both sides of the Hispanic world. The literary text is taught, not as an end in itself, but as a

cultural and historical construct from which we can glean many aspects of Hispanic studies – from simple customs to basic values. The goal of the course is to teach students the tools of analysis in order to extract this vital information from text.

**Prerequisites:** A score of 85% or better in the AP Spanish Language and Culture exam recommended.

**Course Requirements:** satisfactory notebook, several literary projects, school examinations, AP examination

#### Spanish 4 – Conversational CRS 2203

 1.0

This is a college course given through the program called “High School at the University, at the State University of New York Albany Campus”. Students enrolled in this course will continue the study of the Spanish language equivalent to an intermediate level course of study at the university level. Prerequisites: Students must have completed three years of Spanish successfully at the Regents level. It is recommended that the student have a cumulative average of 85% or above in both the course work and the examination.

**Course Requirements:** Emphasis will be given to the acquisition of new vocabulary and new expressions of the language. Emphasis will also be given to conversational and Spanish 4, cont'd - comprehensive skills. Students will have in-depth review of grammatical structures and writing skills. At the end of the year, students will take an oral and written final examination.

#### Spanish 5 - CRS 2253

 1.0

This is a Level C course, recommended for students who have taken AP Spanish, Conversational Spanish, or Spanish 4T. In this course, students will research a topic of interest and create a culminating project that displays his/her skills, abilities and talents in English and the target language. The Spanish V course prepares students to communicate authentically in Spanish by interpreting (reading, listening, viewing), exchanging (speaking and listening; reading and writing), and presenting (speaking, writing) information, concepts, and ideas on a variety of topics, including connections to other subject areas.

**Prerequisites:** Successful completion of AP Spanish, Conversational Spanish, or Spanish 4T and meeting all other criteria for the New York State Seal of Biliteracy.

**Course Requirements:** Commitment to completing all Seal of Biliteracy requirements, completion and presentation of research papers/projects in both languages.

# Studio Art Courses

Studio Arts Courses –the following course can be used for the required studio art credit for graduation.

## Clothing and Textile/Intern Design CRS 7621 1.0

Main Campus- The content of this course includes the cultural and historical aspects of textiles and clothing, personal appearance, the design, construction and selection of clothing and related career opportunities. Students will learn basic pattern use and sewing machine skills. Students will learn the elements and principles of design and how to use color. The content of this course studies housing history and current trends in interior design.

**Prerequisites:** None

**Course Requirements:** The completion of one clothing project and the purchase of patterns and notions needed to complete their garment.

## Design and Drawing for Production - CRS 7661 1.0

Both Campuses -The Design and Drawing for Production (DDP), course of study, are focused on technical drawing techniques, the different styles of drafting, and promote creative problem solving through design. Projects will be centered on a variety of drawing styles, the design process, 3-dimensional modeling skills using AutoCAD, and model making. Assignments will include all forms of technical drawing and presentations. Students who plan to enter into the architectural field, engineering design or other technical studies should consider this fundamental course as early as possible.

**Prerequisites:** None

## Digital Studio in Art - CRS 6011 1.0

Both Campuses- In this class, students will study a variety of media, art styles, and artists. Students use image editing, compositing, animation, and digital drawing to put into practice the art principles discussed in the program. They explore career opportunities in the design, production, display, and presentation of digital artwork.

**Prerequisites:** None

**Course Requirements:** Completion of projects, work process, and portfolio

## Studio in Art - CRS 6001 1.0

Both Campuses - As a Drawing and Painting foundation course in this department, Studio in Art introduces students to a variety of concepts, skills, and techniques necessary for successful visual expression. Many different media will be used in areas of exploration and experimentation. Students will learn to analyze their work, study important works of art and participate in discussions about art.

**Prerequisites:** None

**Course Requirements:** Completion of projects, work process, and portfolio

## Visual Communications & Design 1 - CRS 6041 1.0

Main Campus - This is a foundation course for students who are motivated toward study in advertising and graphic design. To be successful in advertising, you have to understand the creative process and how words and pictures connect. Using contemporary media similar to that used by professionals, students will engage in process-oriented projects like generating print ads. An introduction to computer graphics, desktop publishing, storyboards for television and radio spot ads makes this course the choice for students looking for a future in the communications field.

**Prerequisites:** None

**Course Requirements:** Sketchbook and portfolio including projects, research, and a final evaluation.

# NFA North Elective Courses

## Child Development - CRS 7271

 1.0

Child Development is a great place to grow! Real life skills elective open to all students, especially beneficial for those in a Home Health Career Path. Education in a nurturing environment, fostering creativity and some hands-on experiences. Become competent exploring pregnancy, infants, childhood, parenting and related careers.

**Prerequisites:** None

**Course Requirements:** Make a toy for a child and completion of assignments

## Introduction to Food - CRS 7201

 1.0

An introductory kitchen course that combines academics with hands on cooking. Students will become familiar with nutrition topics, ingredients, a variety of cooking techniques and skills, tools, and they will learn the importance of safety and sanitation. Students will become confident in kitchen management and explore foods, as they practice cooking and baking with their peers.

**Prerequisites:** None

**Course Requirements:** Completion of reading/written assignments, and active participation in all aspects of lab experiences.

## Human Development - CRS 7261

 1.0

Build better relationships. Develop ways to handle stress. Explore personal growth and goals. Discover Leadership through Awareness!

**Prerequisite:** None

**Course Requirements:** Completion of all class assignments, projects and tests.

# Career and Technical Education

## Department Vision

The Newburgh Free Academy Career Pathway programs will prepare all students to be lifelong learners who can adapt to a changing world. Our graduates will be ready to transition to a career or college.

## Department Mission

The mission of the Visual Arts and Career and Technical Education program is to cultivate the potential in our students by integrating rigorous classroom instruction with relevant, work-based experiences that inspire, guide and empower them for post-secondary college and careers. Our CTE program will bridge the academic, employability and technical skills that prepare our students for leadership roles in the working world.



## Notes on choosing your Pathway Program

The Newburgh Free Academy Career Pathway programs emphasis is on developing workplace skills and academic rigor that enables our students to become better qualified to compete for a career of their choosing. Our career courses allow students to discover their talents, skills, and abilities and then chart an appropriate path toward career choices to produce a more informed, satisfied, and productive workforce.

Students will be required by 10th grade to lock in their Pathway course of study. Each Pathway program is a course of study that leads to a special designation on the diploma upon graduation. Additionally, the description of the courses listed for each Pathway must be taken sequentially as they are specific to the New York State approved national CTE assessment.

## Career and Technical NYSED Approved Programs

Program Pathway	College and Trade School Articulations Agreements
Auto Technology	Alfred State College & Rockland Community College
Barbering	Bryant and Stratton
Construction	Alfred State College & SUNY Delhi
Cosmetology	Bryant and Stratton
Criminal Justice	Bryant and Stratton & Columbia Greene Community College
Culinary	Affiliated with the New York Restaurant Association
Electrical	Bryant and Stratton
Fashion Design	Bryant and Stratton
Graphics	Bryant and Stratton
Health Occupations	Bryant and Stratton Monroe College
Welding	SUNY Delhi & Alfred State College

Art Design and Visual Communications Multiple Pathways	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Studio Art 6001</b>	
<b>Visual Communications I 6041</b>	
<b>Digital Studio Art 6011</b>	
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Comprehensive Drawing 6021</b>	
<b>Ceramic I 6941</b>	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Ceramics II 6951</b>	
English 12	
Government/Economics	
Physical Education	
<b>Ceramics III 6961</b>	

## Art Design and Visual Communications Course Descriptions

**Digital Studio in Art - CRS 6011** ✎ 1.0

Both Campuses In this class, students will study a variety of media, art styles, and artists. Students use image editing, compositing, animation, and digital drawing to put into practice the art principles discussed in the program. They explore career opportunities in the design, production, display, and presentation of digital artwork.  
**Pre-requisites:** None  
**Course Requirements:** Completion of projects, work process, and portfolio

**Studio in Art - CRS 6001** ✎ 1.0

Both Campuses - As a Drawing and Painting foundation course in this department, Studio in Art introduces students to a variety of concepts, skills, and techniques necessary for successful visual expression. Many different media will be used in areas of exploration and experimentation. Students will learn to analyze their work, study important works of art and participate in discussions about art.  
**Prerequisites:** None  
**Course Requirements:** Completion of projects, work process, and portfolio

**Ceramics 1 - CRS 6941** 1.0

Both Campuses - An introductory course is offering a study of basic clay working processes using hand building techniques as well as the potter's wheel. Design and craftsmanship will be stressed.  
**Prerequisites:** Studio in Art  
**Course Requirements:** Completion of projects

**Ceramics 2 - CRS 6951** ✎ 1.0

Both Campuses - This course will emphasize extensive operation of the potter's wheel; as well as the history and theory of ceramics. Students will also research the use of clay as art, and as a craft.  
**Prerequisites:** Ceramics 1  
**Course Requirements:** Advanced hand-building/production on the wheel and a final project.

**Ceramics 3 - CRS 6961** ✎ 1.0

Both Campuses - This course is designed for the serious-minded student contemplating a career in ceramics. Projects will be tailored toward career options in higher education or employment. Development of personal style will be encouraged.  
**Prerequisites:** Ceramics 2  
**Course Requirements:** Advanced hand-building/production on the wheel and a final project.

Art Design and Visual Communications Multiple Pathways (Continued)	
English 9	<b>Visual Communications Design I 6041</b> <b>Digital Studio Art 6011</b>
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	<b>Visual Communications Design II 6051</b>
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	<b>Visual Communications Design III 6061</b>
Health	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	<b>AP Studio 6931</b>
Chemistry (or Sci. Elective)	
English 12	
Government/Economics	
Physical Education	

## Visual Communications Course Descriptions

### Visual Communications & Design I - CRS 6041

 1.0

Main Campus - This foundation course is the entry-level experience in the Vis Com sequence where the fundamentals of design are introduced

- What is design? •Why does man create?
- How do designers create? •How does creativity work?
- Can I improve my creativity?

The focus on these vital questions sets the stage for a journey onto the student designers road ahead. Traditional beginnings in project work are the focus as the student transitions from tools that are traditional to tools that are digital. Basic fundamental and intermediate skills in Adobe Photoshop and InDesign are taught from a tutorial perspective, which builds on small steps to increase skill at a deeper level.

**Prerequisites:** None

**Course Requirements:** Sketchbook and portfolio including projects, research, and a final evaluation.

### Visual Communication & Design II - CRS 6051

 1.0

Main Campus - This intermediate course builds on the successes established in Vis Com I. Creativity takes a level of commitment. It is in this regard that the overarching focus of 'being a designer's' furthered. Harnessing the creative process, time management, and making deadlines is further supported along with tackling higher-order design projects. Adobe Illustrator is introduced as well. Along with increasing the skill level in using Adobe Photoshop and InDesign, Illustrator rounds out the student designers options in their quest to arrive at the best design answers. Careers in this field are also discussed as well as portfolio preparation for post-high school educational paths.

**Prerequisites:** Visual Communication & Design 1

**Course Requirements:** Additionally, students are required to maintain a sketchbook, folder, and portfolio; as well as attend various field experiences.

### Visual Communication & Design III - CRS 6061

 1.0

Main Campus- This upper-level course rounds out a rich and vigorous sequence of design classes that deliver marketable skills and/or collegiate preparation for a career in creative media. This course is on the books as Vis Com 3, but we are collectively known as 'The Fullerton Crew.' Our mission statement: "The Fullerton Crew is a student-driven design firm whose primary focus is meeting design needs from across the varied groups in this community. "We specialize in

- branding/logo design
- flyers/brochures/banners

Understanding the dynamic of the client/designer relationship is also articulated and supported. These students take this task seriously as they set about to meet design needs and put their skills to the test! Application of their skill and the interpersonal experiences of a designer-client relationship is fostered to enrich this upper-level design experience.

**Prerequisites:** Visual Communication & Design 1 and 2

**Course Requirements:** Portfolio generation (online & traditional) will be addressed as well for those students who see themselves furthering this endeavor beyond NFA.

Painting and Drawing	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Studio Art 6001</b>	
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Comp. Drawing/Illustrations 6021</b>	
<b>Painting &amp; Drawing I 6901</b>	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Painting and Drawing 2 6911</b>	
English 12	
Government/Economics	
Physical Education	
<b>Painting and Drawing III 6921</b>	
<b>AP Art &amp; Design 6931</b>	

## Painting & Drawing Course Descriptions

### Comprehensive Drawing/Illustrations - CRS 6021

 1.0

Main Campus - The basis of most successful artistic efforts is the development of a student's ability to draw. This comprehensive course is designed to aid students in developing skills necessary for success in advanced art courses. Students will draw extensively using a variety of materials. Open to all students.

**Prerequisites:** None

**Course Requirements:** Completion of production work, class assignments, and tests.

### Painting & Drawing 1 - CRS 6901

 1.0

Both Campuses - Serious students who have demonstrated a sincere interest in drawing and painting experience a variety of media, oil, acrylic and watercolor paints, charcoal, pencil, and crayon. Of concern will be the development of individual artistic expression. Consideration will be given to theory and history of painting and the works of important artists.

**Prerequisites:** Studio in Art

**Course Requirements:** Completion of sketchbook and painting portfolio

### Painting & Drawing 2 - CRS 6911

 1.0

Both Campuses -This is an advanced painting course for students whose interest, seriousness and talent have been demonstrated in the first year of study. Considerable emphasis will be placed on coordinating technique with personal expression.

**Prerequisites:** A grade of 85% or higher in Painting & Drawing 1

**Course Requirements:** Completion of sketchbook and painting portfolio

### Painting & Drawing 3 - CRS 6921

 1.0

Both Campuses -This course continues the development of skills presented in Painting and Drawing 2 as well as provides an opportunity for individualized instruction for those students contemplating a career in the fine arts. Particular emphasis will be placed on the methods, techniques, and practices of contemporary art and artists.

**Prerequisites:** Painting & Drawing 2

**Course Requirements:** Completion of sketchbook and painting portfolio

### AP Art & Design - CRS 6931





 1.0

Main Campus - This course is a focused, in-depth study of media, techniques, and the creative process. It is intended for students who wish to pursue serious study in the arts. This is a college-level course that prepares the students for advanced work.

\*Assessment by the College Board may qualify a student for college credit.





**Prerequisites:** Studio in Art and one other art course




**Course Requirements:** Completion of all AP Portfolio Criteria

Photography Pathway		Photography Course Descriptions	
English 9		<b>Digital Studio in Art - CRS 6011</b>	 1.0
US History		Both Campus- In this class, students will study a variety of media, art styles, and artists. Students use image editing, compositing, animation, and digital drawing to put into practice the art principles discussed in the program. They explore career opportunities in the design, production, display, and presentation of digital artwork.	
Algebra 1		<b>Prerequisites:</b> None	
Liv. Env. or Earth Science (Lab)		<b>Course Requirements:</b> Completion of projects, work process, and portfolio	
Phys. Ed.(Opposite Science Lab)		<b>Photography - CRS 6071</b>	 1.0
Foreign Language		Main Campus - Designed for beginning and advanced students, this program is a rigorous combination of technical, aesthetic and historical presentations, digital and darkroom work, studies in photographic composition, critical group discussions and written responses to readings, lectures, and gallery visits. In addition to the digital camera and editing concepts, students will be introduced to film photography, darkroom printing, and scanning of film images for manipulation in the digital editing format. Students will learn about digital printing and preparation of work for display. Photography students will have created a portfolio of work that can be used to present for post-high school studies and career opportunities.	
<b>Digital Studio Art 6011</b>		<b>Prerequisites:</b> Digital Studio in Art, Studio in Art, Visual Communications & Design I	
English 10		<b>Course Requirements:</b> Participation in class work, homework, and class discussions. Creation of a photographic portfolio.	
Global I		<b>Advanced Photography - CRS 6081</b>	 1.0
Geometry		Main Campus - This course explores advanced photographic procedures and techniques. Continuation of aesthetic concepts in photographic composition, students will learn advanced digital camera work and Photoshop editing techniques. Delving deeper into darkroom film photography, students will work with alternative films and camera formats. Research and written component involving documentary photography history and practicum. An independent portfolio of thematic work will be created over the course of the school year to expand subject matter choices and composition approaches.	
Liv. Env. or Earth Science (Lab)		<b>Pre-requisites:</b> CRS 671 Photography	
Phys. Ed.(Opposite Science Lab)		<b>Course Requirements:</b> Participation in class work, homework and class discussions. Independent work and research project. Creation of a photographic portfolio.	
Health		<b>Advanced Photography 2 - CRS 6091</b>	 1.0
<b>Photography 6071</b>		Main Campus - This course further expands the knowledge and techniques in advanced B&W darkroom photography and digital photography. You will work with medium and large format film cameras in this class. Alternative types of film, developing, printing and chemical processes will be explored. Creative techniques will be explored using Photoshop software. We will examine the work of contemporary photographers and incorporate their ideas and techniques into our own work. Work on independent themes are emphasized as well as creation of a senior portfolio of prints. You will create your own photographic based website using Wix Sites. Work will be submitted for display in the photo exhibition in the NFA Art Gallery.	
English 11		<b>Prerequisites:</b> Advanced Photo 672	
Global II		<b>Course Requirements:</b> Participation in class work, class discussions. Independent work and research project. Creation of college level photographic portfolio.	
Algebra II			
Phys. Education (Opposite Sci. Lab)			
Chemistry (or Sci. Elective)			
<b>Advanced Photography 6081</b>			
English 12			
Government/Economics			
Physical Education			
<b>Advanced Photography 2 6091</b>			

## Auto Body Repair Pathway

## Auto Body Repair Course Descriptions

English 9	<p><b>Basic Auto Body - CRS 7081</b>  0.5</p> <p>Main Campus - Students entering this course should be considered a sequence in Occupational Education and have a strong interest in auto body repair or vehicle maintenance. Good reading skills and mature work behavior is a must. Instruction will include:</p> <ol style="list-style-type: none"> <li>1. Auto body safety and work attitudes</li> <li>2. Career opportunities</li> <li>3. Basic auto body repair materials, and repair procedures.</li> <li>4. Basic hand tools and dolly repairs</li> </ol> <p>Practical application will be done on test panels, not live autos. This course will not include student-owned vehicle repair and repainting.</p> <p><b>Prerequisites:</b> None</p> <p><b>Course Requirements:</b> Students should expect to get dirty, and use of appropriate occupational clothing is required.</p>	
US History		
Algebra 1		
Liv. Env. or Earth Science (Lab)		
Phys. Ed.(Opposite Science Lab)		
Foreign Language		
<b>Required Art Credit</b>		
English 10		
Global I		
Geometry		
Liv. Env. or Earth Science (Lab)	<p><b>Auto Body 1 - CRS 7811 / 7812</b>  2.0</p> <p>Main Campus - This course is intended for the student who is seriously considering Auto Body Repair and Refinishing as a career. The course will require a two-period time block for a full year.</p> <p>The course will include:</p> <ol style="list-style-type: none"> <li>1. Auto Body Shop practical, appropriate work behavior, attitude and career opportunities</li> <li>2. Automotive Repair Welding Systems. Oxyacetylene, MIG &amp; Resistance Spot Welding</li> <li>3. Practical application of Auto Body repair materials and repair procedures for metal, fiberglass, and plastic.</li> <li>4. Advanced application of abrasives with air and electrical power tools</li> <li>5. Removal, repair, and replacement of Auto Body panels</li> <li>6. Introduction to painting and refinishing materials and techniques</li> </ol> <p><b>Prerequisites:</b> Basic Auto Body #722</p> <p><b>Course Requirements:</b> Students must provide suitable work clothes and work shoes.</p>	
Phys. Ed.(Opposite Science Lab)		
Health		
<b>Basic Auto Body 7081</b>		
English 11		
Global II		
Algebra II		
Phys. Education (Opposite Sci. Lab)		
Chemistry (or Sci. Elective)		
<b>Auto Body I -7811 (2 Periods)</b>		
<b>Auto Body I 7812 Lab</b>	<p><b>Auto Body 2 - CRS 7821 / 7822</b>  2.0</p> <p>Main Campus - This course is intended to further prepare the student for Auto Body Repair, to accept entry-level employment in the field or secondary education in auto body. Full-year 2 periods a day, every day. The second-year instruction will stress skills such as:</p> <ol style="list-style-type: none"> <li>1. Advanced repair of sheet metal, fiberglass, and plastics</li> <li>2. Collision estimating and basic frame straightening for autos</li> <li>3. Advanced paint systems as used on modern cars and light trucks, including acrylic enamel, polyurethane enamels, epoxies for spot, panel, and overall repainting; base coat/clear coat technology</li> </ol> <p><b>Prerequisites:</b> Auto Body 1 #702</p>	
English 12		
Government/Economics		
Physical Education		
<b>Auto Body II 7821 (2 Periods)</b>		
<b>Auto Body II 7822 Lab</b>		
<b>Optional – Workstudy 7761 and 7781</b>		<p><b>WorkStudy - CRS 7761 &amp; 7781</b>  0.5 &amp; 1.0</p> <p>Mentor/Mirror/ Job shadow professionals in the field. Make connections for YOUR SUCCESSFUL Career in your area of study.</p> <p><b>Prerequisites:</b> CRS 722 &amp; 702</p> <p><b>Course Requirements:</b> Students will be required to prepare a project and do a presentation at the end of the course.</p> <p>*** Articulation Agreement with Alfred State College</p>

<b>Automotive Technology Pathway</b>		<b>Automotive Technology Course Descriptions</b>	
English 9		<b>Basic Auto Technology - CRS 7701</b>  <b>0.5</b>	
US History		Main Campus - This course is designed for students who know little about cars. Basic Auto Technology provides detailed information on how basic automotive systems work, how to maintain automobiles and do simple repairs. Designed for beginners, the everyday needs of the automobile owner/operator are addressed in this course. Some topics include engine tune-up, tire inspection, rotation, wheel balancing, brake inspection and repair, and exhaust inspection, repair, engine oil, and fluids. When completed, this hands-on course can lead the student into a three-year automotive technology sequence or provide the student with enough knowledge and experience to be self-sufficient in basic automotive repairs and save them money for years to come!	
Algebra 1		Prerequisites: None	
Liv. Env. or Earth Science (Lab)		Course Requirements: Students should expect to get hands dirty and use appropriate occupational clothing.	
Phys. Ed.(Opposite Science Lab)			
Foreign Language			
<b>Required Art Credit</b>			
English 10		<b>Auto Technology 1 - CRS 7711 / 7712</b>  <b>2.0</b>	
Global I		Main Campus - This course is designed for the serious automotive student after completing Fundamentals (Basic Auto). Students can expect to learn engine mechanics including engine performance and design, as well as, starting and charging systems, maintenance of cooling and lubrication systems. Also, chassis mechanics, including brakes, suspension, and driveline maintenance, and an introduction to the use of testing equipment is stressed.	
Geometry		Prerequisites: Basic Auto Mechanics #721	
Liv. Env. or Earth Science (Lab)		Course Requirements: Students must provide suitable work clothes and work shoes.	
Phys. Ed.(Opposite Science Lab)			
Health			
<b>Basic Auto Technology 7701</b>			
English 11		<b>Auto Technology 2 - CRS 7721 / 7722 / 7723</b>  <b>3.0</b>	
Global II		Main Campus - The second year builds upon material learned in Occupational Auto 1, as well as an introduction to more advanced automotive technology. Vehicle driveline, suspension systems, wheel alignment, engine diagnosis, electronic ignition, fuel injection, and an introduction to computerized engine controls are covered in detail. Completion of this course will allow the student to begin a career in Automotive Mechanics on an entry level. The course will also guide students who choose to obtain a post-secondary education in Automotive Technology.	
Algebra II		Prerequisites: Completion of Auto Mechanics I #700	
Phys. Education (Opposite Sci. Lab)		Course Requirements: Students must provide suitable work clothes and work shoes. Completion of assignments.	
Chemistry (or Sci. Elective)			
<b>Auto Technology 1 - 7711 (2 Periods)</b>			
<b>Auto Technology 1 7712 Lab</b>			
English 12			
Government/Economics			
Physical Education			
<b>Auto Technology 2 7721 (3 Periods)</b>			
<b>Auto Technology 2 7722/7723 Lab</b>			
<b>Optional - Workstudy 7761 and 7781</b>		<b>WorkStudy - CRS 7761 &amp; 7781</b> <b>0.5 &amp; 1.0</b>	
		Mentor/Mirror/ Job shadow professionals in the field. Make connections for YOUR SUCCESSFUL Career in your area of study.	
		Prerequisites: CRS 721 &700	
		Course Requirements: Students will be required to prepare a project and do a presentation at the end of the course.	
		* NYSED APPROVED PROGRAM	
		** NYS CTE PATHWAY with Technical Assessment/NYS CDOS Pathway	
		*** Articulation Agreement with Rockland Community College & Alfred State College	

## Barbering Course Descriptions

Barbering Pathway	
English 9	<p><b>Barbering I - CRS 7161</b> <span style="float: right;">✎ 1.0</span></p> <p>Main Campus - This course includes the practice and study of the fundamentals of soft skills, safety and handling of equipment, shampooing, unisex haircuts, manicures, facials, scalp treatments, massage manipulations, proper draping, and decontamination and infection control. Students will have access to laptops containing eBooks, and the ability to note taking, highlight, and self-test through digital means. Students will be required to pass practical and written exams. A passing grade, 250 hours, and an apprenticeship at a barbershop is required to advance to Barbering II.</p> <p><b>Prerequisites:</b> Must be in 11th and 12th grade  <b>Course Requirements:</b> A three ring binder</p>
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Required Art Credit</b>	
	<p><b>Barbering II - CRS 7171 / 7172</b> <span style="float: right;">✎ 2.0</span></p> <p>Main Campus - This course includes the practice and study of the fundamentals of soft skills, advanced haircutting techniques, facial/neck straight razor shaving, hands-on experience in the senior clinic, preparation for the New York State Practical Licensing exam. Students will have access to laptops containing eBooks, and the ability to note taking, highlight, and self-test through digital means. Students will be required to pass practical and written exams. A passing grade, 250 hours, and an apprenticeship at a barbershop is required to be eligible to sit for the New York State Licensing Examination.</p> <p><b>Prerequisites:</b> 250 hours, Apprenticeship, Barbering I  <b>Course Requirements:</b> Purchase of towels, water bottle, shaving cream, shampoo cape, massage cream, cleansing cream, and shampoo are necessary extra supplies for the New York State Licensing exam.</p>
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
English 11	
Global II	
Algebra II	<p>*NYS ED APPROVED PROGRAM  ** NYS CTE PATHWAY with Technical Assessment/NYS CDOS Pathway  *** Articulation Agreement with Bryant and Stratton</p>
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Barbering I 7161</b>	
English 12	
Government/Economics	
Physical Education	
<b>Barbering II 7171 (2 periods) (eligible for NYSED certification exam)</b>	
<b>Barbering II b 7172 Lab</b>	

Computer Science and Coding Pathway	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Computer Science Principles 7411</b>	
<b>Motion Design and Animation 7421</b>	
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Web Design I 7131</b>	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>AP Computer Science A 7451</b>	
English 12	
Government/Economics	
Physical Education	
<b>ECHS Marist</b>	

## Computer Science and Coding Course Descriptions

### Computer Science Principles - CRS 7411

✎ 0.5

Computer science course, students will learn the basics of designing a web page and fundamentals of computer science. Students will learn the basics of HTML, CSS, basic programming, machine learning, hardware and software and game development using programming.

**Prerequisites:** None

**Course Requirements:** Participation in hands on activities and completion of assignments.

### Motion Design and Animation - CRS 7421

✎ 0.5

Students will get an introduction to the basic principles of animation as they use Adobe After Effects, Adobe Animate and CSS to create digital animations. Students will combine graphics, sound, text and video to create and deliver interactive media for web and gaming applications. Students will leave the class with a portfolio of work.

**Prerequisites:** None

**Course Requirements:** Participation in hands on activities and completion of assignments.

### Web Design I - CRS 7131

✎ 1.0

Web Design I is a project-based course that teaches students frontend and backend web development. Q1 & 2 students will learn coding languages HTML and CSS and Java. Q3 & 4 students will develop skills in cloud computing using Amazon Web Services.

**Prerequisites:** Computer Science Principles

**Course Requirements:** Participation in hands on activities and completion of assignments

### AP Computer Science A (APCSA) - CRS 7451

✎ 1.0

AP Computer Science A is an introductory college-level computer Science course. Students cultivate their understanding of coding through analyzing, writing, and testing code as they explore concepts like modularity, variables and control structures.

**Prerequisites:** Computer Science Principles

**Course Requirements:** Participation in hands on activities and completion of assignments

### ECHS Newburgh/Marist Partnership

The ECHS Newburgh/Marist partnership courses are within the CTE Department. The first course Digital Citizenship is for 9th grade students that are accepted into the program. The second course, Software Development is for 10th grade students that are accepted into the program.

**Course Requirements:** Be a participant of the Marist class.

Construction Pathway	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Design &amp; Drawing 7661</b>	
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Intro to Carpentry 7301</b>	
<b>(Not required/ recommended)</b>	
<b>Architecture Design 7681</b>	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Carpentry I 7311 (2 periods)</b>	
<b>Carpentry I 7312 Lab</b>	
English 12	
Government/Economics	
Physical Education	
<b>Carpentry II 7321 (3 periods)</b>	
<b>(eligible for NYSED certification exam)</b>	
<b>Carpentry 7322 Lab</b>	
<b>Carpentry 7323 Lab</b>	
<b>Optional – Work Study 7761 and 7781</b>	

## Construction Course Descriptions

### Design and Drawing for Production - CRS 7661

1.0

The Design and Drawing for Production (DDP), course of study, are focused on technical drawing techniques, the different styles of drafting, and promote creative problem solving through design. Projects will be centered on a variety of drawing styles, the design process, 3-dimensional modeling skills using AutoCAD, and model making. Assignments will include all forms of technical drawing and presentations. Students who plan to enter into the architectural field, engineering design or other technical studies should consider this fundamental course as early as possible.

**Prerequisites:** None

### Introduction to Carpentry - CRS 7301

0.5

Main Campus - Course will introduce Basic Woodworking skills using hand machine tools. Projects will be tailored to incorporate various methods of furniture and cabinet construction.

**Prerequisites:** None

**Course Requirements:** Completion of assignments

### Architectural Drafting and Design - CRS 7681

1.0

Main Campus - The Architectural Drafting and Design course of study is focused on residential structures and 3-dimensional modeling skills. Projects will be centered on the design process, floor plan drafting, 3D model making, and sustainable building methods. Students will study the history of architectural design and techniques used in designing and planning residential structures.

**Prerequisites:** Design & Drawing for Production CRS 660

### Carpentry 1 - CRS 7311 / 7312

2.0

Main Campus - A First-year course designed for students that intend to enter construction as a career. This is an introduction to carpentry as related to building and construction trades. Students will learn to read and interpret blueprints, estimate building costs, safe handling of hand tools and portable power tools, and techniques and processes involved in "rough" carpentry such as framing-floor, wall roof, sheeting, roofing, and siding.

**Prerequisites:** None

**Course Requirements:** Students must provide suitable work clothes and work shoes. Students must be willing to work outside.

### Carpentry 2 - CRS 7321/ 7322 / 7323

3.0

Main Campus - Second-year course for students that intend to enter construction as a career. Students will continue to refine skills developed in the first year. Also, they will learn finish carpentry skills; such as drywall installation and finishing trim door and window installation, finish floor installation.

**Prerequisites:** Building Construction/Carpentry 1 CRS 740

**Course Requirements:** Students must provide suitable work clothes and safety-type shoes. Willingness to do physical labor and work outside required.

\*NYSED APPROVED PROGRAM

\*\* NYS CTE PATHWAY with Technical Assessment/NYS CDOS Pathway

\*\*\* Articulation Agreement with Alfred State & SUNY Delhi

<b>Cosmetology Pathway</b>	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Required Art Credit</b>	
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Into to Cosmetology 7131</b>	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Cosmetology I 704 (4 periods) 7141/7142/7143/7144</b>	
English 12	
Government/Economics	
Physical Education	
<b>Cosmetology II 7151/7152/7153/7154 (4 periods) (eligible for NYSED certification exam)</b>	

## Cosmetology Course Descriptions

### Introduction to Cosmetology - CRS 7131

0.5

Main Campus - This is a ½-year hands-on course in the basics of cosmetology. Students will explore roller sets, finger waving, permanent wave wrapping, pin curls, thermal curling techniques, hair styling, and paraffin hand wax. Also, the students will practice soft skills for entry-level employment. Our theory includes the history of cosmetology, life skills, professional image and communication skills. Students will be required to take notes, practical assessment and chapter exams.

**Prerequisites:** None

**Course Requirements:** Complete practical and theory assignments. Attendance is critical to ensure students' success.

### Cosmetology I - CRS 7141/7142/7143/7144

4.0

Main Campus - This course includes the practice and study in the fundamentals of manicuring, shampooing, styling, permanent waving, chemical texture services, haircutting, and soft skills necessary for entry-level employment. We stress the importance of sanitation, sterilization, and personal and public hygiene. A passing grade, 500 hours, and complete notebook are necessary to advance to Cosmetology II.

**Prerequisites:** Must be in 11th or 12th grade (12th Graders will need to complete coursework in Cosmetology II program outside school district)

**Course Requirements:** Purchase of Kit (Approximately \$250.00), three ring binder with 20 dividers

### Cosmetology II - CRS 7151/7152/7153/7154

4.0

Main Campus - The second year provides further mastery of the basic skills with an emphasis on general science, nail enhancement procedures, skin care, hair color, advanced hair cutting, preparing for employment, and basic skills necessary to pass the New York State licensing examinations. The weekly senior clinic offers the students an opportunity to practice their skills in a real work environment.

Completion of senior cosmetology requires a notebook, 500 hours, and a passing grade. Upon this completion, students will be eligible to sit for the New York State Licensing Exams.

**Prerequisites:** 500 hours completed Cosmetology I and passing grade cosmetology I

**Course Requirements:** Update Cosmetology Kit, Three Ring Binder with 20 Dividers

### WorkStudy - CRS 7761 & 7781

0.5 &amp; 1.0

Mentor/Mirror/ Job shadow professionals in the field. Make connections for YOUR SUCCESSFUL Career in your area of study.

**Prerequisites:** CRS 704

**Course Requirements:** Students will be required to prepare a project and do a presentation at the end of the course.

\*NYSED APPROVED PROGRAM

\*\* NYS CTE PATHWAY with Technical Assessment/NYS CDOS Pathway

\*\*\* Articulation Agreement with Bryant and Stratton

<b>Criminal Justice &amp; Security Pathway</b>	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Required Art Credit</b>	
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Intro. to Criminal Justice 7851</b>	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Criminal Procedure 7861 (eligible for NYSED certification exam)</b>	
<b>Emergency and Disaster Management 7871</b>	
English 12	
Government/Economics	
Physical Education	
<b>WorkStudy 7761 &amp; 7781</b>	

## Criminal Justice & Security Course Descriptions

### Introduction to Criminal Justice - CRS 7851

1.0

North Campus

- Experience how a Criminal Mind operates
- Participate in simulations and labs
- Discover the justice system (police courts corrections services)
- Prepare for a Career in Security, Law, and Forensics

Prerequisite: None

Course Requirements: Completion of assignments

### Emergency and Disaster Management - CRS 7871

1.0

North Campus

- Learn emergency management skills
- Learn emergency communication skills.
- Emergency Dispatch Certification

Prerequisite: None

Course Requirements: Completion of assignments

### Criminal Procedures/Security - CRS 7861

1.0

North Campus

- Apply Real Life Criminal Justice career skills
- Fingerprint, Criminal photography, Crime scene processing
- Examine Drawing and Court presentations for evidence
- Solve the Crime!
- New York State Security Certification and Job Opportunities!

Prerequisite: Introduction to Criminal Justice

Course Requirements: Completion of assignments

### WorkStudy - CRS 7761 & 7781

0.5 &amp; 1.0

North Campus

- Mentor/Mirror/ Job shadow professionals in the field
- Explore Careers as Police Officer, 911 Dispatcher, and Security Guard
- Make connections for YOUR SUCCESSFUL Career in Law Enforcement or Security!

Prerequisites: Law Enforcement /Security pathway- Introduction to Criminal Justice #714N, Criminal Procedures#716

Course Requirements: Students will be required to prepare a project and do a presentation at the end of this course.

\*NYSED APPROVED PROGRAM

\*\* NYS CTE PATHWAY with Technical Assessment/NYS CDOS Pathway

\*\*\* Articulation Agreement with Bryant and Stratton & Columbia Greene Community College



<b>Electronics Pathway</b>	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Required Art Credit</b>	
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
<b>Basic Electronics 7471</b>	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Electronics I 7481</b>	
English 12	
Government/Economics	
Physical Education	
<b>Electronics 2 7491 (eligible for NYSED certification exam)</b>	
<b>WorkStudy 7761 and 7781</b>	

## Electronics Course Description

### Basic Electricity - CRS 7471 0.5

Main Campus - This course covers fundamentals of electricity and electronics. Topics covered will be basic housing wiring, electronics, low-voltage applications, tool identification and application, measuring, and basic audio systems. Students will make an electronics project and practice house wiring.

Prerequisites: None

Course Requirements: Completion of assignments

### Electronics 1 - CRS 7481 1.0

Main Campus - This course includes a review of basic mathematics and algebra and the introduction of basic physics. Basic electricity, DC and AC theory, and residential wiring and code compliance are emphasized. Lab work includes building sample residential walls to emphasize the application of schematic diagrams, proper wiring installation, and other test equipment.

Prerequisites: None

Course Requirements: Completion of assignments

### Electronics 2 - CRS 7491 1.0

Main Campus - This course continues the work and experience gained in Electronics 1. This course will continue to build the student's knowledge through applying their skills in various new situations. They will gain a deeper understanding of electrical code and safety issues that can arise. High voltage circuits and electrical panel work will be explored through classroom sample models. Students will learn to assess and troubleshoot common electrical issues and learn to repair and install new electrical components.

Prerequisites: Electronics

Course Requirements: Completion of assignments

\*NYSED APPROVED PROGRAM

\*\* NYS CTE PATHWAY with Technical Assessment/NYS CDOS Pathway

\*\*\* Articulation Agreement Affiliated with the New York Restaurant Association

Emergency Management Pathway
English 9
US History
Algebra 1
Liv. Env. or Earth Science (Lab)
Phys. Ed.(Opposite Science Lab)
Foreign Language
Studio Art
English 10
Global I
Geometry
Liv. Env. or Earth Science (Lab)
Phys. Ed.(Opposite Science Lab)
Health
<b>Introduction to Emergency First Responder 7823</b>
English 11
Global II
Algebra II
Phys. Education (Opposite Sci. Lab)
Chemistry (or Sci. Elective)
<b>Emergency and Disaster Management 7831</b>
English 12
Government/Economics
Physical Education
<b>WorkStudy 7761 &amp; 7781</b>

## Emergency Medical Services /Fire Science Course Descriptions

### Introduction to Emergency First Responder - CRS 7823

1.0

North Campus

- How to respond to medical, fire or mass casualty events
- Learn survival and rescue skills
- Learn how to prepare for disasters

**Prerequisite:** None

**Course Requirements:** Completion of assignments

### Emergency and Disaster Management - CRS 7831

1.0

North Campus

- Learn emergency management skills
- Learn emergency communication skills.
- Emergency Dispatch Certification

**Prerequisite:** Introduction to Emergency First Responder

**Course Requirements:** Completion of assignments

### WorkStudy - CRS 7761 & 7781

0.5 & 1.0

North Campus

- Mentor/Mirror/ Job shadow professionals in the field
- Explore Careers in EMS and Fire Science

**Prerequisites:** Introduction to Emergency Response and Emergency, Disaster Management

**Course Requirements:** Students will be required to prepare a project and do a presentation at the end of this course.

<b>Architecture &amp; Engineering Pathway</b>		<b>Architecture &amp; Engineering Course Descriptions</b>	
English 9		<b>Design and Drawing for Production CRS 7661</b>	1.0
US History		Both Campus -The Design and Drawing for Production (DDP) course of study are focused on technical drawing techniques, the different styles of drafting, and promote creative problem solving through design. Projects will be centered on a variety of drawing styles, the design process, 3-dimensional modeling skills using AutoCAD, and model making. Assignments will include all forms of technical drawing and presentations. Students who plan to enter into the architectural field, engineering design or other technical studies should consider this fundamental course as early as possible.	
Algebra 1		<b>Prerequisites:</b> None	
Liv. Env. or Earth Science (Lab)		<b>Introduction to Carpentry CRS 7301</b>	0.5
Phys. Ed.(Opposite Science Lab)		Main Campus - Course will provide an introduction to Basic Woodworking skills using hand machine tools. Projects will be tailored to incorporate various methods of furniture and cabinet construction.	
Foreign Language		<b>Course Requirements:</b> Completion of assignments	
<b>Design &amp; Drawing 7661</b>		<b>Engineering Drafting and Design CRS 7671</b>	1.0
English 10		Main Campus - The Engineering Drafting and Design course involves advanced technical design and is focused on the design process and prototyping skills. Projects will be centered on the processes of research, brainstorming, sketching, template design, 3D modeling using Autodesk software, and 3D printing fundamentals. Students will study everyday physical objects and mechanical devices, attempting to replicate or make improvements to these items. Students will develop and test a variety of 3-dimensional models made both by hand and with 3D printers.	
Global I		<b>Prerequisites:</b> CRS 660 - Design & Drawing for Production	
Geometry		<b>Architectural Drafting and Design CRS 7681</b>	1.0
Liv. Env. or Earth Science (Lab)		Main Campus - The Architectural Drafting and Design course of study is focused on residential structures and 3 dimensional modeling skills. Projects will be centered on the design process, floor plan drafting, 3D model making, and sustainable building methods. Students will study the history of architectural design and techniques used in designing and planning residential structures.	
Phys. Ed.(Opposite Science Lab)		<b>Prerequisites:</b> CRS 660- Design & Drawing for Production	
Health		<b>Carpentry 1 - CRS 7311/ 7312</b>	2.0
<b>Intro. To Carpentry 7301</b>		Main Campus - This is an introduction to carpentry as related to building and construction trades. Students will learn to read and interpret blueprints, estimate building costs, safe handling of hand tools and portable power tool and techniques and processes involved in "rough" carpentry such as framing- floor, wall roof, sheeting, roofing, and siding.	
English 11		<b>Course Requirements:</b> Students must provide suitable work clothes and work Shoes. Students must be willing to work outside.	
Global II		<b>Architecture Design 7681</b>	
Algebra II		<b>Carpentry I 7311 (2 Periods)</b>	
Phys. Education (Opposite Sci. Lab)		<b>Carpentry I 7312 Lab</b>	
Chemistry (or Sci. Elective)		<b>WorkStudy 7761 &amp; 7781</b>	
<b>Engineering Design 7671</b>			
English 12			
Government/Economics			
Physical Education			

## Fashion Course Descriptions

Fashion Design Pathway	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Clothing Textile/Inter. Design 7621</b>	<b>Clothing and Textile/Interior Design - CRS 7621</b> 1.0
	Main Campus- The content of this course includes the cultural and historical aspects of textiles and clothing, personal appearance, the design, construction and selection of clothing and related career opportunities. Students will learn basic pattern use and sewing machine skills. Students will learn the elements and principles of design and how to use color. The content of this course studies housing history and current trends in interior design. <b>Prerequisites:</b> None <b>Course Requirements:</b> The completion of one clothing project. The purchase of patterns and notions is required by the student.
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Clothing Textile/Inter. Design 7621</b>	<b>Clothing Construction - CRS 7631/7632</b> 2.0
	Main Campus- This course allows students to explore designs of clothing to create a clothing line. All facets of promoting a clothing line are researched and explored. Implementation of sewing line techniques will produce a full clothing line to be evaluated and graded by the teacher. Completed clothing lines will be presented during a runway fashion show during the school year. <b>Prerequisites:</b> Clothing, and Textile Design <b>Course Requirements:</b> Portfolio and final exam and project. Successful completion of a clothing line. The student must purchase patterns, fabric, and notions.
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Clothing Construction 7631 (2 Periods)</b>	<b>Advanced Clothing Construction - CRS 7641</b> 1.0
<b>Clothing Construction 7632 Lab</b>	
	Main Campus- This course is a continuation of clothing construction. Students are required to demonstrate independent efforts to create a larger and more detailed clothing line then done in Clothing Construction. Students in this level course will learn to play a leadership role in the production and running of the Newburgh Free Academy fashion show. <b>Prerequisites:</b> Clothing Construction <b>Course Requirements:</b> Portfolio and final examination/project, successful completion of a three-piece clothing line. The students must purchase patterns, fabric and notions.
English 12	
Government/Economics	
Physical Education	
<b>Advanced Clothing Construction 7641 (eligible for NYSED certification exam)</b>	
<b>Advanced Clothing Construction Lab</b>	

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\*\* NYS CTE PATHWAY with Technical Assessment/NYS CDOS Pathway

\*\*\* Articulation Agreement with Bryant and Stratton

<b>Graphic Communication Pathway</b>	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Required Art Credit</b>	
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Basic Graphics 7921</b>	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Graphics Arts I 7931</b>	
English 12	
Government/Economics	
Physical Education	
<b>Graphic Arts II 7941 (eligible for NYSED certification exam)</b>	

## Graphics Descriptions

### Basic Graphic Arts - CRS 7921

0.5

Main Campus - This course provides general knowledge and procedures in the Graphic Arts field and how it relates to the business world. The student is introduced to Computer Design on the Macintosh computer, using cutting-edge software including, Photoshop, In-Design, and Microsoft Word. Many projects are done in class.

**Prerequisites:** None

**Course Requirements:** Completion of assignments

### Graphics 1 - CRS 7931

1.0

Main Campus - This course is intended for students who are interested in the Graphic Arts field and its relationship with the business world. This course will cover Typography, Desktop Design, Computer Design, Graphics Manipulation, and copy preparation. Turning Words, Images, into media Masterpieces all with the Macintosh computer. Learning to market ourselves with cutting edge software Inc. Photoshop, In-Design, Microsoft Word

**Prerequisites:** None

**Course Requirements:** Completion of assignment.

### Graphics 2 - CRS 7941

1.0

Main Campus - This course is intended for students who are seriously interested in the mastering of computer technologies on the Macintosh platform. This course will cover Typography, Desktop Design, and Computer Design, Graphics Manipulation, copy preparation, resume, and many other helpful applications towards marketing yourself. Turning Words, Images, into media Masterpieces all using the Macintosh computer, learning to market ourselves with cutting edge software Inc. Photoshop, In-Design, Microsoft Word, and I-Movie Many projects are done in class.

**Prerequisites:** Completion of Graphic Arts 1

**Course Requirements:** Completion of assignments

\*NYSED APPROVED PROGRAM

\*\* NYS CTE PATHWAY with Technical Assessment/NYS CDOS Pathway

\*\*\* Articulation Agreement with Bryant and Stratton

<b>Personal Fitness Foundations Pathway</b>		<b>Personal Fitness Foundations Course Descriptions</b>	
English 9		<b>Advanced Personal Fitness - CRS 7231 /7232</b> <span style="float: right;">📄 0.5 CTE &amp; 0.5 H</span>	
US History		.5 Health credit is only approved for NFA North Campus; NFA Main students may receive 1.0 CTE credit.	
Algebra 1		Both Campus - The main focus at the start of this course will be on diet and fitness (learn to prepare healthy foods). Students will learn the basic study of the structure and function of the human body and its response to nutrition and specific exercise.	
Liv. Env. or Earth Science (Lab)		The students will each be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology by the end of this course. Course fulfills the NYSED Health requirement. (Health credit can only be granted for students at NFA North. Students at NFA Main may receive CTE credit.)	
Phys. Ed.(Opposite Science Lab)		<b>Prerequisites:</b> None	
Foreign Language		<b>Course Requirements:</b> Participation in hands on activities and completion of assignments.	
<b>Required Art Credit</b>			
English 10			
Global I		<b>Health and Fitness Foundations I - CRS 7241</b> <span style="float: right;">📄 1.0</span>	
Geometry		Both Campuses-Students are expected to prepare and participate in creating sports information, event and facility planning, program promotion, media relations and sports finance. The students will begin participating in the hands-on education-assistance program, working with the District Athletic Trainer in preventative services, emergency care, clinical diagnosis, therapeutic intervention, and rehabilitation of injuries.	
Liv. Env. or Earth Science (Lab)		<b>Prerequisites:</b> CRS 7501 Advanced Personal Fitness	
Phys. Ed.(Opposite Science Lab)		<b>Course Requirements:</b> Participation in hands on activities and completion of assignments.	
Health			
<b>Advanced Personal Fitness 7231/7232</b>			
English 11		<b>Health and Fitness Foundation II - CRS 7251</b> <span style="float: right;">📄 1.0</span>	
Global II		Both Campuses - The final component of this program will have each student take an in-depth focus to a specific field of interest that was discovered from Health and Fitness Foundations 1. Students must take part in the work in a work-study (education-assistance) environment based on the career goals of each student.	
Algebra II		Students are required by the end of this course to take the for Personal Training, First-Aid, CPR, and AED Certifications.	
Phys. Education (Opposite Sci. Lab)		<b>Prerequisites:</b> CRS 7501 and 7502	
Chemistry (or Sci. Elective)		<b>Course Requirements:</b> Complete	
<b>Health &amp; Fitness Foundations I 7241</b>			
English 12			
Government/Economics			
Physical Education			
<b>Health &amp; Fitness Foundations II 7251</b>			

Alternative Medicine Pathway	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
Studio Art	
<b>Principals of Natural Health 7531</b>	
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Meditation 7571</b>	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Evidence-Based Medicine 7581</b>	
<b>Acupressure Course 7591</b>	
English 12	
Government/Economics	
Physical Education	
<b>Business in Health and Healing 7601</b>	

## Alternative Medicine Course Description

**Principles of Natural Health- CRS 7531** 🔗 0.5

In this course, we will discuss the various stages of health and illness, and you will discover that true health means wholeness of the mind, body, and spirit. In this course, we will explore in depth the six global traditions: Ayurvedic medicine of India, the indigenous medicine of Central and South America, Native North American healing, the healing traditions of South Africa, traditional Chinese medicine, and Unani medicine of Eastern Europe. We will review a variety of methods like diet, hydrotherapy, positive attitude, relaxation, yoga, chiropractic, natural remedies and more; you will explore a way to achieve total health in mind, body, and spirit.

**Prerequisites:** None  
**Course Requirements:** Participation in hands on activities and completion of assignments

**Meditation – CRS 7571** 🔗 0.5

Focuses on intentionally training a person's attention and concentration. Meditation practices have been used by cultures around the world for thousands of years. In this certificate program, you will explore the many meditation techniques that can be used to support the mind-body connection and promote healing and wellness. This course will guide you as you discover how the practice of meditation can be used to increase mindfulness, reduce stress, deal with pain and illness, and support overall well-being.

**Prerequisites:** None  
**Course Requirements:** Participation in hands on activities and completion of assignments

**Evidence-Based Medicine – CRS 7581** 🔗 0.5

In this course, the focus is on all animal life depending on the existence of plants. They are necessary to produce Oxygen, to supply food and to provide shelter. When the early man started to look for a cure for his ailments, it was towards plants that he turned. Today 75% of Medicines around the world are derived from herbs. In this course, we will guide students through research/discovery of the world of medicines & methods in which they are applied.

**Prerequisites:** Principles of Natural Health  
**Course Requirements:** Participation in hands on activities and completion of assignments

**Acupressure Course – CRS 7591** 🔗 0.5

Acupressure is the application of pressure to the body to enhance the flow of energy. This therapy is widely used in China where more emphasis is given to people's responsibility for their own health than it is in the Western world. It has the same principles as Acupuncture, but the pressure is applied directly to the Acupoints of the body mainly by using the hands, fingers, thumbs or knuckles. Stimulation of the body's meridian system by touch is perhaps one of the oldest and most effective healing systems.

**Prerequisites:** Principles of Natural Health  
**Course Requirements:** Participation in hands on activities and completion of assignments

**Business in Health and Healing - CRS 7601** 🔗 0.5

Becoming an entrepreneur in this growing field can provide you with independence, flexibility, personal fulfillment, control over your own life, and incredible financial rewards. In this innovative program, you will learn how to make your dreams of building a health-related business a reality. This program will guide you through the steps to building your own business. You will explore the different options for creating your business and learn how to develop a successful business plan. You will gain information about financing your business, and see how to create an effective marketing strategy to help ensure your success

**Prerequisites:** Principles of Natural Health & Evidence Based Medicine  
**Course Requirements:** Participation in hands on activities and completion of assignments

<b>Nutrition Pathway</b>	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
Studio Art	
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Principles of Nutrition and Wellness 7561</b>	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Nutritional Management 7541</b>	
English 12	
Government/Economics	
Physical Education	
<b>Nutrition Science and Diet Therapy 7551</b>	

## Nutrition Course Pathway

### Principles of Nutrition and Wellness – CRS 7561

 1.0

Nutrition and Wellness is an applied laboratory-based course designed to educate students about food preparation and the functional components of foods. Students also learn about food safety, sanitation, and students complete the industry recognized Food Handlers Certificate. Through an examination of food labels, dietary guidelines, meal planning, and dietary analysis, students become aware of practical techniques of maintaining and improving health. The course also explores the role of food in respect to its historical, social, environmental context through the preparation of Regional Foods of the United States.

Prerequisites: None

Course Requirements: Participation in hands on activities and completion of assignments

### Nutritional Management – CRS 7541

 1.0

Nutritional Management provides an in-depth study of nutrition and how it affects the human body. Topics include extensive study of major nutrients, nutrition/food choice influences, technological and scientific influences, special diets, and career exploration in this field. Attention will be given to nutrition, menu planning, industry-based food safety, and sanitation. Laboratory experiences will be utilized to develop food handling and preparation skills. Nutritional Management is geared toward students interested in careers involving dietetics, education and health and wellness related fields.

Prerequisites: Principles of Nutrition and Wellness

Course Requirements: Participation in hands on activities and completion of assignments

### Nutrition Science and Diet Therapy – CRS 7551

 1.0

Nutrition Science and Diet Therapy is an applied knowledge course in nutrition for students interested in the role of nutrition in health and disease. Upon completion of this course, proficient students will be able to develop a nutrition care plan as part of the overall healthcare process, use methods for analyzing the nutritional health of a community, and understand the relationship of diet and nutrition, homeopathic to specific diseases. The course emphasizes the role of diet as a contributor to disease and its role in the prevention and treatment of disease.

Prerequisites: Nutritional Management

Course Requirements: Participation in hands on activities and completion of assignments

# Health Science Education Pathway Overview

Healthcare is the largest and fastest-growing industry in the United States and is one of the largest employment areas within the Hudson Valley.

NFA Health Science/ NYS Nurse Aide Certification Pathway offers High Quality Career and Technical Education. The NFA Nurse Aide program is a NYS Career and Technical Model Program as recognized and awarded by NYS Department of Education. While enrolled in the Health Science Career Cluster, you will prepare for a career that promotes health, wellness, diagnosis, and treat injuries and diseases. Students in the health science education pathway learn and practice skills that prepare them for diverse post-high school education and training opportunities, from apprenticeships and two-year college programs to four-year college and graduate programs.

Health Science Education Pathway is a program of interest for the student who is considering a professional career in any of the following professional disciplines: Nurse Aide, Home Health Aide, Licensed Practical Nurse, Registered Nurse, Phlebotomist, Medical Tech/Assisting, Pharmacist, and more.

NFA Health Science pathway will provide students with a competitive edge to be the better candidate for either entry into the global healthcare marketplace and the post-secondary institution of their choice to continue their education and training in a Healthcare/Medical Profession. Students become leaders through aligned curriculum and participation in our Student-Centered Organization HOSA- Future Healthcare Professionals.

## **Recommended Academic Alignment for all students in Health Science Pathway:**

**Science:** Living Environment, Chemistry, Anatomy, and Physiology, Biology/Microbiology

**Math:** Algebra, Medical Math, Prob. & Stat

*Students considering post-secondary education in Healthcare/Medical programs education will need to have strong Math, English/Writing, Science skills.*

## **Required Health Science Career Pathway courses: (course descriptions on following pages)**

- Introduction to Health Science (10th grade)
- Allied Health Science 1 (11th grade)
- Allied Health Science 2 (12th grade)

## **Certification Opportunities for students completing this pathway:**

- American Heart Association Basic Life Support for Healthcare Providers
- American Heart Association HeartSaver CPR/AED
- American Heart Association First Aid
- NYS Nurse Aide Certification
- NYS Home Health Aide Certification
- Medical Assisting Certification
- Practical Nurse pathway students will be eligible to sit for the PN-NCLEX Licensing

\*NYSED APPROVED PROGRAM

\*\* NYS CTE PATHWAY with Technical Assessment/NYS CDOS Pathway

\*\*\* Articulation Agreement with Bryant and Stratton and Monroe College

Health Science Career Multiple Pathway	
English 9	
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Required Art Credit</b>	
English 10	
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Intro to Health Science Education 7001</b>	
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Human Anatomy 5052</b>	
<b>Allied Health Pathway I 7011</b>	
English 12	
Government/Economics	
Physical Education	
<b>Medical Math 3521</b>	
<b>Methods in Medical Technology 7021</b>	
<b>Allied Health Pathway II 7021 (2 Periods) (eligible for NYSED certification exam)</b>	
<b>Allied Health Pathway II 7022 Lab</b>	

**Program at NFA North Campus**  
**Health Science Career Pathway**

**Introduction to Health Science - CRS 7001**  .75 CTE & 0.25 H

.25 Health credit is only approved for NFA North Campus

This is the first of many courses offered to students interested in pursuing a career in the healthcare field. During this first course, students are introduced to healthcare history, careers, law and ethics, cultural diversity, health care language and math, infection control, professionalism, communication, basics of the organization of healthcare facilities.

**Prerequisites:** None

**Course Requirement:** Students must have 80% or higher to enroll in Allied Health I  
\*Students that are eligible for Practical Nurse pathway must meet eligibility criteria including TABE/TEAS exam, Interview, Essay, and Letter of Recommendation.

**Allied Health Science 1 - CRS 7011**  .75 CTE & 0.25 H

.25 Health credit is only approved for NFA North Campus

As students continue their journey into Allied 1, they will apply their knowledge from Introduction to Health care and expand on the content while learning skills of the healthcare profession. Anatomy, disease processes, and care skills will allow students at this level to begin their clinical rotation. Students will job shadow and practice skills both in a clinical lab within the classroom and at a variety of health care facilities. Students will learn about infection control, "Transmission Based Precautions" and become more familiar with OSHA, HIPAA, and the CDC. Students will learn how to take vital signs, record them and learn what the data means. This course will provide the foundation for further advancement in Health Science.

**Prerequisites:** 80 % or higher in CRS 775, good attendance, and teacher recommendation.

**Course Requirements:** Required to have a recent physical and immunization on record for this course. During clinical rotation, students must wear Uniform.

\*Students must have an 80% or higher to enroll in Allied Health Science 2

**Allied Health Science 2 - CRS 7021/7022**  2.0

Students will work to be First Aid and CPR certified before participating in any healthcare experience outside of the classroom. Instructional hours, lab skills practice hours, and clinical placement hours required by the state as a prerequisite to completion of the nurse aide training and registering for NYS Nurse Aide exam.

**Prerequisites:** Required have an 80% score or higher, good attendance, and a teacher recommendation in course 755 & 777.

**Course Requirements:** Recent physical and immunization on record for this course.

During clinical rotation, students must wear Uniform. Students will complete a research poster in collaboration with Mount Saint Mary College Nursing Team from PALS program.

Certification Opportunities possible for students completing this pathway:

- American Heart Association Basic Life Support for Health Care Providers
- NYS Nurse Aide Certification
- NOCTI Industry Based Home Health Aide Certification
- NOCTI Industry Based Medical Assisting Certification

**Medical Mathematics (North Campus Only) - CRS 3521**

✎ 1.0

North Campus- This course prepares students in the LPN program to strengthen the fundamental mathematics skills that are essential to the nursing field. Completion of this course will help students prepare for the TAPE and TEAS exams as well as for the foundational mathematics they will encounter in the nursing field. Topics include reading measurements, basic operations, ratio/proportion, solving equations, percentages, military time units, rounding and place value, exponents, unit conversions, exponential growth, formula manipulations, budgeting, estimations, data analysis, interpreting graphs, etc.

**Prerequisites:** Successful completion of two math credits one being Geometry Common Core

**Course Requirements:** All tests, quizzes, assignments, and local final exam must be completed.

**Human Anatomy & Physiology (11, 12) - CRS 5052**

✎ 1.0

Human Anatomy and Physiology is an honors level course designed for both 11th and 12th grade students interested in learning more about the human body and/or may be interested in pursuing careers in the health sciences. The course is designed to introduce and expand the students' knowledge of the structure and function of the human body. This course will study basic biochemistry, cytology, histology, the maintenance of homeostasis, all body systems, and common diseases/disorders. An emphasis will be placed on the diagnosis, treatment, and the effects of various diseases on the human body using real life scenarios. An intense laboratory investigation program is built into the course allowing students to apply and exhibit their conceptual knowledge through hands-on applications. Double lab period on alternate days.

**Prerequisites:** Successful completion of Regents Living Environment and Regents Chemistry courses. Juniors and Seniors meeting these requirements are eligible for enrollment.

**Course Requirements:** Students must successfully complete all laboratory activities, chapter tests, case studies, and essays. Participation in class presentations and collaboration with peers is also required. A comprehensive final exam will be administered at the completion of the course.

**Methods in Medical Technology (11, 12) - CRS**

✎ 1.0

North Campus - This course may be used as the 3rd unit of science to meet diploma requirements for a Regents Diploma. The course may not be used for Regents credit. This course is the study of the principles and practice of clinical laboratory medicine, including approaching the patient, professional ethics, laboratory procedures, and the ECG technique. Use of technology to develop standard curves and determine clinical parameters like glucose and/or hemoglobin is studied. Students will prepare Levi-Jennings control charts, including determination of the mean, median, mode, standard deviation, and coefficient of variation configurations. Students will learn laboratory techniques in basic hematology using simulated human specimens, microbiology using non-pathogenic organisms, and immunology using simulated human specimens. Research in health care professions, interaction with guest speakers of healthcare professions and site visits to hospital departments are included. Correlated with lectures are readings and laboratory exercises to develop independent study. This is aligned with the Health Care Pathway at NFA North Campus. Students may be eligible for a certificate as a Medical Assistant.

**Prerequisites:** Successful completion of Regents Living Environment, Regents Chemistry, Regents Algebra I, all corresponding Regents exams, permission of the instructor.

**Course Requirements:** Completion of all prescribed laboratory work and rotation assignments in healthcare settings.

# Air Force Junior Reserve Officer Training Corps

The fundamental purpose of the Air Force Junior Reserve Officer Training Corps (AFJROTC) is to build citizens of character dedicated to serving their nation and community. The program is governed by the U.S. Air Force, and the citizenship training is conducted under the framework of an aerospace science program designed for high school students. It will acquaint students with the Air Force and aerospace environment, promote leadership skills, develop communications skills and encourage physical fitness.

The curriculum is divided into a four-year program, with students earning one academic credit for each year of JROTC they complete. There is no minimum number of years a student must remain in JROTC, but motivated students gain rank and increased responsibility with each additional year, so the students that remain the longest get the most benefit. (Note: AFJROTC is not a military recruitment program, and there is no military obligation for participating. However, wear of the Air Force uniform, one day per week, is a mandatory part of the program.)

The AFJROTC program consists of three components: Aerospace Science, Leadership Education, and Wellness (i.e., physical training and healthy living).

**Aerospace Science (AS).** The academic portion of the program consists of several courses listed below. It acquaints students with the history of aviation and well as the current aerospace environment. It introduces aircraft and spacecraft technology, principles of flight, human requirements of flight, earth's atmosphere and the space program. Other courses focus on global awareness or survival.





**Leadership Education (LE).** The leadership portion of the curriculum is designed to develop leadership skills and acquaint students with the practical application of life skills. It emphasizes discipline, responsibility, leadership, followership, citizenship, customs and courtesies, cadet corps activities, study habits, time management, communication skills, and drill and ceremonies.




**Wellness Program.** This part of the program consists of participation in physical fitness activities, as well as training in first aid, health, and nutrition. The objective is to motivate cadets to lead healthy, active lifestyles.

The following are the AFJROTC courses offered at NFA and the projected schedule for the next four school years:

- AS-100: Milestones in Aviation History
- AS-200: Science of Flight: A Gateway to New Horizons
- AS-220: Cultural Studies: (An Introduction to Global Awareness)
- AS-300: Exploring Space: The High Frontier
- AS-410: Survival: Survive and Return
- LE-100: Traditions, Wellness, and Foundations of Citizenship
- LE-200: Communication, Awareness, and Leadership
- LE-300: Life Skills and Career Opportunities
- LE-400: Fundamentals of Management
- LE-500: Drill and Ceremonies

<b>Cadet Year</b>	<b>2020/2021</b>	<b>2021/2022</b>	<b>2022/2023</b>	<b>2023/2024</b>
1/2/3/4	AS-300 Ch 2-8 LE-100 Ch 1-4	AS-220 Ch 1-4, 6 LE-100 Ch 1 (Lsn 1-5) LE-200 Ch 1,2,5-8	AS-100 Ch 1,2,4-6 LE-100 Ch 1 (Lsn 1-5) LE-300 Ch 3-8	AS-200 Ch 1-4 LE-100 Ch 1 (Lsn 1-5) LE-400 Ch 1,3-8,10

Aerospace Science, Leadership Education, and Wellness Pathway	Aerospace Science, Leadership Education, and Wellness Course Descriptions
English 9 US History Algebra 1 Liv. Env. or Earth Science (Lab) Phys. Ed.(Opposite Science Lab) Foreign Language <b>Aerospace Education 1 7341</b>	<b>AEROSPACE EDUCATION 1 (9, 10, 11, 12) - CRS 7341</b>  1.0 Both Campuses -This Academic and Leadership Education course will follow the schedule above. All cadets will receive the same course of instruction for a particular year. At a minimum, field trips will be made to the West Point Confidence Course and to a regional park to participate in an orienteering competition. Other field trips to military establishments or civilian institutions associated with flying are a possibility. There will be ample opportunities to participate in leadership situations. Cadets may join the competition drill team on a voluntary basis. <b>Prerequisites:</b> Be at least in the 9th grade, and a legal resident of the United States. <b>Course Requirements:</b> Completion of, and passing grades in, academic and leadership assignments. Wearing of the uniform once per week and participation in fitness activities, the Annual Military Ball, Commander's Call, Annual Awards Ceremony and one of three local parades.
English 10 Global I Geometry Liv. Env. or Earth Science (Lab) Phys. Ed.(Opposite Science Lab) Health <b>Aerospace Education 2 7351</b>	<b>AEROSPACE EDUCATION 2 (10, 11, 12) - CRS 7351</b>  1.0 Both Campuses -This Academic and Leadership Education course will follow the schedule above. All cadets will receive the same course of instruction for a particular year. At a minimum, field trips will be made to the West Point Confidence Course and to a regional park to participate in an orienteering competition. Other field trips to military establishments or civilian institutions associated with flying are a possibility. There will be many opportunities to participate in leadership situations. Cadets may join the competition drill team on a voluntary basis. <b>Prerequisites:</b> Successful completion of Aerospace Science 1 and recommendation by the Aerospace Science Instructors. <b>Course Requirements:</b> Same as course 940
<b>Studio Art</b> English 11 Global II Algebra II Phys. Education (Opposite Sci. Lab) Chemistry (or Sci. Elective) <b>Aerospace Education 3 7361</b>	<b>AEROSPACE EDUCATION 3 (11, 12) - CRS 7361</b>  1.0 Both Campuses-This Academic and Leadership Education course will follow the schedule above. All cadets will receive the same course of instruction for a particular year. At a minimum, field trips will be made to the West Point Confidence Course and to a regional park to participate in an orienteering competition. Other field trips to military establishments or civilian institutions associated with flying are a possibility. There will be ample opportunities to participate in leadership situations. Cadets may join the competition drill team on a voluntary basis. <b>Prerequisites:</b> Successful completion of Aerospace Science 2 and recommendation by Aerospace Science Instructors. <b>Course Requirements:</b> Same as Course 940
English 12 Government/Economics Physical Education <b>Aerospace Education 4 7371</b>	<b>AEROSPACE EDUCATION 4 (12) - CRS 7371</b>  1.0 Both Campuses -This Academic and Leadership Education course will follow the schedule above. All cadets will receive the same course of instruction for a particular year. At a minimum, field trips will be made to the West Point Confidence Course and to a regional park to participate in an orienteering competition. Other field trips to military establishments or civilian institutions associated with flying are a possibility. There will be ample opportunities to participate in leadership situations. Cadets may join the competition drill team on a voluntary basis. <b>Prerequisites:</b> Successful completion of Aerospace Science 3 and recommendation by Aerospace Science Instructors. <b>Course Requirements:</b> Same as Course 940

Video Production Pathway		Video Production Course Descriptions	
English 9	<b>Video Production - CRS 7901</b>	 1.0	
US History	Both Campuses - This course explores elementary video production principles, practice, and operation. Emphasis is placed on the laboratory elements of scripting, lighting, audio, camera, switching, character generator and Chroma key. Practical experience in producing video projects will be reviewed.		
Algebra 1	Prerequisites: None		
Liv. Env. or Earth Science (Lab)	Course Requirements: Completion of all class assignments and tests		
Phys. Ed.(Opposite Science Lab)			
Foreign Language	<b>Advanced Video Production - CRS 7911</b>	 1.0	
<b>Required Art Credit</b>	Both Campuses - This course continues exploring video production principles, practice and operation. Emphasis is placed on producing video projects for use on Goldback TV presentations.		
	<b>Prerequisites:</b> CRS 686 - Video Production		
English 10	<b>Course Requirements:</b> Completion of all class assignments, projects and tests.		
Global I	<b>WorkStudy - CRS 7761 &amp; 7781</b>	 0.5 & 1.0	
Geometry	Mentor/Mirror/ Job shadow professionals in the field.		
Liv. Env. or Earth Science (Lab)	Make connections for YOUR SUCCESSFUL Career in your area of study.		
Phys. Ed.(Opposite Science Lab)	<b>Prerequisites:</b> CRS 686		
Health	<b>Course Requirements:</b> Students will be required to prepare a project and do a presentation at the end of the course.		
<b>Video Production 7901</b>			
English 11			
Global II			
Algebra II			
Phys. Education (Opposite Sci. Lab)			
Chemistry (or Sci. Elective)			
<b>Advanced Video Production 7911</b>			
English 12			
Government/Economics			
Physical Education			
<b>WorkStudy 7761 &amp; 7781</b>			

## Welding Course Descriptions

Welding Pathway	
English 9	<b>Basic Welding - CRS 7501</b> <span style="float: right;">✎ 0.5</span> Main Campus - This course provides a general knowledge of basic principles and procedures used in the welding trade. The student is introduced to oxyacetylene, MIG, TIG, electric arc welding and plasma cutting. This course is helpful to the student who intends to enter the welding, auto mechanic, and auto body field. <b>Prerequisites:</b> None <b>Course Requirements:</b> Completion of assignments. Students must provide leather work boots
US History	
Algebra 1	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Foreign Language	
<b>Required Art Credit</b>	
English 10	<b>Welding 1 - CRS 7511/7512</b> <span style="float: right;">✎ 2.0</span> Main Campus - This course is intended for the student who is seriously considering welding as a career. The course will include related theory and "hands-on" skills in oxyacetylene, electric arc, and metal inert gas "MIG" welding. Students will be introduced to the different welding positions. Welding proficiency will be gained with programmed practice skills and project construction. <b>Prerequisites:</b> CRS. 729 <b>Course Requirements:</b> Students must provide suitable work clothes and safety-type shoes. Completion of assignments.
Global I	
Geometry	
Liv. Env. or Earth Science (Lab)	
Phys. Ed.(Opposite Science Lab)	
Health	
<b>Basic Welding 7501</b>	<b>Welding 2 - CRS 7513/7514</b> <span style="float: right;">✎ 2.0</span> Main Campus - This course expands greatly on blueprint reading and metallurgy and its relationship to welding. Students will gain advanced skills in oxyacetylene, electric arc "MIG" and "TIG" welding. All welding positions are covered: flat, horizontal, vertical and overhead. Students may be eligible to take the NYS DOT Welding test. <b>Prerequisites:</b> CRS- 712- Welding 1 <b>Course Requirements:</b> Students must provide suitable work clothes and work shoes/boots. Completion of assignments.
English 11	
Global II	
Algebra II	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
<b>Welding I 7511 (2 Periods)</b>	<b>WorkStudy - CRS 7761 &amp; 7781</b> <span style="float: right;">✎ 0.5 &amp; 1.0</span> Mentor/Mirror/ Job shadow professionals in the field. Make connections for YOUR SUCCESSFUL Career in your area of study. <b>Prerequisites:</b> CRS 729 <b>Course Requirements:</b> Students will be required to prepare a project and due at the end of the course.
<b>Welding I Lab 7512</b>	
English 12	
Government/Economics	
Physical Education	
<b>Welding II 7513 (2 Periods) (eligible for NYSED certification exam)</b>	
<b>Welding II Lab 7514</b>	*NYSED APPROVED PROGRAM ** NYS CTE PATHWAY with Technical Assessment/NYS CDOS Pathway *** Articulation Agreement with SUNY Delhi and Alfred State College
<b>WorkStudy 7761 &amp; 7781</b>	

## Third Unit Options

Third Unit Options- Using Technology Education Courses as the Third Unit of Math or Science under the Revised Graduation Requirements

- In March of 1998, a committee composed of math, science and technology stakeholders met with State Education Department personnel to discuss criteria for a course that could be used in the third unit of math or science under the revised graduation requirements.
- The criteria of this third unit are only to be used after the student has completed the first two units in math or science.
- Students under regulations can only take one of the courses to count for their graduation requirements.

### World of Technology Math - CRS 7181

 1.0

Both Campuses - This course is designed to be used for the third unit of math under the revised graduation requirements. Learning experiences designed for the course emphasize problem-solving and critical thinking utilizing acquired math skills in a technology context and real-world application. Students will have to use system approaches requiring data analysis and mathematical modeling. Projects may include small woodcrafts, electronics, and problem-solving activities. Students may need to bring in small supplies for personal touches of projects.

**Prerequisites:** Successful completion of two Math level courses before enrollment.

**Course Requirements:** Completion of all assignments, projects, and tests Note: Open to 10th-grade students by permission of Director only.

### World of Technology Science - CRS 7191

 1.0

Both Campuses - This course is designed to be used for the third unit of science under the revised graduation requirements. Learning experiences designed for the course emphasize problem-solving and critical thinking utilizing acquired science skills in a technology context and real-world application. Students will have to use system approaches requiring data analysis and applied scientific principles and laws of nature. Projects may include small woodcrafts, electronics, and problem-solving activities. Students may need to bring in small supplies for personal touches of projects.

**Prerequisites:** Successful completion of two Science level courses prior to enrollment.

**Course Requirements:** Completion of all assignments, projects, and tests Note: Open to 10th-grade students by permission of Director only.

# Studio Art Courses

The following course can be used for the required studio art credit for graduation.

## Clothing and Textile/Intern Design - CRS 7621 1.0

Main Campus- The content of this course includes the cultural and historical aspects of textiles and clothing, personal appearance, the design, construction and selection of clothing and related career opportunities. Students will learn basic pattern use and sewing machine skills. Students will learn the elements and principles of design and how to use color. The content of this course studies housing history and current trends in interior design.

**Prerequisites:** None

**Course Requirements:** The completion of one clothing project and the purchase of patterns and notions needed to complete their garment.

## Design and Drawing for Production - CRS 7661 1.0

The Design and Drawing for Production (DDP), course of study, are focused on technical drawing techniques, the different styles of drafting, and promote creative problem solving through design. Projects will be centered on a variety of drawing styles, the design process, 3-dimensional modeling skills using AutoCAD, and model making. Assignments will include all forms of technical drawing and presentations. Students who plan to enter into the architectural field, engineering design or other technical studies should consider this fundamental course as early as possible.

**Prerequisites:** None

## Digital Studio in Art - CRS 6011 1.0

Main Campus- In this class, students will study a variety of media, art styles, and artists. Students use image editing, compositing, animation, and digital drawing to put into practice the art principles discussed in the program. They explore career opportunities in the design, production, display, and presentation of digital artwork.

**Pre-requisites:** None

**Course Requirements:** Completion of projects, work process, and portfolio

## Studio in Art - CRS 6001 1.0

Both Campuses - As a Drawing and Painting foundation course in this department, Studio in Art introduces students to a variety of concepts, skills, and techniques necessary for successful visual expression. Many different media will be used in areas of exploration and experimentation. Students will learn to analyze their work, study important works of art and participate in discussions about art.

**Prerequisites:** None

**Course Requirements:** Completion of projects, work process, and portfolio

## Visual Communications & Design 1 - CRS 6041 1.0

Main Campus - This is a foundation course for students who are motivated toward study in advertising and graphic design. To be successful in advertising, you have to understand the creative process and how words and pictures connect. Using contemporary media similar to that used by professionals, students will engage in process-oriented projects like generating print ads. An introduction to computer graphics, desktop publishing, storyboards for television and radio spot ads makes this course the choice for students looking for a future in the communications field.

**Prerequisites:** None

**Course Requirements:** Sketchbook and portfolio including projects, research, and a final evaluation.

## P-TECH (NFA North)

Computer Science and Coding Pathway	
English 9	
US History	
Algebra 1	
Environmental Science	
Physical Education	
Exploring Computer Science	
Required Art Credit	
English 10	
Global I	
Geometry/ College Math Course	
Earth Science (Lab)	
Physical Education (Opposite Sci. Lab)	
College Success and Career Planning	
English 11	
Global II	
College Math / Pre-College Algebra	
Phys. Education (Opposite Sci. Lab)	
Chemistry (or Sci. Elective)	
English 12/ Freshman English	
Government/Economics	
Physical Education	
<b>In addition to the coursework outlined above, students will take courses at SUNY Orange in 10th, 11th, and 12th grade that are aligned to either the Networking or Cyber Security degree requirements.</b>	

P-Tech at NFA North is a new model for teaching and learning that brings together high school, college, and the world of work in order to prepare students for the complex and ever-changing global workforce in information technology. Students in P-Tech graduate with an Associate's in Applied Science degree in Cybersecurity from SUNY Orange, in addition to their high school diploma. They also obtain the skills and knowledge they need to continue their studies or step seamlessly into well-paying, high-potential jobs in the Computer Information Technology industry. P-Tech offer project-based learning experiences and real-world applications of science, technology, engineering, and math. Students will develop important academic and career skills as they learn through projects developed in collaboration with IBM. Due to the accelerated pace of learning in P-Tech, the length of the school day and the school year is longer for enrolled students.

### English Courses - CRS 080T

 0.5

College Success and Career Planning (10, 11, 12)

This course taken for 3 college credits

P-Tech - This is an interdisciplinary course designed to assist the student in making the transition to college, to promote the development of a successful college experience and to improve self-awareness and knowledge of the career decision-making process. Topics include self-exploration, career and career theory study, decision-making skills, information gathering from library and community resources, and the skills required for success in higher education and in career. Lectures films, individual and group exercises, reading and writing assignments will be used to provide students with an in-depth college and career planning experience.  
**Prerequisites:** Successful completion of year 1 coursework and P-Tech committee recommendation.

### Freshman English 1 (11, 12) - CRS 081T

 0.5

This course taken for 3 college credits

P-Tech - This first course in the Freshman English sequence introduces college-level writing and revision, construction of expository essays, and research skills. Reading and class discussion center on the formal and informal essay. Research essay is required.

**Prerequisites:** Successful completion of English 9 and 10 as well as appropriate score on SUNY Orange placement test in both reading and writing.

### Freshman English 2 (11, 12) - CRS 082T

 0.5

This course taken for 3 college credits

P-Tech - In this second course in the sequence, students learn to read critically, to organize supporting details, and to develop coherent oral and written arguments. Fiction, drama and poetry are used as common texts. An analytical research paper is required.

**Prerequisites:** A grade of C or better in Freshman English 1

**Elementary Algebra (10, 11, 12) - CRS 3202T** 0.5

This course taken for 3 college credits

P-Tech - Topics include operations on polynomials and rational expressions, laws of exponents, factoring, graphing of linear equations and inequalities, and systems of equations. A knowledge of operations on signed numbers and solutions to linear equations is required.

Emphasis is placed on developing the skills necessary for further study of algebra.

**Prerequisites:** Successful completion of Algebra 1 and appropriate score on SUNY Orange placement test.

**Intermediate Algebra (10, 11, 12) - CRS 3203T** 0.5

This course taken for 3 college credits

P-Tech - Topics covered: absolute value equations and inequalities, additional factoring techniques, radical expressions, complex numbers, quadratic equations, functions, graphing techniques, coordinate geometry, mathematical modeling, applications and problem solving.

**Prerequisite:** A grade of C or better in Elementary Algebra

**College Algebra (10, 11, 12) - CRS 3200T** 0.5

This course taken for 3 college credits

P-Tech - Topics include: a thorough treatment of the concept of functions and their graphs, linear and quadratic functions, polynomial and rational functions, inverse functions, exponential and logarithmic functions and conic sections.

**Prerequisite:** A grade of C or better in Intermediate Algebra or appropriate score on SUNY Orange placement test.

**College Trigonometry (10, 11, 12) - CRS 3201T** 0.5

This course taken for 3 college credits. College Trigonometry is the second course for students who plan to continue on toward the study of Calculus. Topics include trigonometric functions, graphing techniques, right triangle applications, trigonometric identities, inverse functions, and oblique triangles.

**Prerequisite:** A grade of C or better in College Algebra.

# Cyber Security

Computer Information Technology Cyber Security	Credits
<b>First Semester</b>	
ENG 101 Freshman English 1	3
MAT 121 College Algebra	3
CRJ 101 Intro to Criminal Justice	3
CIT 100 Computer Literacy	3
CIT 105 Data Communications and Introduction to Networking	3
PES Physical Education	1
<b>Second Semester</b>	
ENG 102 Freshman English 2	3
CIT 116 Networking 1	4
CIT 112 Computer Hardware and Software	4
CIT 118 Operating Systems	4
<b>Third Semester</b>	
CIT 203 Networking 2	4
CIT 217 Introduction to Unix/Linux	4
CFR 221 Computer Forensics	3
CSS 223 Information Security	3
PSY Psychology	3
PES Physical Education	1
<b>Fourth Semester</b>	
CFR 222 Network Forensics	3
CSS 224 Network Perimeter Security	3
CSS 226 Cyber Crime Investigations	3
CRJ 111 Criminology	3
Math or Liberal Arts Science	3
<b>Total Credits: 65</b>	<b>65</b>

## Program Description

The Associate in Applied Science degree program in Cyber Security prepares students for employment in a variety of entry level careers in Cyber Security. Today, everyone is concerned with security, and people with knowledge in this area are in high demand. Positions can include such titles as Network Administrator, network security specialist, information security technician, just to name a few. The main thrust is protection of information and limiting access to network resources. In addition to security, students will also be instructed in techniques used to track perpetrators once an attack has occurred.

In addition to basic computer and networking skills, the student will be instructed in Operating Systems, Computer Forensics, Network Forensics, Information Security, Network Perimeter Security, and Cyber Crime Investigation.

Classes are designed to provide students with hands-on training utilizing state-of-the-art computer facilities. Lab work and assignments will present real world cyber security scenarios encountered in the work place. For forensics studies, industry standard software will be used.

While A.A.S. graduates are prepared to enter the workforce immediately, many students choose to transfer to upper-level programs leading to a bachelor's degree in technology.

## Student Learning Objectives

Students will:

- Develop basic network administration skills
- Perform computer forensic analysis
- Demonstrate an understanding of network forensics
- Develop an understanding of the legal issues associated with cyber security
- Document an appropriate procedure of handling case evidence

# Departamento de Inglés como Nuevo Idioma

(English as a New Language -ENL)

## ENL- Entering/Principiante (Gr. 9-10) - CRS 2018 2.0

Este curso es ofrecido a aquellos estudiantes que tienen gran dependencia de los recursos y estructuras para desarrollar sus habilidades lingüísticas académicas y todavía no han alcanzado las exigencias lingüísticas necesarias para demostrar dominio de inglés en diversos contextos o entornos académicos. Este curso se concentra en el inglés conversacional y en el principio de la lectura básica. Para obtener el máximo beneficio del inglés oral, esta clase es de tres periodos incluyendo 1 periodo de ELA/ENL co-integrado. Pre-Requisitos: Tener Competencia limitada en el inglés, según los resultados del NYSITELL o NYSESLAT

**Requisitos para el curso:** Participación activa en la clase, notas satisfactorias en todas asignaciones y pruebas, una libreta satisfactoria y una carpeta de tareas.

## ENL- Entering/Principiante (Gr. 11-12) - CRS 2028 2.0

Este curso es ofrecido a aquellos estudiantes que tienen gran dependencia de los recursos y estructuras para desarrollar sus habilidades lingüísticas académicas y todavía no han alcanzado las exigencias lingüísticas necesarias para demostrar dominio de inglés en diversos contextos o entornos académicos. Este curso se concentra en el inglés conversacional y en el principio de la lectura básica. Para obtener el máximo beneficio del inglés oral, esta clase es de tres periodos incluyendo 1 periodo de ELA/ENL co-integrado. Pre-Requisitos: Tener Competencia limitada en el inglés, según los resultados del NYSITELL o NYSESLAT

**Requisitos para el curso:** Participación activa en la clase, notas satisfactorias en todas asignaciones y pruebas, una libreta satisfactoria y una carpeta de tareas.

## ENL- Emerging/Emergente (Gr. 9-10) - CRS 2038 2.0

Este curso ha sido diseñado para ayudar a los estudiantes a acostumbrarse al modo de enseñanza de los Estados Unidos y a fortalecer sus habilidades lingüísticas, en la lectura y la escritura en inglés. Este es el segundo curso de la serie de cursos del inglés como nuevo idioma. Esta clase es de dos periodos incluyendo 1 periodo de ELA/ENL co-integrado.

**Pre-Requisitos:** Tener Competencia limitada en el inglés, según los resultados del NYSITELL o NYSESLAT

**Requisitos para el curso:** Participación activa en la clase, notas satisfactorias en todas asignaciones y pruebas, una libreta satisfactoria y una carpeta de tareas.

## ENL-Emerging/ Emergente (G. 11-12) - CRS 2048 2.0

Este curso ha sido diseñado para ayudar a los estudiantes a acostumbrarse al modo de enseñanza de los Estados Unidos y a fortalecer sus habilidades lingüísticas, en la lectura y la escritura en inglés. Este es el segundo curso de la serie de cursos del inglés como nuevo idioma. Esta clase es de dos periodos incluyendo 1 periodo de ELA/ENL co-integrado.

**Pre-Requisitos:** Tener Competencia limitada en el inglés, según los resultados del NYSITELL o NYSESLAT

**Requisitos para el curso:** Participación activa en la clase, notas satisfactorias en todas asignaciones y pruebas, una libreta satisfactoria y una carpeta de tareas.

## ENL- En Transición (Gr. 9-10) - CRS 258B 1.0

Este curso ha sido diseñado para ayudar a los estudiantes que demuestran cierta independencia en desarrollar habilidades académicas lingüísticas necesarias para demostrar dominio del inglés en diversos contextos o entornos académicos. Es para estudiantes que están en el nivel de Transición de inglés como nuevo idioma pero que todavía necesitan mucha práctica en la lectura y la escritura en inglés. Los estudiantes del nivel en Transición participan en un curso de inglés regular con la asistencia del maestro(a) de ENL: ELA/ENL co-integrado.

**Pre-Requisitos:** Tener Competencia limitada en el inglés, según los resultados del NYSITELL o del NYSESLAT

**Requisitos para el curso:** Participación activa en la clase, notas satisfactorias en todas asignaciones y pruebas, una libreta satisfactoria y una carpeta de tareas.

## ENL- En Transición (Gr. 11-12) - CRS 259B 1.0

Este curso ha sido diseñado para ayudar a los estudiantes que demuestran cierta independencia en desarrollar habilidades académicas lingüísticas necesarias para demostrar dominio del inglés en diversos contextos o entornos académicos. Es para estudiantes que están en el nivel de Transición de inglés como nuevo idioma pero que todavía necesitan mucha práctica en la lectura y la escritura en inglés. Los estudiantes del nivel en Transición participan en un curso de inglés regular con la asistencia del maestro(a) de ENL: ELA/ENL co-integrado.

**Pre-Requisitos:** Tener Competencia limitada en el inglés, según los resultados del NYSITELL o del NYSESLAT


**Requisitos para el curso:** Participación activa en la clase, notas satisfactorias en todas asignaciones y pruebas, una libreta satisfactoria y una carpeta de tareas.

**ENL- En Expansión (Gr. 9-10) - CRS 263B**  1.0

Este curso ha sido diseñado para estudiantes que están en el nivel avanzado y demuestran gran independencia en desarrollar las habilidades académicas lingüísticas y están cerca de alcanzar las exigencias lingüísticas necesarias para demostrar dominio del inglés en diversos contextos o entornos académicos. Es para estudiantes que están en el nivel de Expansión de inglés como nuevo idioma pero que todavía necesitan práctica en la lectura y la escritura en inglés. Los estudiantes del nivel en Expansión participan en un curso de inglés regular con la asistencia del profesor(a) de ENL: ELA/ENL co-integrado.

**Pre-Requisitos:** Tener Competencia limitada en el inglés, según los resultados del NYSITELL o del NYSESLAT

**Requisitos para el curso:** Participación activa en la clase, notas satisfactorias en todas asignaciones y pruebas, una libreta satisfactoria y una carpeta de tareas.

**ENL- En Expansión (Gr. 11-12) - CRS 264B**  1.0

Este curso ha sido diseñado para estudiantes que están en el nivel avanzado y demuestran gran independencia en desarrollar las habilidades académicas lingüísticas y están cerca de alcanzar las exigencias lingüísticas necesarias para demostrar dominio del inglés en diversos contextos o entornos académicos. Es para estudiantes que están en el nivel de Expansión de inglés como nuevo idioma pero que todavía necesitan práctica en la lectura y la escritura en inglés. Los estudiantes del nivel en Expansión participan en un curso de inglés regular con la asistencia del maestro(a) de ENL: ELA/ENL co-integrado.

**Pre-Requisitos:** Tener Competencia limitada en el inglés, según los resultados del NYSITELL o del NYSESLAT

**Requisitos para el curso:** Participación activa en la clase, notas satisfactorias en todas asignaciones y pruebas, una libreta satisfactoria y una carpeta de tareas.

**Español para los estudiantes de habla hispana (G) CRS 2237**  1.0

Este curso es diseñado para capitalizar la fluidez que el estudiante ya logrado. El énfasis es en aumentar el vocabulario y refinar el uso correcto del español. Lo importante de este curso es mejorar las habilidades de lectura y de redacción con énfasis en la gramática. El estudiante también llegará a entender las contribuciones Latinas en la civilización mundial.

**Pre-Requisitos:** El estudiante debe hablar el español como su primer idioma.

**Requisitos para el curso:** Participación activa en la clase, notas satisfactorias en todas asignaciones y pruebas, un cuaderno satisfactorio, proyecto cultural, examen Checkpoint B.

**Español para los estudiantes de habla hispana (L) CRS 2237**  1.0

Este curso es diseñado para capitalizar la fluidez que los estudiantes ya lo logrado. El énfasis es de aumentar el vocabulario y refinar el uso correcto del español. Lo importante de este curso es mejorar las habilidades de lectura y de redacción con énfasis en la literatura. El estudiante también llegará a entender las contribuciones Latinas en la civilización mundial.

**Requisitos para el curso:** Participación activa en la clase, notas satisfactorias en todas asignaciones y pruebas, un cuaderno satisfactorio, proyecto cultural, examen Checkpoint B.

## EDUCACIÓN BILINGÜE

### Departamento de Estudios Sociales

**Historia Global y Geografía I Regente (9) - CRS 4017**  1.0

Este curso se ofrece en NFA Main - Este curso se ofrece en NFA Main: El currículo de Historia Global y Geografía se ofrece en un programa de dos años (Grados 9 y 10) basado en los cinco estándares de aprendizaje de Estudios Sociales del Estado Nueva York. Este programa esta diseñado alrededor de ocho unidades históricas de temas básicos que suceden a través del tiempo. Este currículo le provee al estudiante la oportunidad de explorar el desarrollo de los sistemas políticos alrededor del mundo, y analizar el papel que desempeñan los individuos y grupos durante varios períodos importantes de tiempo y puntos claves en la historia global. Pre-requisitos: Ninguno

**Requisitos del curso:** Segun el plan de estudio del curso

**Estudios Globales II Regente (10) - CRS 4027**  1.0

Este curso se ofrece en NFA Main: Este curso es la continuación del curso de Estudios Globales I. El curso incorpora enseñanzas de las varias disciplinas de estudios sociales para entender varias culturas y sus sistemas de valores. El énfasis del curso es en investigar el desarrollo cultural y los cambios sociales en la historia global. Los requisitos son parecidos a los del curso de honores con mayor énfasis en el uso de guías de estudio. La prueba de Regentes del estado será la evaluación final. Este curso es ofrecido en español e inglés.

**Pre-requisitos:** Haber completado el curso de Estudios Globales I

**Requisitos del curso:** Segun el plan de estudio del curso

### Historia de los Estados Unidos y su Gobierno (11) 1.0 CRS 4117

Este curso se ofrece en NFA Main: Este es un curso sobre la historia de los Estados Unidos. Este curso incluirá un examen cronológico de los Estados Unidos en general, pero el énfasis está en los Estados Unidos como nación industrial – emergente y completamente desarrollada. Temas constitucionales y legales serán explorados a fondo, al igual que los problemas de una sociedad industrial y dinámica en un mundo complejo, orientada por la tecnología. La prueba de Regentes será la evaluación final para este curso. Este curso es ofrecido en español e inglés.

**Pre-requisitos:** Haber aprobado el curso de Estudios Globales.  
**Requisitos del curso:** Según el plan de estudio del curso

### Economía (12) - CRS 4207 0.5

Este curso se ofrece en NFA Main: Este se concentra en los conceptos básicos y principios de la economía, los elementos principales de los sistemas económicos y el rol de los varios componentes de esos sistemas, incluyendo el consumidor, empresas, el trabajador, agricultura y el gobierno. El énfasis es en los Estados Unidos, pero se la dará énfasis a la economía global y otros sistemas económicos. Se estudiará el proceso de decisiones económicas en todos los niveles durante el curso. Este curso es ofrecido en español e inglés.

**Pre-Requisitos:** Haber aprobado los cursos requeridos de Estudios Sociales.

**Requisitos del curso:** Según el plan de estudio del curso

### Participación en el Gobierno (Regentes) 12 0.5 CRS 4307

Este curso se ofrece en NFA Main: Este curso requisito, acentuará la interacción entre los ciudadanos y el gobierno a todos los niveles: local, estatal y federal. El curso fomentará en los estudiantes conocimiento para participar en el proceso democrático. Los estudiantes de este curso tendrán que hacer diez horas de servicio comunitario. Este curso es ofrecido en español e inglés.

**Pre-Requisitos:** Haber aprobado los cursos requeridos de Estudios Sociales.

**Requisitos del Curso:** Según el plan de estudio del curso

## Departamento de Matemáticas

### Álgebra 1-A - CRS 3007 1.0

Este curso se ofrece en NFA Main - Los estudiantes seguirán el currículo común NYS álgebra 1. Este curso es el primer año de un curso de dos años de estudio para completar álgebra 1. Este primer año cubre habilidades fundacionales y encajar en el currículo común álgebra 1. Estudiantes que puntuación de nivel 1 en las evaluaciones de estado en matemáticas o han fallado las matemáticas de grado octavo se matricularán en este curso.

**Pre-Requisitos:** Nivel 1 en el estado de Nueva York matemáticas 8 evaluación o han fallado matemáticas de grado 8.

**Requisitos del curso:** Deben completados todas las pruebas, cuestionarios, tareas y examen final local

### Álgebra 1-B - CRS 3017 1.0

Este curso se ofrece en NFA Main: Los estudiantes seguirán el currículo común NYS álgebra 1. Este curso es el segundo año de un curso de dos años de estudio para completar álgebra 1. Los estudiantes matriculados en este curso tendrá el examen álgebra 1 común central en junio. Este segundo año abarca habilidades fundamentales enraizadas en el currículo común álgebra 1 al completar los requisitos curriculares para tomar el examen de los regentes en junio.

**Pre-Requisitos:** Realización de álgebra 1-A

**Requisitos del curso:** Se deben completar todas las pruebas, cuestionarios, tareas y examen de Regentes

### Geometría – NR - CRS 31316 1.0

Este curso se ofrece en NFA Main - Este curso se ofrece a los estudiantes que han completado con éxito el álgebra 1 y el examen de regentes central común de álgebra 1 y que desean obtener un crédito de matemáticas adicionales exclusivos de los rigores de las pruebas analíticas, formales. El curso analiza la teoría de conjuntos y normas con las aplicaciones del segmento y ángulo de congruencia. Incluirá una breve exposición a métodos de la prueba de congruencia de triángulo. Los estudiantes trabajarán con reglas que involucran triángulos, líneas paralelas, cuadriláteros, polígonos regulares, círculos, trigonometría del triángulo rectángulo básico, semejanza y área.

**Pre-Requisitos:** Realización de NYS Algebra I Curso de núcleo común y examen de los regentes.

**Requisitos del curso:** Deben completarse todas las pruebas, cuestionarios, tareas y examen final local.

**Modelos en Matemáticas - CRS 3602B**

✍ 1.0

Este curso se ofrece en NFA Main: - Este curso está diseñado para aquellos estudiantes que necesitan un tercer curso de matemáticas para cumplir con los requisitos del estado de Nueva York para graduación. Los temas incluyen aplicaciones en la vida real de funciones lineales, variación, sistemas de ecuaciones, matrices, y cuadráticas, funciones exponenciales y sinusoidales. También se explorarán las estadísticas y predicciones.

**Pre-Requisitos:** Haber aprobado Álgebra y el examen de Regentes de Álgebra Integrada y un curso adicional de matemáticas.

**Requisitos del curso:** Tomar todas las pruebas, completar todas las tareas y asignaciones.

**Departamento de Ciencia****Biología (10, 11, 12) - CRS 5007**

✍ 1.0

Este curso se ofrece en NFA Main - Los estudiantes comprenderán y aplicarán conceptos, principios, y teorías científicas relacionadas al ambiente físico. La meta principal de este curso es que los estudiantes comprendan la asociación entre el hombre y otros seres en el planeta. También los estudiantes comprenderán cómo y por qué somos iguales y diferentes a otros seres; comprenderán los sistemas del ser humano y varios animales; y comprenderán cómo los planetas y los animales se influyen mutuamente. Los estudiantes aprenderán a explicar, analizar e interpretar procesos y fenómenos biológicos.

**Tópicos:** Unidad y diversidad entre los seres vivos; mantenimiento de seres vivos; química de seres vivos, fisiología humana, reproducción y desarrollo; genética, ecología y evolución. El curso se reúne diariamente, con laboratorio, un día sí, otro no

**Pre-requisitos:** Estudiantes han de haber tomado Álgebra integrada o estar tomando ese curso a la misma vez.

**Requisitos del curso:** Haber cumplido con todos los laboratorios, pruebas y demostrar las destrezas necesarias para completar los laboratorios. Examen de los Regentes.

**Ciencias de la Tierra (10, 11, 12) - CRS 5107**

✍ 1.0

Este curso se ofrece en NFA Main Este curso es un programa centralizado en el laboratorio involucrando pequeños grupos de la interpretación de datos usando el método científico. Las áreas de estudio incluyen la Geología (el estudio de la Tierra- porque y cómo cambia), Meteorología (los cambios atmosféricos), Astronomía (el estudio de los cambios del cielo.) Este sujeto está diseñado para los estudiantes que van a entrar a la universidad.

El curso se reúne diariamente, con laboratorio, un día sí, otro no

**Pre-requisitos:** Es esencial que cada estudiante pase ciencias de escuela intermedia antes de tomar el examen Regente de Ciencias de la Tierra. Deben de haber completado el examen Regente de Biología y Álgebra integrada.

**Requisitos del Curso:** Haber completado 1200 minutos de trabajo de laboratorio por escrito del examen Regente.

# Air Force Junior Reserve Office Training Corps

The fundamental purpose of Air Force Junior Reserve Officer Training Corps (AFJROTC) is to build citizens of character dedicated to serving their nation and community. The program is governed by the U.S. Air Force, and the citizenship training is conducted under the framework of an aerospace science program designed for high school students. It will acquaint students with the Air Force and aerospace environment, promote leadership skills, develop communications skills and encourage physical fitness.

The curriculum is divided into a four-year program, with students earning one academic credit for each year of JROTC they complete. There is no minimum number of years a student must remain in JROTC, but motivated students gain rank and increased responsibility with each additional year, so the students that remain the longest get the most benefit. (Note: AFJROTC is not a military recruitment program and there is no military obligation for participating. However, wear of the Air Force uniform, one day per week, is a mandatory part of the program.)

The AFJROTC program consists of the following three components: Aerospace Science, Leadership Education, and Wellness (i.e. physical training and healthy living).

**Aerospace Science (AS).** The academic portion of the program, and it consists of several courses listed below. It acquaints students with the aerospace environment and introduces them to aircraft and spacecraft technology, principles of flight, human requirements of flight, earth's atmosphere and astronomy. The history of aviation and the space program are also discussed. Other courses focus on global awareness or survival.

**Leadership Education (LE).** The leadership portion of the curriculum designed to develop leadership skills and acquaint students with the practical application of life skills. It emphasizes discipline, responsibility, leadership, followership, citizenship, customs and courtesies, cadet corps activities, study habits, time management, communication skills, and drill and ceremonies.

**Wellness Program.** This part of the program consists of participation in physical fitness activities, as well as training in first aid, health, and nutrition. The objective is to motivate cadets to lead healthy, active lifestyles.

The following are the specific aerospace and leadership courses offered at NFA and the projected schedule for the next four school years:

- AS-100: A Journey into Aviation History
- AS-200: Science of Flight: A Gateway to New Horizons
- AS-220: Cultural Studies: (An Introduction to Global Awareness)
- AS-300: Exploring Space: The High Frontier
- AS-410: Survival: Survive and Return
- LE-100: Traditions, Wellness and Foundations of Citizenship
- LE-200: Communication, Awareness, and Leadership
- LE-300: Life Skills and Career Opportunities
- LE-400: Principles of Management
- LE-500: Drill and Ceremonies

# Special Education Department

The Special Education Department at the high school level is composed of a continuum of courses in the Least Restrictive Setting aimed at meeting the individualized educational plans of our students at Newburgh Free Academy. All placements in Special Education classes are made by the Committee on Special Education and are approved by the Board of Education.

Students should submit course requests to their guidance counselor based upon graduation credit needs and areas of interest. Special education settings are only available in core academic classes (English Math, Social Studies and Science). Sections of each course offering for each setting prescribed below will be based upon enrollment.

## Resource Program 5:1

Students enrolled in the Resource Program take their courses in the general education setting and attend one period daily in the Resource Room, with a student to teacher ratio of 5:1. Students receive assistance as prescribed by their IEP and specific learning goals.

## Integrated Co-Teaching

The Integrated Co-Teaching setting is available for all Regents courses and some elective courses in English, Math, Social Studies and Science. The Integrated Co-Taught setting is a general education setting with a mix of general and special education students and taught by two teachers, one certified content teacher and one certified special education teacher. The maximum special education student enrollment per section is 12. All students are expected to take the appropriate Regents examination aligned to each course. All Regents courses will be available in the Integrated Co-Taught setting; core elective offerings will be available based upon student enrollment.

## 15:1 Setting

The 15:1 setting has a student to teacher ratio of 15 special education students to one teacher. This setting is available for many English, Math, Social Studies and Science courses as prescribed by the Committee on Special Education. All students are expected to take the appropriate Regents examination aligned to each course.

Students enrolled in the 15:1 program are presented with the same curriculum as all Regents students. Students may be enrolled in a mix of general education, ICT and 15:1 as prescribed by the Committee on Special Education. Students who pass the required five Regents exams with a 65% or higher will be awarded a Regents diploma. A student who earns a score of 55 - 64 on the Regents exams are eligible for a Local High School diploma. In order to receive a Regents Diploma, students must meet the requirements established by NYS.

## 8:1:2 and 12:1:1 Career Ladder Program for Alternately Assessed Students not grading with a NYS High School Diploma

\*\*\* Only prescribed by the Committee on Special Education in alignment with the NYS Alternately Assessed Guidelines. Students prescribed for the Career Ladder Program through the Committee on Special Education will complete academic core course programming in addition to a Career Ladder Program preparing them for career readiness. Students in this program will graduate with a Commencement Credential and may be eligible for a CDOS credential through CTE course offerings and job embedded.