



# Ballston Spa High School

Course Description Handbook

# 2025-2026

# Ballston Spa High School

220 Ballston Avenue, Ballston Spa, NY 12020  
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 CEEB: 330-305

## High School Principal

Mr. Matthew Robinson Ext. 2351 mrobinson@bscsd.org

## Assistant High School Principals

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## School Counselors

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## Connect With Us



# 2024-2025 SCHOOL PROFILE

PRINCIPAL: MATTHEW ROBINSON



220 BALLSTON AVE.  
BALLSTON SPA, NY 12020  
518-884-7150  
WWW.BSCSD.ORG  
CEEB: 330305

## OVERVIEW

Ballston Spa High School is located in a suburban and socioeconomically diverse population. Student enrollment is approximately 1,292 with an expected graduating class in 2025 of 331.

## MISSION STATEMENT

The Ballston Spa Central School District is committed to providing an excellent education that maximizes the potential of each student. In partnership with the family and community, our students will become responsible and well-rounded adults. "A Meaningful Diploma for All Students."

## GRADUATION REQUIREMENTS

Subject Area	Credits
English	4
Social Studies	4
Math	3
Science	3
World Language	1
Visual/ Performing Arts	1
Health	0.5
Physical Education	2
Electives	3.5

NYS Board of Regents Accredited

International Baccalaureate  
World School

Clean Technologies & Sustainable  
Industries Early College High School

## RECOGNITIONS

- America's Best High Schools list by Newsweek magazine
- America's Best High Schools by Washington Post and U.S. News & World Report
- AP Achievement Award from the College Board
- AP exams - Students scored at or higher than the World Average in all 15 subject areas
- P-21 Exemplar School
- District of Distinction by District Administrator's magazine

## NUMBER OF ADVANCED COURSE OFFERINGS

3 Honors  
8 International Baccalaureate  
15 Advanced Placement  
41 University/College in the High School

## STANDARDIZED TEST SCORES

These are the mean scores of 85 students who took the SAT during Spring 2024.

2024	National	State	Ballston Spa
Critical Reading & Writing	595	586	566
Math	576	579	561

## RANK & GPA

An unweighted final class rank is calculated at the close of the 7th semester. Final averages of high school level courses taken through the 1st semester of the senior year, except physical education, are used to compute the unweighted cumulative GPA, which determines class rank.

Final grades for each course are determined by averaging the marks received at the close of each two-week period with the final examination.

A+ = 100	B+ = 89	C+ = 79	D+ = 70
A = 96	B = 86	C = 76	D = 68
A- = 93	B- = 83	C- = 73	F = 0-64 (failing)

P = Pass      F = Fail      INC = Incomplete  
WP = Withdrawn Pass      WF = Withdrawn Fail

CDOS Credential =>1%

Local Diploma = >1%

Regents Diploma/with CTE/with Honors = 44.7%

Regents Diploma with Advanced Designation/with Honors = 27.1%

Regents Diploma with Advanced Designation and Mastery in Mathematics &/or Science/with Honors =23.7%

## CLASS OF 2024 DIPLOMA TYPES

## COLLEGE AND UNIVERSITY ENROLLMENT FOR 5 YEARS

- Aesthetic Science Institute
- Albany College of Pharmacy and Health Sciences
- Alfred State College
- Alfred University
- American International College
- American Musical and Dramatic Academy
- American University
- Arizona State University-Tempe
- Auburn University
- Bellevue College
- Bentley University
- Berklee College of Music
- Binghamton University
- Bloomfield College of Montclair State University
- Boston College
- Boston University
- Brandeis University
- Brigham Young University-Provo
- Brown University
- Bryant & Stratton College
- Campbell University
- Canisius University
- Cazenovia College
- Cedarville University
- Central Arizona College
- Central Connecticut State University
- Centura College-Norfolk
- Champlain College
- Clarkson University
- Coastal Carolina University
- Colgate University
- College of the Holy Cross
- College of Saint Rose
- Commonwealth University
- Cornell University
- Culinary Institute of America
- CUNY Bernard M Baruch College
- CUNY Borough of Manhattan Community College
- CUNY Hunter College
- CUNY John Jay college of Criminal Justice
- CUNY Macaulay Honors College
- Dickinson College
- Duke University
- East Carolina University
- Eckerd College
- Elmira College
- Embry-Riddle Aeronautical University
- Emerson College
- Emmanuel College
- Fairfield University
- Farmingdale State College
- Fashion Institute of Technology
- Flagler College
- Florida Southern College
- Florida Southwestern State College
- Florida State University
- Fort Scott Community College
- Franklin Pierce University
- Frostburg State University
- Fulton-Montgomery Community College
- George Mason University
- Georgia Southern University
- Gordon College
- Hamilton College
- Hartwick College
- Herkimer County Community College
- Hobart William Smith College
- Hofstra University
- Hudson Valley Community College
- Ithaca College
- Jackson State University
- Jacksonville State University
- James Madison University
- Johnson & Wales University-Providence
- Kansas State University
- Keene State College
- Kutztown University of Pennsylvania
- Lehigh University
- LeMoyne College
- Liberty University
- Limestone University
- Loughborough University
- Marist College
- Marywood University
- Massachusetts College of Liberal Arts
- Massachusetts College of Pharmacy and Health Sciences
- Massachusetts Institute of Technology
- Mercyhurst University
- Middle Tennessee State University
- Middlebury College
- Mohawk Valley Community College
- Monmouth University
- Muhlenberg College
- Nazareth University
- North Carolina State University at Raleigh
- Northeastern University
- Northwestern Oklahoma State University
- Oberlin College
- Oklahoma State University
- Onondaga Community College
- Pace University
- Paul Mitchell the Schools
- Paul Smith's College
- Pennsylvania State University
- Pennsylvania College of Technology
- Peru State College
- Plymouth State University
- Point Park University
- Pratt Institute-Main
- Princeton University
- Providence College
- Purdue University-Main Campus
- Quinnipiac University
- Rensselaer Polytechnic Institute
- Robert Morris University
- Roberts Wesleyan College
- Rochester Institute of Technology
- Roger Williams University
- Russell Sage College
- Sacred Heart University
- Saint Bonaventure University
- Saint John Fisher University
- Saint Lawrence University
- Saint Michael's College
- Salve Regina University
- San Joaquin Delta College
- Santa Clara University
- Sarah Lawrence College
- Savannah College of Art & Design
- Schenectady County Community College
- Seton Hall University
- Siena College
- Southern Connecticut State University
- Southern New Hampshire University
- Springfield College
- Seton Hall University
- Siena College
- Southern Connecticut State University
- Southern New Hampshire University
- Springfield College
- State University of New York at New Paltz
- Stevens Institute of Technology
- Stonehill College
- Stony Brook University
- Suffolk County Community College
- Suffolk University
- SUNY Adirondack
- SUNY Brockport
- SUNY Broome Community College
- SUNY Buffalo State
- SUNY College of Agriculture and Technology at Cobleskill
- SUNY Cortland
- SUNY College of Environmental Science and Forestry
- SUNY College at Geneseo
- SUNY Morrisville
- SUNY Oneonta
- SUNY College at Potsdam
- SUNY College of Technology at Canton
- SUNY College of Technology at Delhi
- SUNY Empire State College
- SUNY at Fredonia
- SUNY at Maritime College
- SUNY College at Oswego
- SUNY College at Plattsburgh
- SUNY Polytechnic Institute
- SUNY at Purchase College
- Syracuse University
- Tallahassee Community College
- Temple University
- Texas Tech University
- Three Rivers Community College
- Union College
- University of Alabama
- University at Albany
- University of Arizona
- University at Buffalo
- University of California-Davis
- University of Central Florida
- University of Connecticut
- University of Delaware
- University of Florida
- University of Georgia
- University of Guelph
- University of Hartford
- University of Illinois at Urbana-Champaign
- University of Kansas
- University of Maine at Fort Kent
- University of Massachusetts-Amherst
- University of New England
- University of New Hampshire
- University of New Mexico
- University of North Carolina at Charlotte
- University of Oklahoma-Norman Campus
- University of Pittsburgh
- University of Rhode Island
- University of Richmond
- University of Rochester
- University of South Carolina-Columbia
- University of South Florida
- University of Tampa
- University of Vermont
- University of Washington
- Utica University
- Vermont State University
- Villanova University
- Virginia Highlands Community College
- Virginia Military Institute
- Virginia Tech
- Webster University
- West Virginia University
- Western New England University
- Western Washington University
- William & Mary
- Worcester Polytechnic Institute

### CLASS OF 2024 POST-SECONDARY PLANS

4 - Year Colleges = 51.7%  
 2 - Year Colleges = 25.2%  
 Employment = 15.1%  
 Other = 4.7%  
 Military = 2%  
 Trade School = 1.3%

### SCHOOL COUNSELORS

Colleen Bengle  
 Christina Carlson  
 Mara Gallagher  
 Christy Knapp

Ashley Osborne  
 Nicole Stehle  
 Lyndsey Wilcox

## Timeline for Planning

When planning your high school program it's important to take into consideration your special abilities, interests, and goals. In addition to traditional course offerings, Ballston Spa High School offers a variety of highly specialized programs and curriculum choices that enhance students' career and college readiness. Each student has a counselor to assist in planning a student's high school program, and we encourage students and parents to be active members of the academic and scheduling process. For additional information about the programs we offer see the calendar below. This information is also posted on our website.

Dates	Events
February 2025	The course selection process, which includes teacher course recommendations is opened to students and families via SchoolTool. Students should access the Course Description Handbook on the school website and view the "How to add Course Selections" video posted in SchoolTool.
February - March 2025	Students are scheduled to meet with their counselor to review their course selections and discuss post-secondary planning.  Note: Course offerings are based on enrollment and are subject to final budget approval. It may not be possible to offer all courses listed in the Course Description Handbook due to enrollment or fiscal constraints.
February - April 2025	Meetings are scheduled with parents who wish to discuss courses at a higher level than what the student was recommended for.
March 2025	8th Grade parent night with school administrators on transitioning to the high school and curriculum choices, including AP World History.
March 2025	11th Grade students will meet with their School Counselor to discuss post-secondary planning.
April 2025	Student course requests are mailed home for parental review and discussion.
March 2025	BOCES CTE Enrollment Applications are due for junior year
May 1, 2025	Last day to submit course change requests. Note: Change requests must be received in the school counseling office by 3 p.m.
May - June 2025	Students will be informed of unfulfilled requests and meet with their School Counselor to resolve conflicts.
July 2025	List of courses scheduled for the 2025-2026 school year are mailed home with student's report card.
First Day of School	Students receive schedules in homeroom on the first day of school (freshmen will receive their first copy at 9th Grade Orientation).

# General Information

## SchoolTool/Parent Portal

SchoolTool is a student management system used by the district. It is the most up to date source for information on grades and attendance. With a Parent Portal account, parents/guardians have access to the following student information:

- Student Records (basic information)
- Contact Information
- Schedule
- Attendance (daily course absences)
- Grades (marking period averages and final grades)
- Assignment grades
- Email communication with teachers and counselors

## Student Grading Policy

The report card is a record of the student's achievement and effort for each course taken. Final grades are determined by averaging the marks received at the close of each 10 week marking period with the final examination for full year courses. Final grades for half year (one semester) courses are determined by doubling each quarter mark and averaging them with the final examination mark.

## Honor Roll

Honor Roll is determined after each 10 week marking period. A student must attain an average of 85.00 for Honor Roll, 90.00 for High Honor Roll, or 95.00 for the Principal's List. Incompletes or failures automatically exclude students from Honor Roll. In addition, incompletes must be completed within two weeks after the end of the marking period.

## School Counseling

A staff of professional school counselors is available at the Ballston Spa High School, to aid students with interpersonal development issues and in making informed decisions regarding academic plans and career decisions. Counselors are available to meet with students in groups or individually to discuss academic planning, career opportunities, college information, and/or issues of personal concern. School counseling services include the assessment of educational, occupational, and personal/social strengths; referral to other pupil personnel and/or community agencies; career education; college information; letters of recommendation; and conferences which may include parents, teachers, administrators, and/or other staff members.

## Enrollment in Courses

Students in grades 9-11 enroll in courses, which total a minimum of seven periods. Students in grade 12 must enroll in a minimum of six periods.

## Promotion Requirements

Grade placement is determined by the number of credits completed as follows:

- To enter grade 10: 5 units of credit to include 1 unit of English, 1 unit of Social Studies, and 1 unit of either Mathematics or Science
- To enter grade 11: 10 units of credit to include 2 units of English and Social Studies and at least 3 units in a combination of Math and Science
- To enter grade 12: 15 units of credit and the potential to graduate in June

## Course Grade Policy for Credit Recovery and Accrual Programs

Students who fail a course or want to enroll in a course for credit accrual may have the option to earn course credit through an approved program. The following guidelines will apply:

- All credit recovery and accrual courses require the approval of the building Principal.
- In order to be eligible for a credit recovery program a student must have attempted the course a minimum of two times.
- Students who successfully pass a credit recovery course will earn a final course grade of 65% on their transcript. The appropriate credit for this course will be reflected on the transcript.
- Students who successfully pass a course for credit accrual will receive the course grade earned as the final grade on the transcript. The appropriate credit for this course will be reflected on the transcript.

## Course Selection

Our course offerings and master schedule are determined by student course selections made in the spring. Students are enrolled in courses based on teacher recommendation. Should a student or parent choose to select a higher level course than the recommendation indicates, the family must meet with a counselor and administrator by the 'request for change' deadline.

Ballston Spa High School has an add/drop policy. Students should see their school counselor for details. However, extenuating circumstances can develop that make it impossible for students to complete all the courses they have selected for any academic year. In response to these circumstances, we have developed the following guidelines:

- All add/drop requests must be approved by a parent/guardian, teacher, school counselor, and administrator.
- If a student is permitted to drop a course after the first three full weeks of the class, the course grade and drop is reflected on the transcript. For example, the transcript will denote "WP - withdrew pass" or "WF- withdrew fail."
- If a course level change is needed, then the grade(s) earned in the original course will be incorporated into the grade of the new course. The level change may not be reversed later in the year.

In all cases, students must maintain a full schedule of courses, i.e. 7 scheduled periods (6 scheduled periods for seniors) and all requirements for graduation must be met.



# Graduation Requirements

Graduation from Ballston Spa High School requires the fulfillment of course and examination requirements as outlined by the New York State Board of Regents. In accordance with state and district standards, the high school offers three possible diplomas (Local, Regents, and Advanced Regents), with the possibility of additional accolades, and for students with disabilities, a NYS CDOS<sup>1</sup> Commencement Credential.

## Course Requirements

Students must earn the following credits to graduate with one of the three possible diplomas.

	Regents or Local	Advanced Regents
English	4	4
Social Studies	4	4
Mathematics	3	3
Science	3	3
Art/Music	1	1
Health	.5	.5
Physical Education	2	2
World Language	1	3
Electives	3.5	1.5
<b>Total</b>	<b>22</b>	<b>22</b>

## Examination Requirements

Students must earn a minimum grade of 65% for ALL the following Regents exams:

### Regents Diploma / Local Diploma (5 exams)

- English Regents
- Social Studies Regents
- One Math Regents
- One Science Regents
- One additional assessment from options above, a CTE assessment, or CDOS Commencement Credential

### Advanced Regents Diploma (8 exams)

- English Regents
- Global History Regents
- U.S. History Regents
- Algebra I, Geometry and Algebra II Regents
- Two Science Regents

Notes:

<sup>1</sup>Details about the NYS CDOS Commencement Credential on page 9.

<sup>2</sup>Examination requirements for a Local Diploma are the same as the Regents Diploma, except students with disabilities have the safety net option of scoring between 55-64 on all Regents exams. For students with disabilities, a score of 45-54 on a required Regents exam other than English and Math can be compensated with a score of 65% or above on another required Regents exam. In all cases, students must achieve at least a 55% on English and Math, and pass the course in the corresponding course.

<sup>2b</sup>A student with a disability may appeal scores between 52 and 54 on up to two Regents exams in any discipline to graduate with a Local Diploma.

<sup>3</sup>Students who have a 65 course average, but whose highest score on the corresponding Regents examination after two attempts is below but within 3 points of a 65, may appeal to graduate. If a student appeals one exam, with a score ranging 62-64, the student may be eligible for a Regents Diploma using this lower score. However, if a student appeals two exams with scores ranging 62-64, the student may be eligible for a Local Diploma using this lower score. The appeals process is initiated with the assistance of the high school counselor.

## NYS Testing

The New York State Regents examinations are administered annually in January, June and August. Students may retake tests at successive test dates to improve their scores. If a student retakes a Regents exam in August of the same school year in which the course was completed and earns a higher score, the final course average will be recalculated using the higher score. Should a student retake a Regents exam, only the highest Regents score will appear on the transcript.

# Diploma Accolades

## Honors

Students who earn an overall average of a 90% or higher on the five required exams needed for a Regents Diploma receive an Honors Distinction. Students who earn an overall average of a 90% or higher on all eight Regents exams needed for the NYS Regents Diploma with Advanced Designation receive an Honors Distinction.

## Mastery in Math and/or Science

Students who earn an 85% or higher on three Math Regents exams will earn Mastery in Math on their diploma. Students who earn an 85% or higher on three Science Regents exams will earn Mastery in Science on their Diploma (note: one of the three must be the Living Environment exam).

## Career & Technical Endorsement

Students who pass the four required Regents exams and pass the certification examination relative to their specific vocational field of study receive a CTE Endorsement Seal.

## Seal of Biliteracy

This accreditation serves to recognize students who have met certain criteria that demonstrates their competency in a second language. With this diploma seal, students can show prospective employers and colleges that they have attained proficiency in listening, speaking, reading, and writing in one or more languages in addition to English. Students who earn this seal will have an additional notation on their diploma and will be presented with a special cord to be worn with their graduation regalia to signify this accomplishment.



## Seal of Civic Readiness

This accreditation serves to recognize students who have met certain criteria set by the State of New York that demonstrates their civic knowledge, skills and mindsets over the students' four years in high school. With this diploma seal, students can show prospective employers and colleges that they have attained a community-minded level of civic experiences. There are multiple pathways by which a student can earn the Seal of Civic Readiness. Social Studies teachers will work with students to complete Seal applications during junior and senior year. Students who earn this seal will have an additional notation on their diploma and in the graduation program as well as be presented with a special cord to be worn with their graduation regalia signify this accomplishment.

## Specific to Students with Disabilities Accolade

NYS Career Development and Occupational Studies Commencement Credential (CDOS): The NYS CDOS Commencement Credential is a credential recognized by the New York State Board of Regents as a certificate that the student has the knowledge and skills necessary for entry level employment. There are two options available for students to earn this credential.

- The student must have developed a career plan that includes documentation of the student's self-identified career interests, career-related strengths and needs, career goals, career and technical coursework, and the work-based learning experiences that the student plans to engage in to achieve those goals; and
- The student must have demonstrated achievement of the commencement level CDOS learning standards in the areas of career exploration and development, integrated learning and universal foundation skills; and
- The student must have successfully completed at least 216 hours of CTE coursework and/or work-based learning experiences (of which at least 54 hours must be in work-based learning experiences); and
- The student must have at least one completed employability profile that documents the student's employability skills and experiences, attainment of each of the commencement level CDOS learning strands, and as appropriate, attainment of technical knowledge and work-related skills, work experiences, performance on industry-based assessment, and other work-related academic achievements.

# College Credit Opportunities

Students are presented with a wide variety of opportunities to obtain college credit while enrolled in upper level courses at Ballston Spa High School. Every college sets its own standard for accepting transfer credits. Advanced Placement (AP), International Baccalaureate (IB), University in the High School (UHS) and College in the High School (CHS) courses are viewed as transfer credits by many colleges. Ballston Spa High School presents the curriculum, designates courses as college level on the high school transcript, and grants credit toward high school graduation; but the college in which the student enrolls decides whether to award college credit. Ballston Spa High School encourages that every student enrolled in AP or IB course(s) take the AP or IB exam(s).

## College in the High School (CHS) offerings:

All students enrolled in classes through SUNY Adirondack, Schenectady County Community College and/or Hudson Valley Community College must complete the Saratoga Certificate of Residency process found at: <http://www.saratogacountyny.gov/departments/county-treasurer/certificate-of-residency/>

SUNY Adirondack Community College

Cost to high school student: \$74.00 per credit hour\*

Course Title	Course College #	College Credits
CHS Advance Video Editing, Animation and Visual Effects	COM 181	3
CHS College Career Financial Management	ECO 101	3
CHS Graphic Design 1	ART 222	3
CHS Graphic Design 2	ART 252	3
CHS Photography	ART 104	3

Hudson Valley Community College

Cost to high school student: \$70.00 per credit hour\*

Course Title	Course College #	College Credits
AP/CHS Biology	BIOL 150	4
AP/CHS Macroeconomics	ECON 100	3
AP/CHS Physics	PHYS 140	4
AP/CHS US Government and Politics	POLS 105	3
AP/CHS US History	HIST 110 & HIST 111	3
CHS American History Since 1877	HIST 111	3
CHS American History to 1877	HIST 110	3
CHS College Algebra and Trigonometry	MAT 150	4
CHS Intro to Psychology	PSYC 100	3
CHS Pre-Calculus	MAT 170	4
CHS Pre-Calculus Honors	MAT 170	4

SUNY Schenectady County Community College  
 Cost to high school student: \$65.00 per credit hour\*

Course Title	Course College #	College Credits
CHS Astronomy - Exploring Space	AST 123	3
CHS Astronomy – Cosmic Systems	AST 127	3
CHS Business Math	BUS 113	3
CHS College Algebra with Trig	MAT 154	3
CHS College Composition	ENG 123	3
CHS College Literature & Writing	ENG 124	3
CHS Drawing & Painting II	ART 128	3
CHS French – Level 3	FRE 122	3
CHS French - Level 4	AFRE 221Y	3
CHS French - Level 5	AFRE 222Y	3
CHS Intro to Business	MGT 123	3
CHS Mathematical Topics	MAT 145	3
CHS Music Fundamentals I	MUS 147	3
CHS Principles of Business Marketing	MKT 223	3
CHS Public Speaking	COM 105	3
CHS Spanish – Level 3	SPA 122	3

\*Cost of all courses and exams are subject to change and are non-refundable.



## University in the High School (UHS) Offerings

Rochester Institute of Technology

Cost to high school student: \$225\*

Course Title	College Credits
UHS/PLTW Civil Engineering & Architecture	3
UHS/PLTW Computer Integrated Manufacturing Systems	3
UHS/PLTW Engineering Essentials	3
UHS/PLTW Human Body Systems	3
UHS/PLTW Introduction to Design & Drawing for Production	3
UHS/PLTW Medical Interventions	3
UHS/PLTW Principles of Biomedical Sciences	3
UHS/PLTW Principles of Engineering	3

SUNY University at Albany

Cost to high school student: \$190\*

Course Title	Course College #	College Credits
AP/UHS Calculus AB/BC	AMAT 112	3
AP/UHS Statistics	AMAT 108	3
UHS Spanish 4	ASPN 200	4
UHS Spanish 5	ASPN 201	4

\*Cost of all courses and exams are subject to change and are non-refundable.



## Advanced Placement (AP) Offerings

Cost to high school student: \$95\*

### Course Title

AP Art Portfolio

AP Biology

AP Calculus AB

AP Calculus BC

AP Chemistry

AP Computer Science Principles

AP English Language & Composition

AP English Literature & Composition

AP European History

AP Human Geography

AP Macroeconomics

AP Physics 1

AP Psychology

AP Statistics

AP United States Government & Politics

AP United States History

AP World History II



# Clean Technologies & Sustainable Industries Early College High School

Number of Students: 226  
 College Acceptance Rate: 100%  
 Participating School Districts: 19

## Program support includes:

- NYS P-TECH grant and corporate partner donations.
- Equity and access for all students.
- Concurrent high school and college credits each year.

## Post Secondary Majors

- Aeronautical Science
- Architecture/Project Management
- Business Administration
- Clean Energy
- Communications
- Computer Science
- Cybersecurity
- Education
- Engineering (various)
- Entrepreneurship
- Exercise Science
- Hotel, Resort, and Tourism Management
- Illustration
- International Relations
- Marine Biology
- Mechatronics
- Nursing
- Political Science
- Veterinary Technology
- Video Game Art

## Scholarship Offerings:

- The Sage Colleges
- Siena College

## VISION

To cultivate a fully connected and collaborative learning environment focusing on 21st Century skills, STEM teaching and learning, and College and Career Readiness for all students that is supported through public and private partnerships.



The mission of the Clean Technologies & Sustainable Industries Early College High School (Clean Tech ECHS), Pathways In Technology (P-TECH) Program, is to develop and support pathways to higher education that lead to careers in STEM fields for students through rigorous academic programming and a collaborative approach to learning.

Launched in the 2011-2012 school year in collaboration with NYSERDA and Hudson Valley Community College at TEC-SMART in Malta, NY, the Clean Tech ECHS program provides high school students with opportunities to develop college and career readiness skills and pursue college coursework in one of the following pathways:

### *HVCC College Majors:*

- Clean Energy Management
- Community & Public Health
- Engineering Sciences
- Entrepreneurship, Leadership & Innovation
- Hacking & Cybersecurity
- Polysomnography
- Surgical Technology

### *9th -12th Grade Students*

The Clean Tech ECHS program includes partners from K-12 education, higher education, and businesses and industries collaborating together to provide students a distinct opportunity to pursue coursework towards an associates degree and be prepared to seamlessly transition into key industry sectors within our economic region. Students have the opportunity for job shadowing and mentoring experiences to develop workplace skills.

Additional information about the program and its mission can be found at:  
<https://cleantechechs.bsbsd.org>

## Program Design Principles

The Clean Technologies & Sustainable Industries Early College High School believes that through a transdisciplinary approach to STEM teaching, learning, and experiences in higher education our students will have authentic educational opportunities that value:

- A clear pathway from high school graduation, to college, to career.
- Personalization and Collaboration: Each student is responsible to make learning uniquely his/her own while able to collaborate, communicate, and apply STEM concepts to best solve problems driven by personal interests.
- Transdisciplinary learning with an emphasis on application of understanding in diverse situations through the development of projects and lessons that address authentic issues.
- The demonstration of proficiency and mastery of content, ingenuity, innovation, and creativity using nontraditional assessment tools.
- Critical thinking and the design process in the context of the community by leveraging assets and resources from higher education, business and industry: A collaborative learning ecosystem among partners in education.
- Design-focused service learning that promotes and informs self-discipline and ethical citizenry through learning about community issues and providing viable solutions to critical community issues and problems.



## Program Overview and Format

The program includes the following for 9th grade:

- Applications due in the spring of grade 8.
- Virtual Learning Program- 21st Century Skills focusing on design projects and exploration of professional skills.
- Students enrolled in high school coursework at their home schools.
- Monthly visits for a half day to HVCC North.

The program includes the following for 10th grade:

- A two day summer academy for incoming 10th graders to be held on the TEC-SMART campus focusing on program career pathways and workplace skills.
- Yearlong Virtual Learning Program – modules focusing on a particular pathway.
- Students enrolled in high school coursework at their home school.
- Monthly visits to TEC-SMART with peer and professional mentoring.
- Site visits at home schools by program staff.
- HVCC College Coursework- online College Forum (1.0 HVCC credit) in the fall; online Sociology (3.0 HVCC credits) in the spring

The program includes the following in 11th and 12th grades:

- Students can choose from the following HVCC pathways:
  - Clean Energy Management
  - Community & Public Health
  - Engineering Sciences
  - Entrepreneurship, Leadership & Innovation
  - Hacking & Cybersecurity
  - Polysomnography
  - Surgical Technology
- Students attend school at TEC-SMART for high school AND college classes in the morning then return to their home school in the afternoon.

9th Grade: P-TECH 21st Century Skills- Impact of Technology on Society

10th Grade: Summer Bridge Programing,  
P-TECH 21st Century College and Workplace Readiness and HVCC college coursework  
P-TECH Civics  
(FORM101 College Forum and SOCL100 Sociology)

Pathway:  
**Clean Energy**

MKTG 120  
Principles of Marketing

ECMN 120  
Electrical Theory for Renewable Energy

ESYS100  
Introduction to Wind Energy

ECMN 210  
Photovoltaic Theory and Design

BADM 110  
Legal & Ethical Env. of Business

ECMN 211  
Photovoltaic Installation and Maintenance

ECMN 195  
Electrical Power Distribution & Control

College Math

ENGL 101  
English Comp I

Pathway:  
**Hacking & Cybersecurity**

CISS 100  
Introduction to Computer Inf. Science

CISS 110  
Programming & Logic I

CISS 125 Computer & Information Security

CRJS 101  
Introduction to Criminal Justice

PSYC 100  
General Psychology

College Math

PSYC 205  
Developmental Psychology

ENGL 101  
English Comp I

Pathway:  
**Community & Public Health**

PSYC 100  
General Psychology

ENGL 125  
Public Speaking

BADM 220  
Statistics

SOCL 110  
Social Problems

ENGL 101  
English Comp I

CMHL 110  
US Healthcare

CMHL 115  
Healthcare Ethics

SOCL 120  
Cultural Diversity in American Society

PSYC 200  
Child Psychology

Pathway:  
**Entrepreneurship, Leadership & Innovation**

MKTG 120  
Principles of Marketing

ENTR 110  
Introduction to Entrepreneurship

ENTR 120  
Entrepreneurship Process

BADM 220  
Statistics

BADM 207  
Organization & Management

MKTG 210  
Digital Marketing

PSYC 100  
General Psychology

ENGL 101  
English Comp I

ENGL 102  
English composition 1

or

ENGL 104  
English Composition II: Writing About Literature

Additional Pathways continue on following page!

Pathway:  
**Engineering Sciences**

CISS 110  
Programming &  
Logic I

ENGR 120  
Introduction too  
Engineer Design

ENGR 110  
Engineering Tool  
or

SOCL 120  
Cultural Diversity in  
American Society

MATH 170  
College Math

MATH 180  
Calculus 1

ENGL 101  
English Comp I

MATH 190  
Calculus 2

PHYS 150  
Physics I

ENGL 104  
English Comp  
II: Writing About  
Literature

Pathway:  
**Polysomnography**

PSYC 100  
General Psychology

BADM 220  
Statistics

BIOL 139  
Anatomy and  
Physiology for  
Respiratory Care

ENGL 101  
English Comp I

PHYS 110  
Physics for the Health  
Sciences

CMHL 115  
Healthcare Ethics

RESP 110  
Human Anatomy and  
Physiology

Pathway:  
**Surgical Technology**

PSYC 100  
General Psychology

PSYC 205  
Developmental  
Psychology

MATH 150  
Calculus 2 or MATH  
170 College Math

BIOL 270  
Anatomy and  
Physiology I

ENGL 101  
English Comp I

BIOL 271  
Anatomy and  
Physiology II

ENGL 102  
English Comp II



Full Matriculation into Higher Education Institution

\*HVCC College classes are subject to change

# Clean Technologies & Sustainable Industries

## High School Course Descriptions

Students study Environmental Science and Sustainability, Mathematics, and English through a transdisciplinary lens to solve authentic real world problems during their junior year. Their senior year includes Nanotechnology, Green Economics and Public Policy, taught through a transdisciplinary lens. Transdisciplinary learning is holistic, not English, Science, Math or Social Studies in isolation in terms of content or applying what you have learned. The challenges of the 21st Century are too complex to be solved by looking through a single disciplinary lens. The focus is on the unity of knowledge, not knowledge in silos or content specific, in the solution of authentic real world problems. The focus on course work inherently fosters problem solving, innovative thought, and critical thinking. Students complete approximately eight mastery assignments and a capstone project throughout each year.

### **P-TECH 21st Century Skills**

Grade 9  
(Pass/Fail)

**HS2067**

Credit 1 Unit

P-TECH 21st Century Skills provides students with knowledge of how to use technology to communicate, collaborate, and create. Students will develop an understanding of the engineering design process, as well as how business professionals use this process. Students will develop communication and collaboration skills to create improvements and modifications in the professional environment and society. Students will be awarded 3 credits from Hudson Valley Community College upon successful completion of this course.

### **P-TECH 21st Century College, Workplace Readiness and P-Tech Civics Education**

Grade 10  
(Pass/Fail)

**HS2068**

Credit 1 Unit

College and Workplace Readiness provides students the opportunity to explore and gain knowledge about the fields of Clean Energy, Mechatronics, Computer Programming, and Entrepreneurship. Students will complete a project in a different field each quarter. Students will be exposed to renewable energies, coding, 3-D Printing, and creating an invention.

### **Environmental Science and Sustainability**

Grade 11

**HS2060**  
Credit 1 Unit

Universities and corporations are beginning to recognize that humanity is affecting the environment in ways which are historically unprecedented and which are potentially devastating for both natural ecosystems and us. They have begun to look at ways to reduce their carbon footprint. Similarly, our school district is uniquely positioned to influence the direction we take as a community in terms of learning about and conducting research in the areas of Environmental Science, sustainability and “Green Design.” Resource availability has guided the development of human society. This course allows students to study the sustainability of human societies and how the biodiversity that supports them requires responsible management of natural resources not only to reduce existing adverse impacts but also to get things right in the first place. Students learn that all forms of energy production and other resource extraction have associated economic, social, environmental, and geopolitical costs and risks, as well as benefits. Students work to understand how new technology and regulation can change the balance of these factors.

### Applied Mathematics in Clean Technologies HS2036

Grade 11 Credit 1 Unit

The Mathematics in Clean Technologies covers mathematics concepts from the areas of Algebra, Geometry, and Statistics. Students use the concepts from these Math disciplines to solve issues related to the environment and sustainability. The assignments for this course include rigorous content knowledge and skills application, and are aligned with expectations of both college and workforce. Students will have the opportunity to analyze and evaluate large data sets. Students use their math skills to learn about and evaluate data related to economics, management of natural resources, and renewable energies. (This course is not approved by NCAA.)

### English 11 HS2063

Grade 11 Credit 1 Unit

The English 11 Regents course concentrates on comprehensive skill development and refinement. The curriculum utilizes non-fiction literature, documents, and research to help students develop a better understanding of the environment and need for sustainability. Students will develop a mature writing style, an extensive vocabulary, and presentation skills. Students will gain experience with the rhetorical mode of argumentation and persuasion. Students will be prepared to take the English Comprehensive Regents exam.



### P-TECH Career Exploration HS2268

Grade 11 Credit 1/2 Unit

Students will complete a 40-hour field experience at the end of their junior year. In addition to the 40 hours, students will participate in meetings, job shadow experiences, and skill development training. The field experience will be a highly structured, time-limited, career preparation activity in which students are placed at a workplace for a defined period of time to participate in and observe work firsthand within a given industry. Field experiences provide students the opportunity to learn by doing real work and being productively engaged in the workplace. They may be provided the opportunity to work in teams, rotate through a number of departments and job functions, or to work on a project of interest to the student (or group of students) as a productive value for the employer partner. They are designed to give students hands-on experience in a field of interest, learn and practice occupational skills, and provide the opportunity to learn about their career options. Students will submit a portfolio for review at the conclusion of their field experience.

### CHS English Composition I HS1125

Grade 12 Credit 1 Unit

English 12 concentrates on literacy requirements and communication skills utilized in real world experiences. The curriculum utilizes non-fiction literature, documents, and research to help students develop a better understanding of the impact of technological advancements and policy on the world. Students will develop and refine their communication skills for a 21st century environment, and will understand the application of digital literacy in today's marketplace.

**Green Economics and Public Policy**

Grade 12

**HS2064**

Credit 1 Unit

The only constant is change and the only variable is the rate of change. Nanotechnology, the technological foundation of some of the world's most rapidly growing industries including the modern nanoelectronics, renewable technologies, and semiconductor industries, has helped shape the globalization and interdependence of world economies at a faster rate than was known to any previous generation. Green Economics and Public Policy examines economic and government policies from the perspective of science and technology, and how investment in these areas shapes the world economy and policies. In addition, students will look at the economic impact of nanotechnology and clean technologies on our own community, and the Tech Valley Region as a whole. This course will provide the opportunity to learn how government, policies, business, and market structures have changed in terms of investment, infrastructure, transportation, and communications as a result of advances in emerging nanotechnologies and renewable technologies. The role of the United States in a global and interdependent economy will also be examined and discussed. Students will learn about the social skills needed to be effective citizens, including ethical decision making, service and participation in government. This course emphasizes current issues personal responsibility and individual initiative. Students will be given an opportunity to volunteer for a community service project that links government policy making with real life needs.

**Introduction to Nanotechnology**

Grade 12

**HS1274**

Credit 1 Unit

Nanotechnology is an interdisciplinary field that is changing the world. Nanotechnology focuses on the engineering of functional systems at the molecular scale. Through this course students will learn about the properties and applications of nanotechnology. Basic chemistry and physics topics will be covered as they relate to nanotechnology. Students will conduct hands on labs in a clean room environment. Students will have the opportunity to use scientific equipment, including microscopes, to learn how the properties of materials differ. Students will use the knowledge they obtain from research and labs to develop a research proposal related to increasing the efficiency of photovoltaic materials.

Please review the Hudson Valley Community College Academic Catalog at [www.hvcc.edu](http://www.hvcc.edu) for course descriptions for the college courses.



# Career and Technical Education

## What is Career and Technical Education (CTE)?

According to the CTE Technical Assistance Center of New York, “Career and technical education is an extensive array of secondary and postsecondary instruction preparing students with technical/academic skills and behaviors to be successful in careers and further education.” <https://nyctecenter.org/planning/cte-in-nys>

## What are the benefits to students of participating in CTE Programs?

- Students have the competitive advantage of real-life connections to careers/workplaces.
- Students have documentation of the professional skills that so many employers indicate are important in the hiring process.
- Students have the opportunity to earn college credits and/or tuition reductions.
- Students who successfully complete all of the program requirements of a CTE Program will receive a Technical Endorsement on their diploma.
- These programs provide students with multiple pathways to graduation through the CTE Graduation Pathway or the CDOS Graduation Pathway.

## What is a CTE Approved Program?

CTE approved programs provide academic and technical instruction in the content areas of agriculture, business and marketing, family and consumer sciences, health occupations, trade and technical education, and technology education. All approved programs include a meaningful sequence of required CTE courses (all taught by CTE certified teachers), connections to academic content, work-based learning opportunities (including internships, service projects, etc.), post-secondary agreements with one or more colleges, and completion of a 3-part NYSED approved Industry/Technical Assessment.

## CTE Programs for Ballston Spa High School Students Include:

- WSWHE BOCES Approved Programs
- Ballston Spa High School Programs:
  - Business Education:
    - Business Management/Entrepreneurship
    - Marketing
  - Technology Education:
    - Building Sciences
    - Pre-Engineering

# BOCES Career and Technical Education

These two-year programs are certified by New York State to provide technical training specific to business and industry standards. Students in grades 11 and 12 may select any of the course offerings if they have successfully completed two units of credit in English, History, Mathematics and Science and passed the required Regents exam for these classes. Students who enroll in a CTE program and complete a two-year program earn four credits towards graduation each year. Career and technical education (CTE) course offerings at the F. Donald Myers Education Center are available in the areas of:



## Trade and Industrial

- Auto Body Repair
- Automotive Technology
- Constuction Trades
- Environmental Conservation and Forestry
- Heating Ventilation, Air Conditioning and Refrigeration (HVAC/R)
- Heavy Equipment Maintenance and Operation
- Welding

## Health Services

- Health Occupations

## Human and Public Services

- Cosmetology
- Criminal Justice Studies
- Culinary Arts and Hospitality
- Early Childhood Education
- Graphics & Visual Communication

## Nature and Horticultural Science

- Horticulture, Landscaping and Floral Design
- Horse Care
- Small Animal Science



# Business Education Department

NYSED - CTE Approved Program Pathways in Business Education

## Business Management Pathway

(Recommended Course Sequence)

9th Grade

Business Essentials  
Sports & Entertainment Marketing

10th Grade

Business Law  
CHS College Career Financial Management

11th Grade

CHS Introduction to Business

12th Grade

Professional Career Internship

## Marketing Pathway

(Recommended Course Sequence)

9th Grade

Business Essentials  
Sports & Entertainment Marketing

10th Grade

Business Law  
CHS College Career Financial Management

11th Grade

CHS Principles of Marketing

12th Grade

Professional Career Internship

Additional Program Electives

CHS Business Math  
CTE I  
CTE II

\* Students can take all of the above courses individually or as part of the identified CTE Approved Programs\*

# Business

In today's global economy, it is important that all students have knowledge of the economic and financial world in which they live. Business Education provides students with the foundation to pursue programs such as business administration, accounting, marketing/management, law and finance. Many business courses provide students with the opportunity to develop computer skills necessary to be competitive in both college and the workplace.

## 1/2 UNIT COURSES

### Business Essentials

**HS1733**

Grade 9, 10, Credit 1/2 Unit

Final Assessment: School Exam/Project

*\*Course Required for completion of CTE Approved Program*

Business Essentials is an introductory course that will provide students with the opportunity to learn about a variety of topics which include (but are not limited to) business ownership and the business cycle, ethical decision-making, marketing, social responsibility, career exploration, leadership, and public speaking. Emphasis is placed on the importance of effective human relations skills, making decisions and problem-solving. Computer skills incorporated are word processing, desktop publishing, presentation development, and spreadsheets.

### Business and Personal Law

**HS1708**

Grade 10, 11, 12 Credit 1/2 Unit

Final Assessment: School Exam/Project

Prerequisite: Business Essentials

*\*Course Required for completion of CTE Approved Program*

Students will gain an understanding of the law as it affects them in personal and business applications. We will cover basic legal principles and procedures in addition (but not limited to) contracts, civil law, criminal law, laws pertaining to minors, and insuring your future.

### Sports and Entertainment Marketing

**HS1711**

Grade 9, 10, 11, 12

Credit 1/2 Unit

Final Assessment: School Exam/Project

Prerequisite: Business Essentials

*\*Optional Course for CTE Approved Program*

This semester course will focus on the marketing and management of familiar industries, including sports, entertainment, fashion and tourism. Each of these industries deliver value to consumers daily. Students will develop an understanding of how the components of marketing impact each industry as well as the similarities between them. Students will understand the different impacts of management and how it affects the industry. The course is project based and will include research, discussions and presentations. There will be a final exam and project.



**CHS College Career Financial Management HS1704  
(College# ECO 101)**

Grade 11, 12

Credit 1/2 Unit

Final Assessment: School Exam/Project

Prerequisite: Business Essentials

During the first half of the course, students will explore career options and steps needed to prepare for a career. Students will develop a portfolio that includes personality profiles, interest and value assessments, a resume and cover letter. In addition, students will learn job application and interviewing tips. Financial literacy is stressed during the second half of the course as students learn subject areas needed to manage their economic future including financial planning, banking, credit, retirement planning and investing. Upon receiving a final grade of C or better, students will be awarded 3 credits from SUNY Adirondack.

**Professional Career Internship (PCI) HS1714**

Grade 12

Credit 1/2 Unit

Final Assessment: The Project and Time Requirement

Prerequisite: Business Essentials

*\*Course required for completion of CTE Approved Program*

This course allows students to complete an unpaid internship experience in one or two different careers that are of interest to them. Students will need to complete 54 hours in their internship experience and a minimum of 27 hours of classroom instruction. Students can explore a variety of careers including (but not limited to) accounting, biology, criminal justice, child care, engineering, journalism, teaching, and many others. Students planning to enroll in PCI need to provide their own transportation to and from their placements. In addition, students will have a minimum of one class per four day rotation - the schedule will be provided by the teacher the first day of class. Students who choose to enroll in this elective course are expected to demonstrate a level of responsibility and commitment appropriate for the workplace. Applications to enroll in this program may be obtained from their school counselor. Students will be interviewed by members of the Business Education Department to determine final acceptance into the program. Students must have a high level of independence and be trustworthy. Students must have a clean discipline record and have excellent attendance.

**CTE I: Introduction to CTE  
(Career and Technical Education)****HS1706**

Grade 10, 11, 12

Credit 1/2 Unit

Final Assessment: School Exam/Project

CTE I is a half year introductory business course that connects project-based learning with “real world” and career applications in order to develop the life skills needed to maintain an occupation in the 21st century. Students will utilize technology to research, interpret, and evaluate information regarding a variety of careers. Students will also enhance their interpersonal skills and learn how to apply such workforce skills during their work-based learning activities. Topics to be addressed include (but not limited to) methods of communication, styles of leadership, management processes, personal aptitudes and interests, and the responsibilities of various life roles for students as individuals and as contributing members of a community. Student participation in work-based learning is required.

\*\*This course is applicable to students pursuing a NYS CDOS Commencement Credential or the CDOS Pathway.

**CTE II: Introduction to CTE  
(Career and Technical Education)****HS1707**

Grade 10, 11, 12

Credit 1/2 Unit

Final Assessment: School Exam/Project

Prerequisite: CTE I

Building upon the coursework in CTE I, CTE II: Introduction to CTE is a business course that connects project-based learning in the classroom with real world career settings to develop and practice skills needed to maintain an occupation in the 21st century. Students will utilize technology to research, interpret, and evaluate information regarding a variety of careers. Students will practice their interpersonal skills and learn how to apply them both in the classroom and the workplace. Topics to be addressed include (but not limited to) social and workplace communication, personal aptitudes and interests, interviewing and the hiring process, and the responsibilities of various life and career roles for students as individuals and as contributing members of a community. Student participation in work-based learning experiences is required. \*\*This course is applicable to those students pursuing a NYS CDOS Commencement Credential or the CDOS Pathway.

**1 UNIT COURSES****CHS Principles of Business Marketing (College# MKT 223) HS1710**

Grade 11, 12 Credit 1 Unit  
 Final Assessment: School Exam/Project  
 Prerequisite: Business Essentials  
 \*Course required for completion of CTE Approved Program

CHS Principles of Marketing is a college level course that introduces the practices and principles of marketing. Students will learn concepts of promotion, pricing, selling, purchasing, product planning, information management/research, distribution, and risk management. Students have the option to enroll in the college in the High School Program (CHS) with Hudson Valley Community College (HVCC) and students must complete an HVCC application in the beginning of the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from HVCC. These credits are accepted at most institutions of higher learning.

**CHS Introduction to Business (College# MGT 123) HS1730**

Grade 11, 12 Credit 1 Unit  
 Final Assessment: School Exam/Project  
 Prerequisite: Business Essentials

This introductory course gives students a broad overview of social, economic, legal, and political forces of the global economy that influence a business manager's roles and decisions. Topics include fundamentals of business and economics, business ethics and social responsibility, competing in global markets, forms of business ownership, starting and growing a business, management, marketing, product distribution, promotion and pricing strategies, and managing technology and information. Students will develop a business model/plan to create a new product or service. Students have the option to enroll in the college in the High School Program (CHS) with Hudson Valley Community College (HVCC) and students must complete an HVCC online registration application in the beginning of the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from HVCC. These credits are accepted at most institutions of higher learning.

**CHS Business Math (College# BUS 113) HS1731**

Grade 11, 12 Credit 1 Unit  
 Final Assessment: School Exam/Project  
 Prerequisite: Business Essentials  
 \*Optional course for CTE Approved Program

CHS Business Math is a college level course that is designed to enhance the mathematical skills applied in the business field. Students will learn the calculations of cash discounts, percentages, simple interest, inflation, discounting notes, payrolls, bank reconciliations, business and consumer loans, depreciation, and inventory evaluation methods. We will be utilizing electronic spreadsheets in the form of Google Sheets to calculate and prepare financial documents. Students are strongly encouraged to successfully complete three years of mathematics prior to enrolling in this course. Students have the option to enroll in the college in the High School Program (CHS) with Hudson Valley Community College (HVCC) and students must complete an HVCC application in the beginning of the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from HVCC. These credits are accepted at most institutions of higher learning.



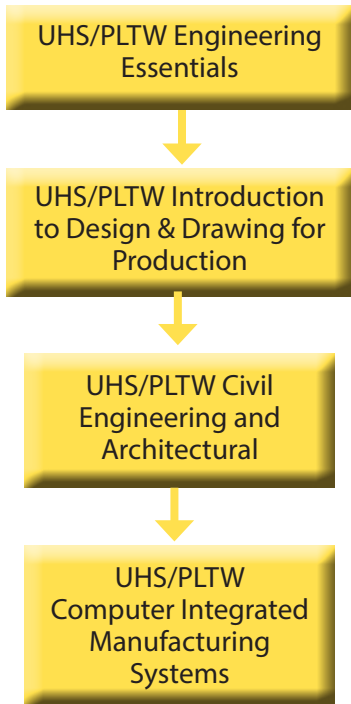
# Engineering and Technology

NYSED - CTE Approved Program Pathways in Technology Education

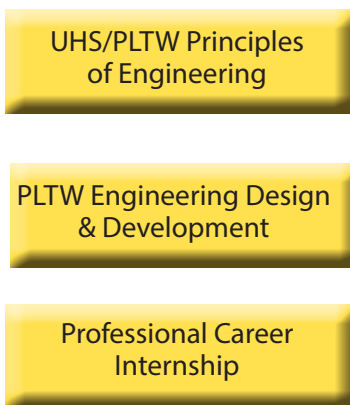
## Pre-Engineering Strand

Program Requirements:

- Complete required technology coursework (4 credits)
- 3 Part Industry/Technical Assessment



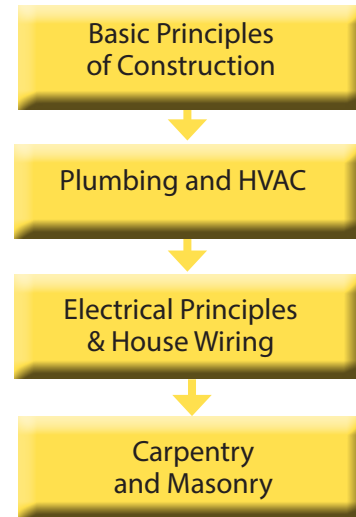
Additional Program Electives:



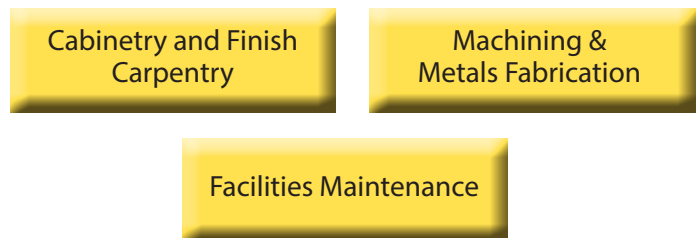
## Building Science Strand

Program Requirements:

- Complete required technology coursework (4 credits)
- 3 Part Industry/Technical Assessment

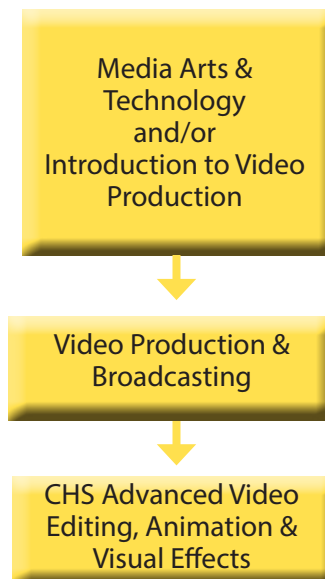


Additional Program Electives:



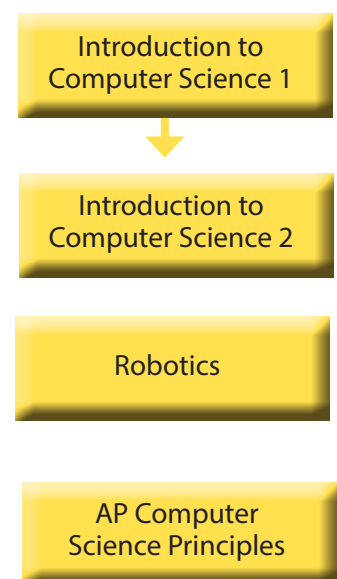
## Digital Media

Program Electives:



## Computer Science

Program Electives:



\* Students can take all of the above courses individually or as part of the identified CTE Approved Programs\*

# Engineering and Technology

Students interested in Engineering and Technology have a wide variety of opportunities in course work. Students may complete a 5-unit sequence in Technology as a substitute for the Foreign Language requirement necessary for a Regents Diploma with Advanced Designation. Students interested in pursuing college studies or careers in Pre-Engineering or Building Science have the opportunity to complete NYSED approved Career and Technical Education (CTE) programs in these areas and earn a CTE endorsement for their diploma.

Ballston Spa High School participates in Project Lead the Way (PLTW), a pre-engineering program that prepares students for a career in STEM. PLTW courses are designated in this course description handbook if the title of the course includes PLTW. Rochester Institute of Technology (RIT) is the affiliate college for all PLTW courses in New York State. Students who maintain an 85% average in these courses and have a high enough score on the PLTW end of course assessment are eligible to apply for 3 college credits from RIT. Design and Drawing for Production (DDP) may be used as the 1 unit of credit in Art or Music to fulfill that graduation requirement.

Students completing the Building Science sequence of course and enrolling in Hudson Valley Community College's Building Construction AAS degree program after graduation can take advantage of an articulation agreement for 3 college credits.

In addition to technology coursework, students have the opportunity to participate in the Robotics Club and Media Club to expand and apply their knowledge and talents outside the classroom.

## Building Science

### Basic Principles of Construction

**HS1651**

Grade 9, 10, 11, 12

Credit 1 Unit

Final Assessment: School Exam

Basic Principles of Construction is a full year course that introduces students to the field of construction and familiarizes them with building codes and safe material handling. The course provides thorough, up-to-date coverage of the core areas that are necessary for success in the construction field. Students will learn about print reading, safety and common tools, as well as professional skills for the construction field related to work ethic and communication. This course will culminate with a written local exam.

### Cabinetry and Finish Carpentry

**HS1666**

Grade 10, 11, 12

Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: Basic Principles of Construction*

This is a full year course that will study finish carpentry, the last step in the construction process in which carpenters install wood products such as trim, molding, cabinets, and other items required to finalize a home. Topics such as cabinetry, stair construction, wood joinery, furniture making, and other fine woodworking skills will be studied.

### Carpentry & Masonry

**HS1657**

Grade 10, 11, 12

Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: Basic Principles of Construction*

Carpentry and Masonry is a full year course that builds on the Basic Principles of Construction course and covers the essentials of residential construction, carpentry, and masonry. Students will learn about tools and materials, rough carpentry, and exterior and interior finish carpentry, ensuring professional success on any job site. Students will also learn about residential masonry construction procedures as well as current building and construction industry safety regulations. This course will culminate with a written local exam. Students enrolled in this course will take a 3 part technical assessment in Foundations in Construction and a 10 hour OSHA Safety Course. Completion of the Cabinetry and finish carpentry course is recommended prior to this course.

**Electrical Principles & House Wiring** **HS1669**

Grade 10, 11, 12 Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: Basic Principles of Construction*

Electrical Principles & House Wiring is a full year course that builds on the Basic Principles of Construction course and covers all areas of residential wiring that are required of an entry-level electrician. Topics included are all areas of preparing and planning a job, service entrances and equipment, rough-in and trim-out, and maintaining/troubleshooting a residential electrical wiring system. This course will culminate with a written local exam.

**Machining & Metal Fabrication** **HS1678**

Grade 10, 11, 12 Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: Basic Principles of Construction*

Machining & Metals Fabrication is a full year introductory course that explores the topic of machining and metals fabrication. The course provides students with an overview of the tools, material techniques, and organizational skills needed for trades involving metals. Students will be introduced to precision machining techniques as well as measuring. This course will culminate with a written local exam.

**Plumbing & HVAC** **HS1722**

Grade 10, 11, 12 Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: Basic Principles of Construction*

Plumbing and HVAC is a full year course that builds on the Basic Principles of Construction course and covers the essentials of residential plumbing and ventilation. In the plumbing portion of the course students will learn a step-by-step approach to residential plumbing including tools of the trade, proper safety measures, code requirements, installation of common fixtures, and troubleshooting techniques. The HVAC portion of the course covers the installation, startup, and service of residential air conditioning and heating systems. Topics that will be covered related to HVAC include matter, energy, heat and the basics of refrigeration, and the servicing of oil, gas, electric and geothermal heating systems, boilers, hydronic heating and radiant heating. This course will culminate with a written local exam.

**Facilities Maintenance****HS1715**

Grade 11, 12 Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: Basic Principles of Construction, Carpentry & Masonry, Electrical Principles & House Wiring, and Plumbing & HVAC*

Facilities Maintenance is a full year course that builds on the content from the Basic Principles of Construction, Carpentry & Masonry, Electrical Principles & House Wiring, and Plumbing & HVAC courses. A facilities maintenance technician is responsible for a variety of maintenance and repair duties in order to maintain the present state of a facility. When appliances, equipment, and building materials wear out or malfunction, it is the job of the facility maintenance technician to restore these building elements to their original condition. Remodeling duties like obtaining permits, securing financing, and selecting contractors can be duties of the facilities maintenance technician as well. Remodeling and demolition information, safety tips, and tricks of the trade are included throughout this course. This course will culminate with a written local exam.

## Pre-Engineering Strand

**UHS/PLTW Engineering Essentials****HS1656**

Grades 9, 10, 11, 12 Credit 1 Unit

Final Assessment: End of Course Assessment &amp; Project

Engineering Essentials is a full-year course designed to be a student's first exposure to engineering classes and the Career and Technical Pre-Engineering pathway. In Engineering Essentials, students explore the work of engineers and their role in the design and development of solutions to real-world problems. The course introduces students to engineering concepts that are applicable across multiple engineering disciplines and it empowers students to build technical skills through the use of a variety of engineering tools, such as geographic information systems (GIS), 3-D solid modeling software, and prototyping equipment. Students learn and apply the engineering design process to develop mechanical, electronic, process, and logistical solutions to relevant problems across a variety of industry sectors, including health care, public service, and product development and manufacturing. This course culminates with a final project and an end of course assessment.

**UHS/PLTW DDP (Introduction to Design and Drawing for Production) HS1650**  
 Grade 9, 10, 11, 12 Credit 1 Unit  
 Final Assessment: End of Course Assessment & Project

Introduction to Design and Drawing for Production is a full year class that emphasizes the design and development process of a product and how a model of that product is produced, analyzed, and evaluated. Various design applications will be explored and students will be introduced to possible career opportunities. This course is designed to develop students' problem-solving skills, with emphasis placed upon the concept of developing a 3-D model or solid rendering of an object. Students will focus on the application of visualization processes and tools provided by modern, state-of-the-art computer hardware and software (AutoCAD with Inventor). This course culminates with a final project and an end of course assessment. Students who maintain an 85% average in this course and a high enough score on the PLTW end of course assessment are eligible to apply for 3 college credits from Rochester Institute of Technology (RIT). This course can fulfill the NYS requirements for 1 unit in Art or Music.

**UHS/PLTW Civil Engineering & Architecture HS1655**  
 Grade 9, 10, 11, 12 Credit 1 Unit  
 Final Assessment: End of Course Assessment & Project  
 Prerequisite: UHS/PLTW DDP

Civil Engineering & Architecture is a full year course about various aspects of civil engineering and architecture. The course is structured to enable all students to have a variety of experiences that will provide an overview of both fields. The course provides freedom to the teacher and students to develop a property as a simulation or for students to model the real-world experiences that civil engineers and architects experience when developing property. Students will complete a long-term project that involves the development of a local property site with application of what they've learned to the design and development of this property. Students work in teams exploring hands-on projects and activities to learn the characteristics of civil engineering and architecture. This course culminates with a final project and an end of course assessment. Students who maintain an 85% average in this course and a high enough score on the PLTW end of course assessment are eligible to apply for 3 college credits from Rochester Institute of Technology (RIT).

**UHS/PLTW CIMS (Computer Integrated Manufacturing Systems) HS1680**  
 Grade 9, 10, 11, 12 Credit 1 Unit  
 Final Assessment: End of Course Assessment & Project  
 Prerequisite: UHS/PLTW DDP

Computer Integrated Manufacturing Systems is a full year course that will enhance the computer modeling design skills developed in Design and Drawing for Production. Students will be presented with design problems that will require the use of Inventor to develop solutions to the problem. In addition, students will be asked to extend their knowledge of design by applying principles of robotics and automation to the creation of prototypes of three-dimensional designs. Students will be expected to communicate the process and results of their work through oral and written reports. This course culminates with a final project and an end of course assessment. Students who maintain an 85% average in this course and a high enough score on the PLTW end of course assessment are eligible to apply for 3 college credits from Rochester Institute of Technology (RIT).

**UHS/PLTW Principles of Engineering HS1654**  
 Grade 10, 11, 12 Credit 1 Unit  
 Final Assessment: End of Course Assessment & Project  
 Prerequisite: UHS/PLTW DDP

Principles of Engineering is a full year course that explores various technology systems and manufacturing processes. Principles of Engineering is a project-based course that helps students understand the field of engineering/engineering technology. Students will learn how engineers and technicians use math, science and technology in a problem-solving process to benefit people. The course also includes concerns about social and political consequences of technological change. This course culminates with a final project and an end of course assessment. Students who maintain an 85% average in this course and a high enough score on the PLTW end of course assessment are eligible to apply for 3 college credits from Rochester Institute of Technology (RIT). This course may count for the third year of Science required for high school graduation.

**PLTW Engineering Design and Development HS1530**

Grades 12

Credit 1 Unit

Final Assessment: Project

*Prerequisite: UHS/PLTW DDP Introduction to Design & Drawing for Production, UHS/PLTW Civil Engineering and Architecture and UHS/PLTW Computer Integrated Manufacturing*

Engineering Design and Development is a full year culminating course that applies the principles developed in previous engineering courses. Students will design and construct the solution to an engineering problem. The problem may be selected from a database of engineering problems, be a recognized national challenge, or be an original engineering problem identified by the student and approved by the teacher. The problems will involve a wide range of engineering applications. Each student will be responsible for delivering progress reports and making final presentations of their project to an outside review panel. The completed portfolio will be invaluable as the student applies to college. This course culminates with an engineering notebook and portfolio of the designed solution.

## Digital Media

**Media Arts & Technology**

Grade 9, 10, 11, 12

**HS1519**

Credit 1 Unit

Final Assessment: Project

This course offers a unique co-taught curriculum, linking Art and Technology, to bridge the gap between design and production. Students will be introduced to the principles of design and create artwork through various forms of media. Students will work with industry standard software in the Adobe Creative Cloud© to learn graphic design, photography, and digital video production skills, and use them to produce pieces of unique artwork. Students will then be able to translate digital designs to physical objects using CNC equipment in a variety of mediums. Successful completion of this course meets the NYS Education Department art requirement towards graduation.

**Introduction to Video Production**

Grade 9, 10, 11, 12

**HS1652**

Credit 1 Unit

Final Assessment: Project

This is a full year course that will serve as an introduction to the other broadcasting/video production courses offered at the high school. Students will start by studying the basics of video production like camera operation, shot framing & composition, and video editing techniques. Students will then move on to learning how to put those skills to practice by creating short films. Finally, students

will get an introduction to the Television Studio equipment that they will use in the advanced section of this class. The class will culminate in a final project.

**Video Production & Broadcasting**

Grade 9, 10, 11, 12

**HS11103**

Credit 1 Unit

Final Assessment: Project

Video Production & Broadcasting is a full year course that will serve as an introduction to the other broadcasting/video production courses offered at the high school. Students will study a variety of topics within the video production field, including live studio production, field production and basic video editing skills. Students will practice these skills through creating short documentaries and promotional videos and combining them into a studio show. The course will culminate in a final project.

**CHS Advanced Video Editing, Animation & Visual Effects**

Grade 11, 12

**HS5256**

Credit 1 Unit

Final Assessment: Project

*Prerequisite: Grade of at least 80% in Introduction to Video Production*

Advanced Video Editing, Animation & Visual Effects is a year-long course that builds on the basic editing skills that students learned in Video Production & Broadcasting. In this course, students will learn more advanced editing techniques inside Adobe Premiere Pro, preparing for a certification exam in the software. Additionally, students will explore animation and creating visual effects in Adobe After Effects. Students will produce special effects videos and motion graphics (animations) completely from scratch. Eligible students will complete an application and submit payment and Certificate of Residency to SUNY Adirondack. Upon successful completion of the course with a C or better students will receive 3 credits from SUNY Adirondack competition.

## Computer Science

### Introduction to Robotics

Grade 9, 10

Final Assessment: Portfolio

**HS1679**

Credit 1/2 Unit

Robotics is a semester course that introduces students to robotics and computer programming. Students will have the opportunity to apply the engineering design process by collaborating as a class to design a robot to complete a challenge. The topics covered by the course include computer programming, mechanics, and electronics. Students will submit an engineering design notebook and compete as a class in the FIRST Tech Challenge competition.

### Introduction to Computer Science I

Grade 9,10,11,12

Final Assessment: School Exam

**HS1681**

Credit 1/2 Unit

This semester course is offered to introduce our students to the field of computer science. We will encourage collaboration and presentation using available Google tools as students develop and share portfolios. We will utilize Scalable Game Design and emphasize Computational Thinking. Students will work in multiple language environments, from the block language of Scratch to a high level language of Python, as a means to implement algorithms. This course also explores Logic Gates and other number systems such as binary and hexadecimal.

### Introduction to Computer Science II

Grades 9,10,11,12

Final Assessment: School Exam

*Prerequisite: Computer Science I*

**HS1905**

Credit 1/2 Unit

A semester continuation of Introduction to Computer Science I with a more in depth emphasis on computational thinking with Python and Java utilized as a vehicle for algorithm implementation. This class prepares students for later Computer Science classes such as AP Computer Science Principles, or introductory computer science in college. Based on time and enrollment, there is potential to explore Mobile Programming.

### AP Computer Science Principles

Grade 9, 10, 11, 12

Final Assessment: School Exam

*Prerequisite: Algebra*

**HS1906**

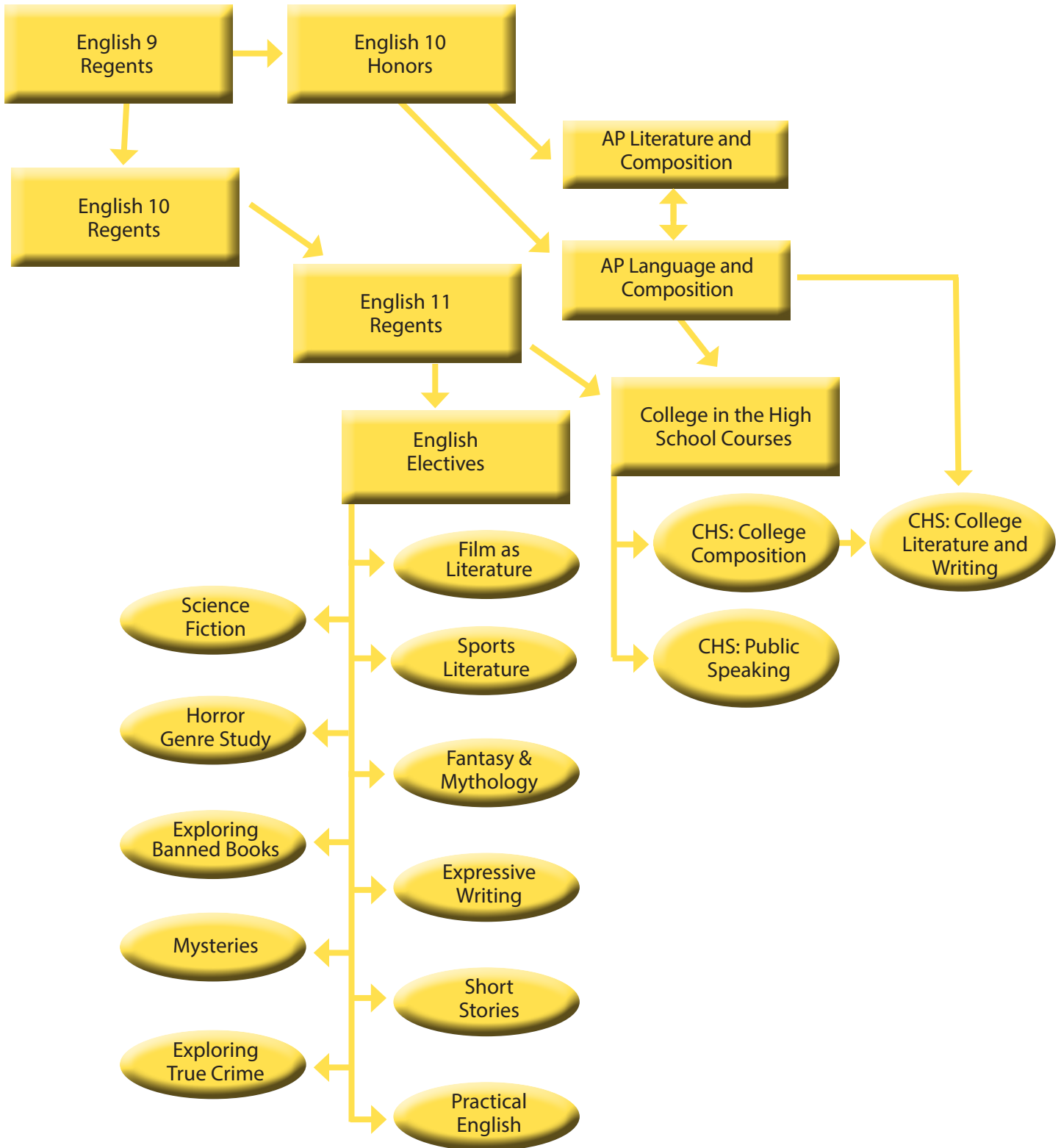
Credit 1 Unit

This course introduces students to the foundational concepts of Computer Science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem-solving and real-world applications, AP Computer Science Principles prepares students for college and career.



# English

## Recommended Pathways in English



# English

All students must take the NYS Regents Examination in English Language Arts. Four credits in English are also required for all students.

## 1 UNIT COURSES

### English 9 Regents

Grade 9

Final Assessment: School Exam

**HS1106**

Credit 1 Unit

English 9 Regents introduces students to various genres, and includes several classics. Students will complete papers for a variety of purposes and audiences. Vocabulary development and grammar skills will be stressed. English 9R is a required course for all 9th grade students. Students will be required to complete cumulative exams at the end of the 1st and 2nd semesters and maintain a writing portfolio as part of a final exam grade.

### Literacy 9

Grade 9

**HS2269**

Credit 1 Unit

Literacy 9 is a course that is designed to reinforce the basic components offered in ninth grade English class. The class focus is on reading comprehension, de-coding, fluency, vocabulary, basic writing skills and grammar. The goal is to have reading play a bigger part in students lives. Students will learn more about what reading is and why and how we read. Students will explore various strategies and skills to improve reading comprehension. This course will increase abilities in the areas of reading and written language.

### English 10 Regents

Grade 10

Final Assessment: School Exam

*Prerequisite: English 9 Regents*

**HS1101**

Credit 1 Unit

English 10 Regents concentrates on the mastery of a variety of composition forms, comprehension of literature, application of literary techniques, and extensive vocabulary development. Students will also complete an extensive historicalfiction research project. Students are expected to assume a high degree of personal responsibility for their own learning outside of class. A comprehensive exam will be given at the end of the 1st and 2nd semesters. Students are required to maintain a writing portfolio as part of a final exam grade.

### English 10 Honors

Grade 10

Final Assessment: School Exam

*Prerequisite: English 9 Regents, satisfactory performance on entrance requirement, teacher recommendation.*

**HS1102**

Credit 1 Unit

English 10 Honors is designed for highly motivated students who have a strong interest in reading, writing, and critical analysis. Students will read complex and thought-provoking texts, and develop the skills of close reading and textual analysis. They will also study the writing process and complete essays for a variety of purposes and audiences. Vocabulary development, presentations and discussions will be stressed. Students will be expected to work independently, as well as be responsible for and capable of taking ownership of their learning. Students will be required to complete a summer reading and writing assignment. Students will maintain a writing portfolio as part of their final exam grade. Students intending to enroll in AP English classes in their 11th and 12th grade years should take this class.

### English 11 Regents

Grade 11

Final Assessment: School Exam

*Prerequisite: English 10 Regents*

**HS1105**

Credit 1 Unit

English 11 Regents concentrates on comprehensive skill development and refinement. The literature program stresses analysis of works by American writers. Students will develop a mature writing style, an extensive vocabulary, and independent study skills. Students will also read non-literary texts and gain experience with the rhetorical mode of argumentation and persuasion. Students will spend considerable time at the end of the second semester reviewing for the NYS Regents Examination in English Language Arts.

**AP English Literature and Composition HS1103**

Grade 11, 12

Credit 1 Unit

Final Assessment: School Exam

*Recommended Achievement Levels : 90 or better for English course work and final exam in the prior year, teacher recommendation.*

AP English Literature and Composition is for the student who wants to dive deeper into literature and poetry. The course engages students in careful reading and critical analysis of imaginative literature (novels, short stories, and poetry). Through the close reading of texts, students deepen their understanding of the ways writers use language to provide both meaning and pleasure for their readers. As they read, students consider a work's structure, style, and themes, as well as smaller-scale elements such as the use of figurative language, imagery, symbolism, and tone. Reading for this course is deliberate and thorough, requiring time to understand a work's complexity, to absorb its richness of meaning, and to analyze how the meaning is embodied in literary form. Writing for the course will focus on critical analysis of literature. In addition to preparing for the AP exam in May, students will build their skills toward a reflective portfolio. The portfolio will count as their final exam grade for the course. (11th grade students will also take the NYS Regents Examination in English Language Arts.)

**AP English Language and Composition HS1104**

Grade 11, 12

Credit 1 Unit

Final Assessment: School Exam

*Recommended Achievement Levels : 90 or better for English course work and final exam in the prior year, teacher recommendation.*

AP English Language and Composition course is designed to prepare students for the rigors of college reading and writing. Students will read literary and non-literary texts and hone their critical and analytical skills. Students will examine how language is employed for specific purposes within specific contexts to become informed consumers of information. Students will also study the writing process and gain experience with the various rhetorical modes: narration, description, exposition, and argumentation/persuasion. Additional course requirements include extensive outside reading, writing, and research. The course is designed for highly motivated students who have a strong interest in reading, writing, and critical analysis. In addition to preparing for the AP exam in May, students will build their skills toward a literary research paper and a reflective portfolio. The portfolio will count as their final exam grade for the course. (11th grade students will also take the NYS Regents Examination in English Language Arts.)

**1/2 UNIT COURSES****CHS College Composition  
(College # ENG 123)****HS1126**

Grade 12

Credit 1/2 Unit

Final Assessment: School Exam

*Prerequisite: English 11 Regents or AP English and a Score of 75 or Better on the English Regents Exam*

CHS College Composition is a semester course that is designed to prepare seniors for the types of writing they will encounter in 2 or 4 year colleges. Students will study the writing process and participate in a writing workshop that includes conferencing, revising and editing. Writing assignments will allow students to gain experience with the various rhetorical modes: narration, description, exposition, and argumentation/persuasion. Students will also read model essays written by students and professional writers. Students who plan on enrolling in a 2 or 4 year college should take this course. Students have the option to enroll in the SCCC College in the High School Program (CHS) with Schenectady Community College (SCCC) and students must complete an SCCC application in the beginning of the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits are accepted at most institutions of higher learning.

**CHS College Literature and Writing  
(College # ENG 124)****HS1120**

Grade 12

Credit 1/2 Unit

Final Assessment: School Exam

*Prerequisite: Successful completion of CHS College Composition or AP English Language and Composition with a grade of 75 or higher*

CHS College Literature and Writing is a semester course that builds upon the writing techniques introduced in College Composition. In addition, students are encouraged to use writing to explore the ways in which literature functions as an art form. Students will survey various writers and genres to understand and explore the ways that these artists use literary forms of expression and techniques. Students will also complete a critical research project. A comprehensive exam is administered at the end of the course. Students have the option to enroll in the SCCC College in the High School Program (CHS) with Schenectady Community College (SCCC) and students must complete an SCCC application in the beginning of the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits are accepted at most institutions of higher learning.

**CHS Public Speaking  
(College # COM 105)**

Grade 12

Final Assessment: School Exam

*Prerequisite: English 11 or AP English***HS1123**

Credit 1/2 Unit

CHS Public Speaking is a college-level semester course that is designed to help students prepare and deliver powerful speeches that leave a lasting impression. Emphasis is on ethical and rhetorical reasoning, research, preparation, delivery, and evaluation of informative, persuasive, and special occasion public speaking. Students will explore the specific verbal and nonverbal public speaking techniques that master speakers use to create strong impressions, persuade, and inspire their audiences to act. The course employs a traditional text and other readings, as well as model speeches to guide students through topic selection, organization, language, and delivery. Working independently and with peer groups, students who wish to improve their speaking skills will be actively involved in every step of the process of public speaking preparation and execution. Much of class time will be spent preparing formal outlines in preparation for speech presentations. Assessments include traditional written content-based quizzes, formal speeches (including, but not limited to informative, persuasive, and demonstration), brief skill-building speeches, speech analyses, and both teacher and peer evaluations. Consistent attendance and regular presentations are necessary for success in this course. Students have the option to enroll in the SCCC College in the High School Program (CHS) with Schenectady Community College (SCCC) and students must complete an SCCC application in the beginning of the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits are accepted at most institutions of higher learning.

**Exploring Banned Books**

Grade 12

Final Assessment: Final Project

**HS1113**

Credit 1/2 Unit

Banned Books is a semester course focused on the landscape of book bans in the United States. This course will provide students the opportunity to review the plot, characters, setting, narrative structure and theme of literary classics that were banned in the 1960s-1980s and contemporary works as well as some short stories and poems. Students will also investigate the implication of the First Amendment, the reasons for banning books, and who should decide what literature is offensive. Emphasis will be placed on reading and class discussion.

**Exploring True Crime**

Grade 12

Final Assessment: Final Project

**HS1114**

Credit 1/2 Unit

True Crime is a semester course addressing the following questions: is justice always served, what drives people to do terrible things and why are people so obsessed with True Crime? This course will focus on providing students the opportunity to delve into the past while developing their research skills. Students will read works as a class and will be expected to read independently. Emphasis will be placed on reading and class discussion. Students will be evaluated through quizzes, tests, written assignments and projects.

**Expressive Writing**

Grade 11,12

Final Assessment: Final Project

**HS1108**

Credit 1/2 Unit

Expressive Writing is a semester course that is designed to encourage self-expression through various forms of writing. Students will study well-written examples of journals, creative essays, poetry and fiction. Writing process, with an emphasis on revision, will be studied. Students will workshop their writing and be held accountable for the feedback they provide others. Ultimately, students will create a portfolio of their work for the class. The class should be taken by those students interested in the art of writing.

**Fantasy & Mythology in Literature**

Grade 11, 12

Final Assessment: Final Project

**HS1119**

Credit 1/2 Unit

Fantasy and Mythology in Literature is a semester course that is designed to examine classical and modern myths and fantasy literature. Students will learn to identify the themes, archetypes, and patterns within this unique and interesting genre. Emphasis will be placed on reading, writing, and class discussion. Students who are interested in this genre and enjoy reading should take this class. Students will complete several research projects and will read several novels.

**Film as Literature**

Grade 12

Final Assessment: Final Project

**HS1111**

Credit 1/2 Unit

This half-year elective English class explores and analyzes films as literature. Students will study the elements that quality films use to tell stories in powerful, effective ways. A wide variety of films from various genres and time periods will be used. Students will write narrative, analytical, persuasive, and expository pieces in response to the films.

**Horror Genre Study**

Grade 12

Final Assessment: Final Project

**HS1112**

Credit 1/2 Unit

Why are people fascinated with what they find terrifying? Why are we drawn to eerie settings and chilling characters? And how do these strange interests offer insight into our culture? In Horror Fiction, these are some of the questions that will be examined and discussed. Students will study novels, short stories, essays and films that represent the wide scope of this genre. In considering a range of material from classic and Gothic literature to contemporary selections, we will contemplate the boundaries, themes, movements, and conventions which comprise this brand of popular fiction. Further, this course will delve into the connections between literary horror and psychological, historical, and cultural fears, as well the genre's potent function as social commentary.

**Mysteries**

Grade 11, 12

Final Assessment: Final Project

**HS1116**

Credit 1/2 Unit

Mysteries is a semester course that is designed to give students the opportunity to explore and enjoy the mystery genre. Students will read and discuss the works and techniques of famous mystery writers. Also, students will learn about the plot development and themes commonly used in mystery writing. Students will write their own mystery using the techniques perfected by professional mystery writers. Students who enjoy reading and have a strong interest in the mystery genre should take this course. The students in this course will be assessed using various methods including quizzes and tests, class discussions, journaling, writing assignments, and group and independent projects. A cumulative comprehensive exam will be administered at the end of the semester.

**Practical English**

Grade 12

Final Assessment: Final Project

**HS1118**

Credit 1/2 Unit

Practical English is a half year course designed to fulfill half of the English credit requirement needed to graduate. Students will be reading and writing short pieces throughout, centered around some themes: media and bias, adulting, and what comes next (college/career.) Students will have the opportunity to work on their college applications, (if applicable) and the culminating grade is a research project on a career of your choice. The goal is to get students prepared for what comes next after school, whether it is college, career, military, or a trade

**Science Fiction**

Grade 11, 12

Final Assessment: Final Project

**HS1122**

Credit 1/2 Unit

Science Fiction is a semester course that is designed to survey the evolution of science fiction. Students will read multiple novels and short stories covering such topics as genetics, space exploration, artificial intelligence, alien life, and time travel. Students will be expected to demonstrate a critical analysis of the works studied through discussion and writing. Emphasis will be placed on how science fiction facilitates social criticism. This class is designed for students who are genuinely interested in the themes of science fiction. The class will culminate in an assessment that requires students demonstrate an in-depth understanding of the genre. (This course is not approved by NCAA.)

**Short Stories**

Grade 11, 12

Final Assessment: Final Project and Final Exam

**HS1115**

Credit 1/2 Unit

Short Stories is a semester course that is designed to introduce the genre of short fiction and develop an understanding of the basic elements of the craft. Students will read a variety of short stories surveying different writing styles and literary techniques. In addition, the class will pay close attention to the meaning(s) of each story via class discussion and written responses. Students will be required to keep a reading response journal for the course. Students who enjoy reading short works of fiction should enroll in this course. A comprehensive final exam will be given at the end of the course.

**Sports Literature**

Grade 11, 12

Final Assessment: Final Project

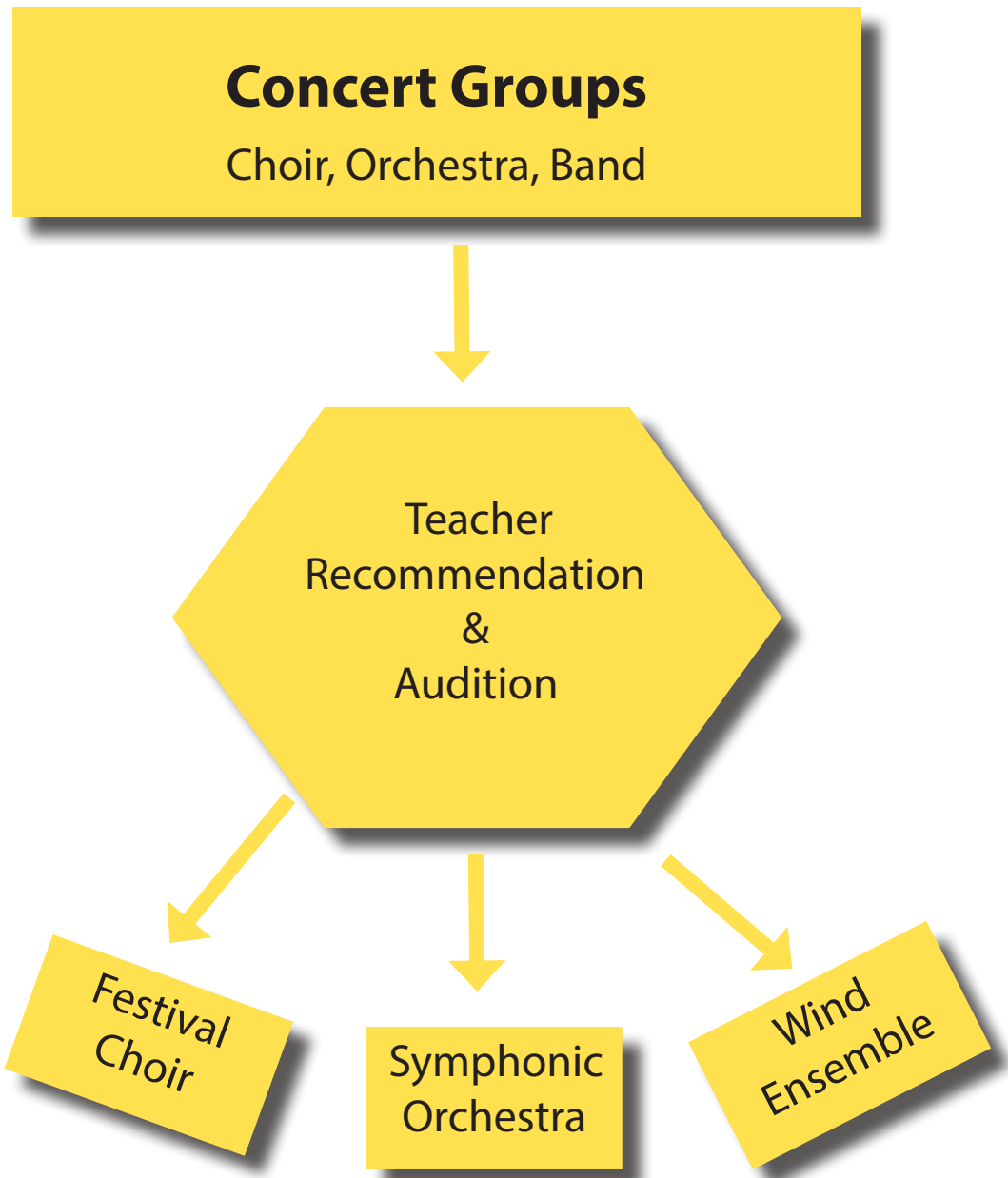
**HS1117**

Credit 1/2 Unit

Sports Literature is a semester course that examines the functions and purposes of sports in our society. Students will explore the pros and cons of identifying oneself primarily as an athlete. An examination of how a sports team can influence and reflect the history, politics, values, stereotypes, and expectations of a society will be explored. Students will read a variety of fiction and non-fiction, news and magazine articles, and short stories. Required writing assignments include journals and longer analytical responses to the readings. Students who enjoy reading and are interested in sports and/or journalism should take this course. Tests and quizzes on the readings are given regularly, and students will be graded on their papers and journal writing as well.

# Fine Arts and Performing Arts – Music

## Performing Ensemble Pathway



# Fine Arts and Performing Arts – Music

Satisfactory completion of one credit in Musical Performance or Music in Our Lives may be used to meet the one credit of Art or Music required of all students to meet graduation requirements as prescribed by the NYS Education Department. Students may substitute a 5-unit sequence in music which must include Music In Our Lives and Music Fundamentals for the Foreign Language requirement of the Regents Diploma with Advanced Designation.

Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits are accepted at most institutions of higher learning.

## Music Fundamentals II

**HS1536**

Grade 11, 12

Credit 1 Unit

Final Assessment: School Exam, Performance Journal

*Prerequisite: Music Fundamentals I*

Music Fundamentals II is designed to increase understanding of music in the western and world cultures. Students who are looking to further their knowledge of music and/or study music at the college level will benefit from this course of study. Students will be involved in studying music theory, composition, and music history, as well as preparing for solo and group performances. Students will be responsible for projects based on composition, comparison of musical pieces from the western culture and those of other cultures such as Eastern/Asian and African/South American. Discussions of how music affects our world, and how our world is affected by music will be a part of this class. All students will be expected to keep a running log of their experiences in music, including daily involvement and performances. Students in this course will begin to prepare either a Group Performance or Solo Performance, and Creating, which will involve composition. It is suggested that students in the solo performance component have private instruction on voice or their chosen instrument. Students in the group performance component of this class must be enrolled in a school performance group. Assessments for this course will be based on the projects assigned, and a local final exam.

## Music In Our Lives

**HS1526**

Grade 9, 10, 11, 12

Credit 1 Unit

Final Assessment: School Exam

Music In Our Lives is a high school level general music course. It is designed for students who have a strong interest in many aspects of music but may not have music reading skills. It is taught with a hands-on approach in which students learn by doing, and stresses the development of listening skills. The primary objectives are learning to appreciate multiple genres of music; listen intelligently to music performed by a variety of musical ensembles in both western and non-western styles; to perform music at a recreational level on a social, electronic, or orchestral instrument or voice; to compose, organize, or arrange music in some medium; to use basic library and computer resources for research; and to plan, develop, and present an in-depth special interest project.

## CHS Music Fundamentals I

**HS1553**
**(College # MUS 147)**

Grade 9, 10, 11, 12

Credit 1 Unit

Final Assessment: School Exam, Performance Journal

*Prerequisite: Musical Training, Experience in Music Performance*

CHS Music Fundamentals has the learning of Music Theory as the foundation, and is designed to increase understanding of music in the western and world cultures. Students who are looking to further their knowledge of music and/or study music at the college level will benefit from this course of study. Students will be involved in studying music theory, composition, and music history. Students have the option to enroll in the SCCC College in the High School Program (CHS) with Schenectady Community College (SCCC) and students must complete an SCCC application in the beginning of the course and return it promptly to the teacher.



**Concert Band**

Final Assessment: School Exam and Portfolio Assessment

**HS1509**

Credit 1 Unit

Concert Band is a performance based course that is designed for students who have ongoing instruction on traditional Band instruments. These instruments are Flute, Oboe, Clarinet, Bassoon, Saxophone, Trumpet, French Horn, Trombone, Baritone Tuba and Percussion. Students will learn music history, theory and practice through performance. The student must have three years of prior instruction on the instrument as well as the ability to read music notation. Participation in concerts and other performances throughout the year is required. Students are expected to attend one pull-out lesson a week, or take private lessons. Additional credit may be earned with participation in Jazz Band and Chorus, which will meet once a week out of the Band rehearsal. Students will be graded on performance and portfolio assessment.

**Wind Ensemble**

Final Assessment: School Exam and Portfolio Assessment

**HS1525**

Credit 1 Unit

*Prerequisite: One year of Concert Band and teacher recommendation*

Wind Ensemble is a audition based performance based course that is designed for students who have had ongoing instruction on traditional Band instruments and wish to challenge themselves further with NYSSMA Level V and VI literature. Students will learn music history, theory and practice through performance. The student must have three years of prior instruction on the instrument as well as the ability to read music notation. Participation in concerts and other performances throughout the year is required. Students are expected to attend one pull-out lesson a week, or take private lessons. Additional credit may be earned with participation in Jazz Band and Choir, which will meet once a week out of the Wind Ensemble rehearsal.

**HS Concert Choir**

Final Assessment: Performance, Sight Singing, and Written Evaluation

**HS1535**

Credit 1 Unit

Concert Choir is a performance based course that is designed for students that want to sing in an ensemble. Basic sight reading, vocal technique, and basic music theory skills are studied. Students are evaluated on sight-reading and part-singing every quarter. Participation in concerts and other performances throughout the year is required. Students are expected to attend one pullout lab a week, or take private lessons.

**Festival Choir**

Final Assessment: Multiple Performances,

**HS1510**

Credit 1 Unit

Sight Singing, and Written Evaluation

*Prerequisite: One year of Concert Choir, ability to match pitch, and strong understanding of vocal technique and breath support, teacher recommendation, and audition*

Festival Choir is an audition based performance course that is designed for students who have interest in ongoing instruction in choral singing and want to sing in a NYSSMA Level IV-VI ensemble. Strong sight reading skills, vocal technique, and strong music theory skills are required. Participation in concerts and other performances throughout the year is required. Students are expected to attend one pull-out labe a week, or take private lessons. Students are evaluated on sight-reading and part-singing skills for membership in Choir. Students are evaluated on sight-reading and singing every quarter. Participating in concerts, extra-curricular performance opportunities, and NYSSMA Majors Festival are required for the course.

**Concert Orchestra**

Final Assessment: School Exam and Portfolio Assessment

**HS1521**

Credit 1 Unit

Concert Orchestra is a performance based course that is designed for students who have had ongoing instruction on traditional orchestra instruments, including violin, viola, cello, and bass. Students will learn music history, theory and practice through performance. The student must have three years of prior instruction on the instrument as well as the ability to read music notation. Participation in concerts and other performances throughout the year is required. Students are expected to attend one pull-out lesson a week, or take private lessons. Additional credit may be earned with participation in Jazz Band and Chorus, which will meet once a week out of the Concert Orchestra rehearsal. Students will be graded on performance and portfolio assessment.



### Symphonic Orchestra

Final Assessment: School Exam and Portfolio Assessment

*Prerequisite: One year of Concert Orchestra and teacher recommendation*

### HS1551

Credit 1 Unit

Symphonic Orchestra is an audition based performance course that is designed for students who have had ongoing instruction on traditional orchestra instruments and wish to challenge themselves further with NYSSMA Level IV and V literature. Students will learn music history, theory and practice through performance. The student must have three years of prior instruction on the instrument as well as the ability to read music notation. Participation in concerts and other performances throughout the year is required. Students are expected to attend one pull-out lesson a week, or take private lessons. Additional credit may be earned with participation in Jazz Band and Chorus, which will meet once a week out of the Symphonic Orchestra rehearsal. Students will be graded on performance and portfolio assessment.

### Applied Music

Grade 9, 10, 11, 12  
(Pass/Fail)

Final Assessment Performance Assessment based on materials studied throughout the year  
*Prerequisite: One full year of private study on the instrument/voice and approval of the music coordinator*

### HS1502

Credit 1/2 Unit

Applied Music is for students who study an instrument or voice. Students in Applied Music do not have to participate in a school performing group. Private study must consist of a minimum lesson of 30 minutes outside the school day, 36 weeks of the school year. Students will provide a signed form for each marking period showing materials that are being studied. These forms will be provided to the student the first week of the school year by the music coordinator.

### History of Rock

Final Assessment: Composition and Performance

### HS1527

Credit 1/2 Unit

Discover the History of Rock and Roll from the 1950's and beyond! The class will take students through the various genres of rock music and historical events that led to each style. Students will study music through performance and composition. Students will be expected to perform on guitar, keyboard, bass and drum kit to play various songs from each time period. Students will study and perform the music of rock legends.



# Fine Arts and Performing Arts - Theater

Successful completion of Introduction to Theater may be used to meet the one credit in Art or Music required of all students to meet the graduation requirements by the NYS Education Department. Students completing a 5-unit sequence in Fine Arts may use Introduction to Theatre as part of that sequence. Students may substitute a 5-unit sequence in Fine Arts for the Foreign Language requirement of a Regents Diploma with Advanced Designation.

## Introduction to Theater

Grade 9, 10, 11, 12

Final Assessment: Performance Based Final Project

**HS1524**

Credit 1 Unit

Introduction to Theater is a full year introductory course that will include study and practical application of performance skills, character development, scenic, costume, and lighting design, directing, stage managing, and acting. Reading, writing, and performing are major components of the Introduction to Theater class. Dramatic criticism and playwriting will also play a major role in this course.



## Introduction to Acting

Grade 11, 12

Final Assessment: Performance Based Final Project  
*Prerequisite: Introduction To Theatre*

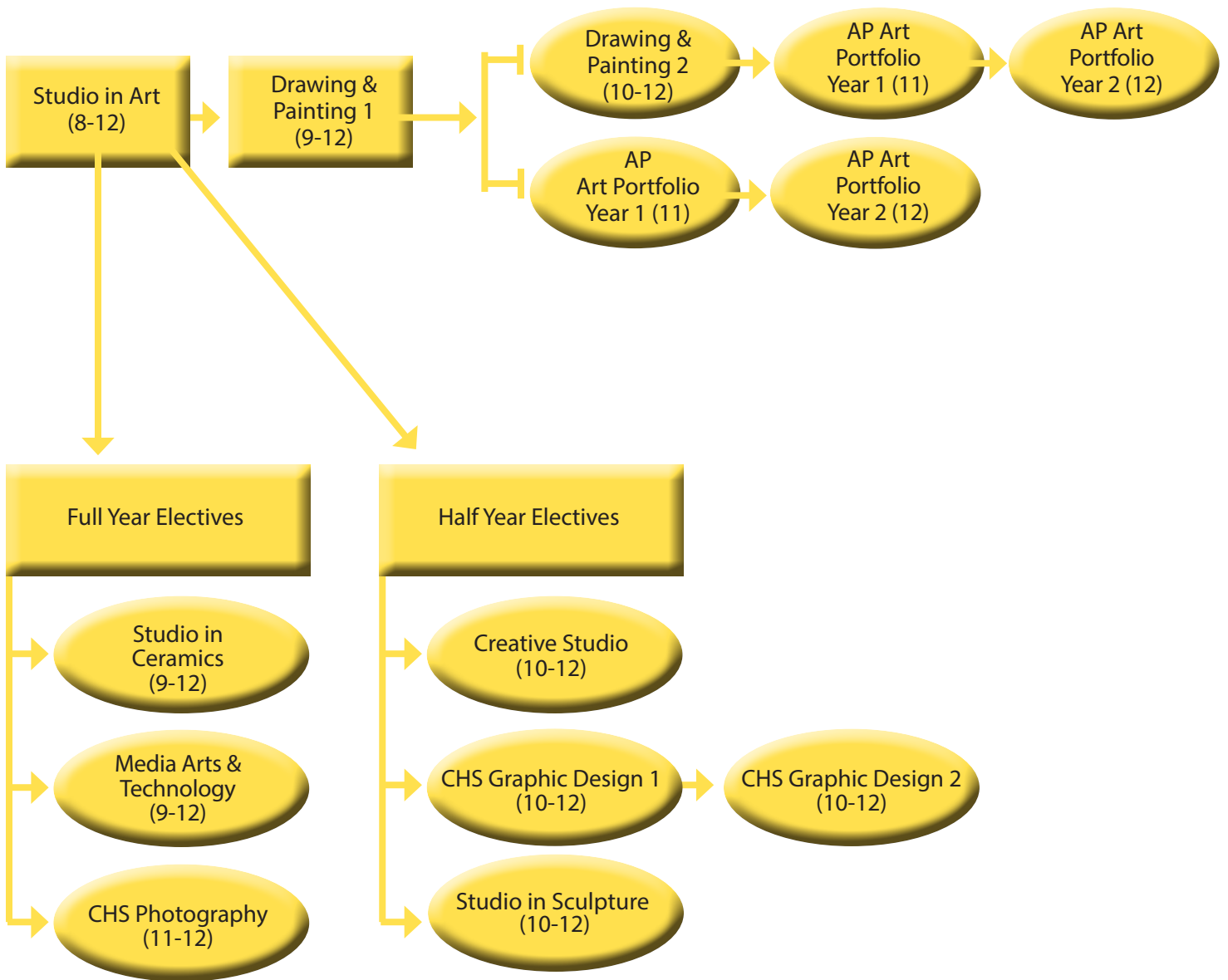
**HS1501**

Credit 1 Unit

Introduction to Acting is a full year course that will expand upon the materials and skills developed in Introduction to Theater, exploring the many methods of acting. Students will refine communication skills through verbal language as well as body language. History of acting, acting methodologies, and different types of literature are included in this performance-based class. Reading, writing and performing are major components of the Introduction to Acting class.

# Fine Arts and Performing Arts – Visual Arts

Recommended Pathways in Art (Grade Requirements in Parentheses)



# Fine Arts and Performing Arts – Visual Arts

Satisfactory completion of one credit in Studio in Art may be used to meet the one credit in Art or Music required of all students to meet graduation requirements as prescribed by the NYS Education Department. Students may substitute a 5-unit sequence in Art for the Foreign Language requirement of a Regents Diploma with Advanced Designation.

## Studio in Art

Grade 9, 10, 11, 12

Final Assessment: School Exam

**HS1500**

Credit 1 Unit

Studio in Art is an introductory course that will allow students to explore and gain knowledge in a variety of different media throughout the school year. Basic principles, concepts, skills, and techniques will be introduced in preparation for upcoming projects. Drawing, painting, printmaking, ceramics, sculpture, and paper making are some of the topics that will be covered in the full year course. This course is **REQUIRED** for all students for a sequence in Art, and is a prerequisite course to any other art course offered. In addition, it is also recommended for students who wish to begin their education with a general art experience.

## CHS Graphic Design 1 (College # Art 222)

Grade 10, 11, 12

Final Assessment: School Exam

*Prerequisite: Studio in Art or Media Arts and Technology*

**HS1558**

Credit 1/2 Unit

Graphic Design is a semester two-dimensional media course emphasizing the design elements of visual communication. Students will explore the fundamentals of layout, typography, design, photography and illustration. The project design course will expand students' media and design literacy. Students will create professional computer generated graphic designs using industry standard software, Adobe Illustrator and Photoshop. Eligible students will complete an application and submit payment and Certificate of Residency to SUNY Adirondack. Upon successful completion of the course with a C or better students will receive 3 credits from SUNY Adirondack. Any 10th grade student who wishes to receive college credit for this class must carry a minimum GPA of 85 or above in previous high school art classes.

## CHS Graphic Design 2 (College # Art 252)

Grade 10, 11, 12

Final Assessment: Successful completion of culminating project

*Prerequisite: Graphic Design 1*

**HS1542**

Credit 1/2 Unit

CHS Graphic Design 2 explores the creative possibilities of multiple software applications currently used in the graphic arts field. Class instruction, demonstrations, and lab exercises prepare students to create a series of electronic images and digital illustrations. Students are encouraged to explore topics and conceptual themes related to their career interest. Originality is fostered by creating work based on original imagery and photographs. Instruction will include, but is not limited to, photo-retouching, digital painting, and multiple drawing techniques. Eligible students will complete an application and submit payment and Certificate of Residency to SUNY Adirondack. Upon successful completion of the course with a C or better students will receive 3 credits from SUNY Adirondack. Any 10th grade student who wishes to receive college credit for this class must carry a minimum GPA of 85 or above in previous high school art classes.

## AP Art Portfolio

Grade 11, 12

Final Assessment: Portfolio

*Prerequisites: Studio in Art, 90 % or above in Drawing and Painting I, teacher recommendation*

**HS1504**

Credit 1 Unit

AP Art Portfolio is a self driven, high paced course which can be taken junior and/or senior year. Students may take the course their junior and senior years and submit a portfolio (for college credit) each year.\* Students will create original 2-dimensional artwork using advanced skills and techniques based on their personal interests. Students are expected to plan, research, experiment and revise their work to show synthesis of ideas. AP Art Portfolio is designed for students who are seriously interested in pursuing a higher level of enrichment in the arts and will be expected to spend significant time working outside of the classroom. \*In order to receive college credit twice, a student must submit to two different portfolios, 2D design and drawing.

**Drawing and Painting I**

Grade 9, 10, 11, 12

Final Assessment: School Exam/Project

*Prerequisite: Studio in Art*

Drawing and Painting I is a foundational two-dimensional course in drawing and painting. Students will explore a variety of materials and techniques, including pencil, charcoal, pastels, pen and ink, water colors, and acrylics. Students will be encouraged to think with imagination and originality. Emphasis will be placed on acquiring and improving observational drawing and painting skills. Students should maintain a portfolio for their work to take with them if they progress to Drawing and Painting II.

**CHS Drawing and Painting II****(College # ART 128)**

Grade 11, 12

Final Assessment: Project

*Prerequisite: Studio in Art, Drawing and Painting I, or art teacher recommendation.*

CHS Drawing and Painting II is an advanced 2-dimensional course and is a continuation of Drawing and Painting I. Students will explore a variety of materials and techniques with an in-depth focus on the elements of art and principles of design. Emphasis will be placed on further development of observational drawing and painting skills in addition to expanding those skills into original works of art. Students should maintain a portfolio of their work should they progress to AP Art Portfolio. Students have the option to enroll in the SCCC College in the High School Program (CHS) with Schenectady Community College (SCCC) and students must complete an SCCC application in the beginning of the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits are accepted at most institutions of higher learning.

**HS1514**

Credit 1 Unit

**Studio in Ceramics**

Grade 9,10,11,12

Final Assessment: School Exam/Project

*Prerequisite: Studio in Art*

Studio in Ceramics is an elective course which provides an opportunity to explore hand-building, wheel throwing, sculpture, and glazing techniques. Skills, concepts, and elements related to clay will be introduced in preparation for all projects and assessments. Students will incorporate the relationship between form and function into sculptural and functional applications.

**HS1508**

Credit 1 Unit

**CHS Photography****(College # ART 104)**

Grade 11, 12

Final Assessment: Project

*Prerequisite: Studio In Art***HS1552**

Credit 1 Unit

CHS Photography is an introductory course designed to give students proficiency in the creative and technical possibilities of photography. Students learn the fundamentals of camera operation and imaging software to produce effective photographs. The course covers the elements of composition, historical aspects of photography, and photography as a means of personal expression and communication. Digital single-lens reflex cameras are provided for student use in class. Students will also work with 35 mm cameras, film development, enlarging and printing in the darkroom. Film and photographic paper will be provided. Students that are interested in receiving college credit from SUNY Adirondack must complete the course with a C or better, fill out an application, certificate of residency form and submit to the Guidance Department. SUNY Adirondack will then bill students directly in order to receive 3 credits.



**Media Arts & Technology**

Grade 9, 10, 11, 12

Final Assessment: Project

**HS1519**

Credit 1 Unit

This course offers a unique co-taught curriculum, linking Art and Technology, to bridge the gap between design and production. Students will be introduced to the principles of design and create artwork through various forms of media. Students will work with industry standard software in the Adobe Creative Cloud© to learn graphic design, photography, and digital video production skills and use them to produce pieces of unique artwork. Students will then be able to translate digital designs to physical objects using CNC equipment in a variety of mediums. Successful completion of this course meets the NYS Education Departments art requirement towards graduation.

**Studio in Sculpture**

Grade 10, 11, 12

Final Assessment: Final Project

*Prerequisite : Studio in Art***HS1523**

Credit 1/2 Unit

Studio in Sculpture is a course that will allow students to explore and gain knowledge in a variety of sculptural areas throughout the semester. An emphasis on form and function will be incorporated into both abstract and utilitarian sculptural pieces. Basic principles, concepts, skills, and techniques will be introduced in preparation for upcoming projects. Paper, clay, foam, wire, plaster, and other various mixed media are some of the materials that will be worked with in the half year course.

**Creative Studio**

Grade 10, 11, 12

Final Assessment: Project Based

*Prerequisite: Studio in Art***HS1540**

Credit ½ Unit

Creative Studio is a semester course for the art student who wants to explore new ways to work with paper, paint, recycled, or found objects. Students can look forward to inventing and experimenting with various materials using a variety of creative techniques for a highly personal artistic experience. Students will work on projects that focus on creativity, innovation, responsibility, independence, and self-directed learning. Fun and challenging projects will require concept-driven skills to make highly unique and personal two-dimensional and three-dimensional works of art. The learning artist will plan, implement, and evaluate their experiences and creative focus.



# Health

All students must earn  $\frac{1}{2}$  credit in Health Education to meet the New York State requirement for graduation.

## Health Education

Grade 10, 11, 12

Final Assessment: Project

**HS1352**

Credit 1/2 Unit

The students will learn the knowledge necessary to be physically, mentally, and socially healthy, as well as the skills needed to create and maintain a healthy lifestyle. Students will take part in discussions and projects that encourage them to reflect on their own knowledge, attitudes, and behaviors.

## Health Education Online

Grade 10, 11, 12

Final Assessment: Project

**HS1388**

Credit 1/2 Unit

This rigorous online option is ideal for highly organized, conscientious, independent learners. Students will learn the knowledge necessary to be physically, mentally, and socially healthy, as well as the skills needed to create and maintain a healthy lifestyle. Students are expected to interact with one another utilizing online forums similar to the discussions held in the classroom. The course is delivered by means of Schoology, an online learning platform. Only students who are unable to fit Health Education in the typical classroom setting into their schedule will be considered.



# Mathematics

All students must earn three credits in Mathematics to meet requirements for graduation with a Regents Diploma or Local Diploma. In addition, all students must take a New York State Regents exam in Math for a Regents Diploma and three Regents exams for a Regents Diploma with Advanced Designation.

## Algebra A

Grade 9

Final Assessment: School Exam

**HS1725**

Credit 1 Unit

This course is the first year of a two-year Common Core Algebra curriculum. The main topics covered are variables, equations, operations with integers, formulas, graphing, linear and exponential functions and problem-solving skills. This course is the beginning preparation for the NYS Common Core exam in Algebra. The course will follow the first half of the Algebra Common Core Learning Standards adopted by New York State. A local final examination is taken at the end of the course. The TI-84 Plus CE graphing calculator will be used.

## Algebra B

Grade 10 (Available 2024-2025)

Prerequisite: Algebra A

**HS1727**

Credit 1 Unit

This course will cover the second year of a two year Common Core Algebra curriculum. It focuses on the study of elementary algebra, linear and quadratic function. It will follow the second half of the Algebra Common Core Learning Standards adopted by New York State. The course ends with a local exam and the NYS Common Core Regents exam in Algebra. The TI-84 Plus CE graphing calculator will be used in this course.

## Algebra 1

Grade 9, 10, 11, 12

Final Assessment: Regents in Algebra

*Recommended: Pass Math 8 with an average of 70% or higher*

**HS1215**

Credit 1 Unit

Algebra is a full year course that is the study of functions specifically addressing the relationships between quantities and reasoning with equations and graphs. Students will study linear, quadratic, and exponential functions, and descriptive statistics. The final for this course is the Regents in Algebra 1. A TI-84 graphing calculator is required for this course.

## Algebra 1 Learning Lab

Grade 9, 10, 11, 12

*\* This is a non-credit bearing course*

*Prerequisite: Enrolled in Algebra I*

**HS1215L**

Algebra 1 Learning Lab is an opportunity for students to obtain additional help outside of the classroom to assist them in skill development, understanding of concepts and preparation for the Algebra I Common Core Regents Exam.

## Applied Geometry

Grade 10, 11, 12

Final Assessment: School Exam

*Prerequisite: Algebra*

**HS1211**

Credit 1 Unit

Applied Geometry is a full year course following the Geometry curriculum at a slower pace. Students will explore triangle congruence, similarity, and properties of lines, triangles, quadrilaterals, circles, surface area, and volume through real world problems. Students will also be introduced to the writing of Euclidean and coordinate proofs based on logic and properties of geometric figures. This course concludes with a local final. A TI-84 graphing calculator is required for this course. (This course is not approved by NCAA.)

## Geometry Lab

Grade 9, 10, 11

Final Assessment: Regents in Geometry

*Prerequisite: Pass Algebra with an average of 75% or higher*

**HS1212**

Credit 1 Unit

Geometry Lab is a full year course covering the same Geometry curriculum with additional time built into the schedule for practice and activities that will strengthen skills. This course will conclude with the Regents in Geometry. A TI-84 graphing calculator and compass are required for this course.

## Geometry

Grade 9, 10

Final Assessment: Regents in Geometry

*Prerequisite: Algebra 1 average of at least 75% and Algebra 1 Regents Exam score of at least 75%*

**HS1210**

Credit 1 Unit

Geometry is a full year course that offers an in depth and rigorous study of geometric relationships. Students will study the relationships between points, lines, angles, planar figures, and solids; as well as the overarching concepts of logic, congruency, and similarity; both on and off the coordinate plane. Other topics include transformations, constructions, and an introduction to trigonometry. This course concludes with the NYS Geometry Regents Exam. A TI-84 graphing calculator and compass are required for this course.

**Applications for Mathematics**

Grade 11, 12

Final Assessment: School Exam

*Prerequisite: Applied Geometry***HS1723**

Credit 1 Unit

Applications for Mathematics is a full year course for students who have been traditionally challenged by math concepts. Students will review basic arithmetic and algebraic fundamentals through a survey of topics in finite mathematics and corresponding applications, including percents, area, perimeter, volume, logic, matrices, modular arithmetic, probability, statistics, and financial models. It can be used as a third or fourth credit for those who have completed Algebra. This course will conclude with a school exam. (This course is not approved by NCAA.)

**CHS Intermediate Algebra****(College # MAT 110)**

Grade 9,10, 11, 12

Final Assessment: School Exam

*Prerequisite: Successful completion in Algebra 1 or Algebra B plus one course in Geometry***HS1728**

Credit 1 Unit

This course is a review of the principles of Algebra and introductory Trigonometry. Topics include operations with polynomials, first degree equations, special products, factoring, algebraic fractions, exponents, radicals, quadratic equations, right angle trigonometry, and graphing linear equations. This course concludes with a local college final.

**CHS Mathematical Topics****(College # MAT 145)**

Grade 11, 12

Final Assessment: School Exam

*Prerequisite: Geometry Or Applied Geometry***HS1726**

Credit 1 Unit

CHS Mathematical Topics is a full year course designed to acquaint students with various areas of mathematics. Students will be exposed to a variety of mathematical topics and their applications to the world around us. Topics covers voting and apportionment, problem solving, logic, Euler diagrams, the mathematics of graphs, Euclidean and non-Euclidean geometry, modular arithmetic, group theory, numeration systems, sets, and combinatorics. This course will conclude with a local exam. Students have the option to enroll in the SCCC College in the High School Program (CHS) with Schenectady Community College (SCCC). Students must register on-line with SCCC. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits are accepted at most institutions of higher learning.

**CHS College Algebra with Trigonometry  
(College # MAT 150)**

Grade 11, 12

Final Assessment: School Exam

*Prerequisite: Algebra and Geometry***HS1732**

Credit 1 Unit

CHS College Algebra with Trig, also known as MAT 150, includes functions, functional notation, linear and quadratic functions, graphs of basic functions and graphing techniques such as shifts and reflections, constant slope and average rate of change, solving systems of linear and nonlinear systems, and complex numbers. The course also covers solving quadratic equations using factoring, the square root property and the quadratic formula, exponential and logarithmic equations and functions, trigonometric functions, the graphs of sine, cosine and tangent functions, and a brief introduction to vectors. Students have the option to enroll in college in the high school (CHS) through Hudson Valley Community College (HVCC). Upon receiving a final grade of a C or better, registered students, will be awarded college credit.

**Algebra 2**

Grade 10, 11, 12

Final Assessment: Regents in Algebra 2

*Prerequisite: Regents Algebra and Geometry. It is strongly recommended students entering this course earned an overall average of 75% or better in both prerequisite courses.***HS1219**

Credit 1 Unit

Algebra 2 is the expanded study of functions, building upon the functions studied in Algebra. Students will study polynomial, rational, radical, logarithmic, and trigonometric functions, and will learn to draw inferences and conclusions from data (probability and statistics). Students will be expected to model real-life scenarios with mathematical functions, construct viable arguments, and recognize and utilize patterns in order to solve problems. This course will conclude with the Regents in Algebra 2 in June. A TI-84 graphing calculator is required for this course.

**CHS Pre-Calculus  
(College # MAT 167)****HS1208**

Grade 12

Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: Successful completion of Algebra 2, 75% or higher in the course, 75% or higher in the Regents Exam or successful completion of CHS College Algebra and Trigonometry 85% or higher in the course and a passing score on the Algebra 2 Regents.*

CHS Pre-Calculus is for students planning to continue in a mathematics or science related field after graduation from high school. Students will study topics including conics, theory of equations, functions, polar coordinates, matrices, graphical analysis, trigonometry and an introduction to differential calculus. CHS Pre-Calculus is intended for students who do not intend to enroll in AP Calculus AB/BC. The final exam for this course is a local exam. Students have the option to enroll in College in the High School Program (CHS) through Hudson Valley Community College (HVCC). Students must complete a (HVCC) application in the spring semester. Upon receiving a final grade of a C or better, registered students will be awarded college credit.

**CHS Pre-Calculus Honors  
(College # MAT 167)****HS1209**

Grade 11

Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: Must be a junior with successful completion of Algebra 2, and an 75% or higher on the Regents exam and in the Algebra 2 course.*

CHS Pre-Calculus is for students planning to continue in a mathematics or science related field after graduation from high school. Students will study topics including conics, theory of equations, functions, polar coordinates, matrices, graphical analysis, trigonometry and an introduction to differential calculus. This course includes additional calculus topics and prepares students for advancement into AP Calculus AB/BC. The final exam for this course is a local exam. Students have the option to enroll in College in the High School Program (CHS) through Hudson Valley Community College (HVCC). Students must complete a (HVCC) application in the spring semester. Upon receiving a final grade of a C or better, registered students will be awarded college credit.

**AP/UHS Calculus AB/BC  
(College # AMAT 112)****AB – HS1202****BC – HS1221**

Grade 12

Credit 1 Unit

Final Assessment: School Exam

*AB Prerequisite: CHS Pre-Calculus 11 (75% or higher) or IB Mathematics SL BC Prerequisite: Teacher Recommendation*

In AP Calculus the following topics are studied: analytical geometry, differential calculus of algebraic functions, geometrical and physical applications of integration, the calculus of elementary transcendental functions, and the application of transcendental functions. BC Calculus also covers topics in series and sequences, polar and parametric equations and additional integration techniques. Mandatory AP Examinations in Calculus AB and Calculus BC will be given in May at cost to individual students. Upon satisfactory completion of the AP examination, each student may receive college credit in Calculus as determined by the collegiate institution(s) accepting the student for admission. Eligible students will complete a UHS application and submit the tuition payment directly to SUNY Albany. The curriculum and grades are determined by the high school teacher. Upon receiving a final grade of "C" or better, students will be awarded 3 credits from SUNY Albany. Students will have both a local exam and an AP exam for this course.

**AP/UHS Statistics  
(College # AMAT 108)****HS1213**

Grade 11, 12

Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: Successful completion of Algebra 2 and a passing grade on the Regents in Algebra 2*

AP Statistics covers the syllabus of a college Elementary Statistics course and includes such topics as standard deviation, line regression, how to write a questionnaire, and how to interpret data. The mandatory AP examination for Statistics will be given in May at cost to individual students. Upon satisfactory completion of the AP examination each student may receive college credit in Statistics as determined by the collegiate institution(s) accepting the student for admission. Eligible students will complete a UHS application and submit the tuition payment directly to SUNY Albany. The curriculum and grades are determined by the high school teacher. Upon receiving a final grade of "C" or better, students will be awarded 3 credits from SUNY Albany. Students will have both a final local exam and an AP exam for this course.

**Introduction to Computer Science I**                      **HS1681**  
Grade 9, 10, 11, 12                                      Credit 1/2 Unit  
Final Assessment: School Exam

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This semester course is offered in an effort to introduce our students to the field of computer science. Emphasize Computational Thinking through the study of Python programming language. Students will explore topics including Turtle Graphics, console interaction, conditionals, looping, functions and parameters, strings, and datat structures. A main focus is on learning to break problems down into manageable pieces and solving them one by one.

**Introduction to Computer Science II**                      **HS1905**  
Grade 9, 10, 11, 12                                      Credit 1/2 Unit  
Final Assessment: School Exam

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A semester continuation of Introduction to Computer Science I with a more in depth emphasis on computational thinking using the programming language of Java. Students will continue with topics from the first semester course, but will focus on algorithm implementation, methods, and the concept of object oriented programming. This class prepares students for introductory computer science in college. There is potential to explore additional topics and languages.

**AP Computer Science Principles**                      **HS1906**  
Grade 9,10, 11, 12                                      Credit 1 Unit  
Final Assessment: School Exam  
*Prerequisite: 80% or higher in Algebra*

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This course introduces students to the foundational concepts of computer science and challenges them to explore how computing and technology can impact the world. With a unique focus on creative problem solving and real-world applications, AP Computer Science Principles prepares students for college and career.



# Physical Education

All students must complete two units of credit in Physical Education over four years. All students must enroll in Physical Education each year of high school. Students will pair together two of the offerings below in order to obtain 1/2 credits of study per year.

**Physical Education: Lifetime Activities** **HS1350**  
 Grades 9, 10, 11, 12 Credit 1/4 Unit  
 Final Assessment: None Given

This course is offered to students who are interested in lifetime activities such as but not limited to pickleball, archery, tennis, badminton, golf, frisbee golf, backyard games, cooperative games, snowshoeing, team building and yoga/pilates.

**Physical Education: Personal Fitness** **HS1356**  
 Grades 9, 10, 11, 12 Credit 1/4 Unit  
 Final Assessment: None Given

This course is strongly encouraged for those students who may be participating in interscholastic athletics or interested in personal fitness. This class will offer training programs for in season and out of season athletes and those students striving to improve physical fitness and overall health. Activities will include strength training, muscular endurance training, injury rehab and prevention as well as mobility and flexibility exercises.

**Physical Education: Team Sports** **HS1357**  
 Grades 9, 10, 11, 12 Credit 1/4 Unit

This course is offered to students who are interested in a traditional team sport model of physical education. Activities will include, but are not limited to, soccer, flag football, team handball, floor hockey, volleyball, mat ball, basketball, softball and evasive games.

**Physical Education: Lifeguarding** **HS1353**  
 Grades 9, 10, 11, 12 Credit 1/4 Unit  
 Final Assessment: School Exam

Lifeguarding includes three components: Lifeguard Training; (including first aid), CPR for the Professional Rescuer, and a Waterfront Lifeguarding Module. Each component has a written and practical exam, and each has a card for successful completion of activities. Strong swimmers of any age are able to enroll. However, you must be 15 years old by the end of the course, achieve 80% on the written exam and successfully complete the practical skills test will earn lifeguard certification

**Physical Education: Smart Steps CTE/BOCES Online** **HS1364**  
 Grades 11, 12 Credit 1/2 Unit

Smart Steps is an exercise walking program. It requires no gym, no exercise machines, and no personal trainers. This program is all about physical movement, footsteps, miles, energy expenditure, exertion, activity, games, active living, and pedometers. The primary emphasis will be placed on active lifestyle, personal awareness of activity levels, and understanding/appreciating the benefits of a walking program. This course is offered as a full year Pass/Fail course for any BOCES student that cannot fit Physical Education into their schedule.

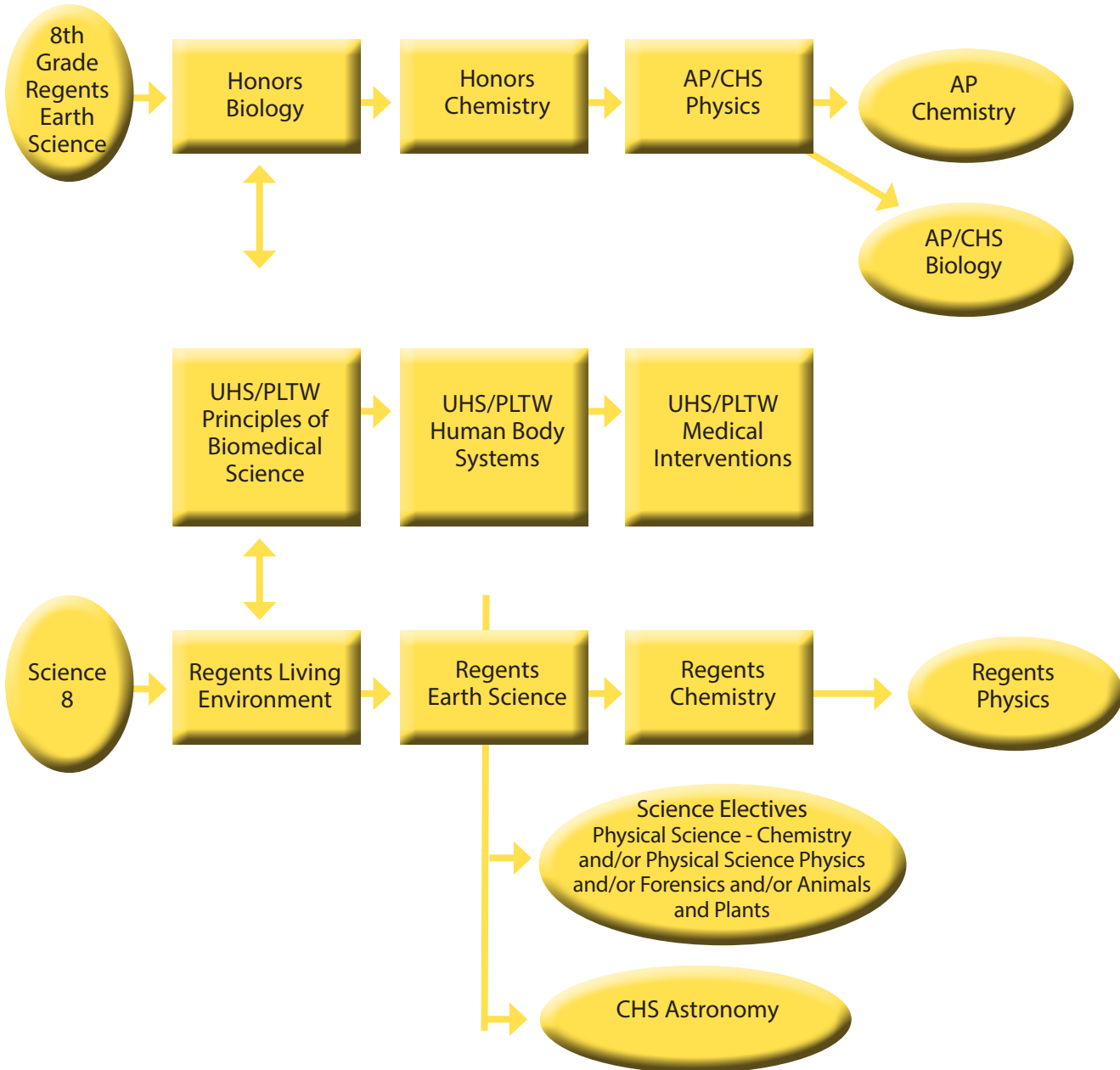
## Potential Pairings:

- Lifetime Activities & Personal Fitness-HS1358
- Personal Fitness & Lifetime Activities-HS1359
- Team Sports & Personal Fitness-HS1360
- Personal Fitness & Team Sports-HS1361
- Lifetime Activities & Team Sports-HS1362
- Team Sports & Lifetime Activities-HS1363
- Team Sports & Team Sports-HS1347
- Personal Fitness & Personal Fitness-HS1348
- Lifetime Activities & Lifetime Activities-HS1349

Each pairing is worth 1/2 unit

# Science

## Recommended Pathways in Science



# Science

All students must earn three credits in Science and pass one Regents exam in order to meet the requirements for graduation. One credit must be in life science and the second in a physical science. The third credit of science can be in either a physical science or a life science. Students must pass two Regents exams (at least one in a life science) for the Regents Diploma with Advanced Designation. Section 207 of NYS Education Law Section 8.2(c) of the rules of the Board of Regents states that in order to qualify to take a Regent's examination in any of the Regents sciences a student must complete 20 hours of laboratory experience with satisfactory documented laboratory reports. The 20 hours of laboratory experience must be in addition to the required classroom instruction associated with earning a unit of credit.

## Biology Regents

Grade 9, 10, 11, 12

Final Assessment: NYS Regents

**HS1255**

Credit 1 Unit

Regents Biology is a full year laboratory course in modern biology. It is designed to provide broad general understandings of the fundamental principles of life sciences and to provide an extension of understanding in selected areas. Students will work through storylines using science and engineering practices to learn about Ecology, Homeostasis, and disease in order to explain phenomena. Students must satisfactorily complete 20 hours of hands-on laboratory experiences. The final exam score for the course is the average of 3 required NYS Biology Investigations. This course culminates in the Life Science: Biology Regents exam which can be used to meet the graduation requirement of passing a science regents exam.

## Biology Honors

Grade 9, 10, 11, 12

Final Assessment: NYS Regents

*Prerequisite: Completion of Earth Science with at least a 90 average for course/exam*

**HS1254**

Credit 1 Unit

Biology Honors is a full year laboratory course that will cover topics in much greater detail and at a much faster pace in order to challenge students with exceptional ability. This course is designed for highly motivated students

that want to challenge themselves and are willing to work independently. Expectations are higher for investigative skills and critical thinking. The course includes additional laboratory work such as self-designed experiments based on student research each semester. Students must complete 20 hours of hands on laboratory experiences with satisfactory lab reports to successfully complete the course. This course culminates in the Living Environment Regents exam.

## Earth Science Regents

Grade 10, 11, 12

Final Assessment: NYS Regents

**HS1261**

Credit 1 Unit

Regents Earth Science is a full year laboratory course. Topics include geology, meteorology, hydrology, and astronomy with an emphasis on our Earth and the processes affecting it. Students must complete 20 hours of hands on laboratory experiences with satisfactory lab reports to successfully complete the course. This course culminates in the Physical Setting/Earth Science Regents exam.

## Chemistry Regents

Grade 10, 11, 12

Final Assessment: NYS Regents

*Prerequisite: Earth Science course/Regents exam with a 70 or above. Students must have successfully completed Algebra course/Regents exam with a 70 or above.*

**HS1260**

Credit 1 Unit

Regents Chemistry is a full year laboratory course and deals with the fundamental relationships between matter and energy as well as the changes which matter undergoes. Topics include atomic structure, chemical bonding, stoichiometry, kinetics, equilibrium, acid-base theory, oxidation-reduction, and organic reactions. Students must complete 20 hours of hands on laboratory experiences with satisfactory lab reports to successfully complete the course. This course culminates in the Physical Setting/Chemistry Regents Exam.

**Chemistry Honors**

Grade 10, 11, 12

Final Assessment: NYS Regents

*Prerequisite: Successful completion of Living Environment and Earth Science with at least a 90 average for the course/exam. Strong foundational skills in solving algebraic equations. Concurrent enrollment in Algebra 2.*

**HS1259**

Credit 1 Unit

Chemistry Honors is a full year laboratory course with significant supplemental content beyond the Regents Chemistry curriculum and a faster pace of instruction. This course will prepare students who are planning for post-secondary study in a STEM major with the content and skills needed for advanced study in the sciences. This course is designed for highly motivated students that want to challenge themselves with a fast paced curriculum and are willing to work independently to solve complex problems. Students will seek abstract patterns that unify the relationships between matter and energy. Students must complete 20 hours of hands on laboratory experiences with satisfactory lab reports to successfully complete the course. The course culminates in the Physical Setting/Chemistry Regents exam.

**Physics Regents**

Grade 11, 12

Final Assessment: NYS Regents

*Prerequisite: Successful completion of or concurrent enrollment in Algebra 2*

**HS1268**

Credit 1 Unit

Physics Regents is a full year laboratory course and provides a systematic introduction to the main principles of the physical world. Topics covered include mechanics, energy, electricity and magnetism, waves and modern physics. Regents Physics emphasizes the development of problem-solving skills. Students should have an understanding of algebra and trigonometry. Students who intend to continue study in any science-based technical field are encouraged to enroll in this course. Students must complete 20 hours of hands on laboratory experiences with satisfactory lab reports to successfully complete the course. This course culminates in the Physical Setting/Physical Regents Exam.

**Biomedical Sciences**

The Biomedical Science Program is a sequence of courses that provide a hands-on, real-world problem-solving approach to learning developed by Project Lead the Way. Project Lead The Way is the nation's leading provider of science, technology, engineering, and math (STEM) curriculum programs. Students explore the concepts of human medicine, as well as the prevention, diagnosis and treatment of disease. Students work collaboratively to investigate and design innovative solutions for health

challenges of the 21st century. This sequence of courses is designed for students interested in pursuing a career in biological sciences, emergency services, healthcare, or medicine. This is a college preparatory program and students should be concurrently enrolled in a college prep science class.

**UHS/PLTW Principles of Biomedical Sciences HS1280**

Grade 9, 10

Credit 1 Unit

Final Assessment: School Exam and Final Project

*Corequisite: College Preparatory Science Class*

Principles of Biomedical Sciences is a full year introductory course which covers the study of human medicine, research processes, and an introduction to bioinformatics. This course is designed for students interested in pursuing a career in the biological sciences, emergency services, healthcare, or medicine. In this course, students investigate the human body systems and various health conditions. An ongoing theme throughout the year is the analysis of various factors that led to the death of a fictional person. Students investigate lifestyle choices and medical treatments that might have prolonged the person's life. The course culminates with a written exam and a project. Students need to be concurrently enrolled in a Regents science class.

**UHS/PLTW Human Body Systems**

Grade 10, 11, 12

**HS1282**

Credit 1 Unit

Final Assessment: School Exam and Final Project

*Prerequisite: Successful completion of Principles of Biomedical Sciences and Regents Biology*  
*Corequisite: College preparatory science class*

Human Body Systems is a full year course which covers human body systems and studies how the "parts of a whole" work together to maintain homeostasis, good health, and keep the human body functioning at an optimal level. Students will work through interesting real-world cases, and often play the role of biomedical professionals to solve medical mysteries. Students will design experiments, explore various medical careers, investigate the structures and functions of body systems, and use data acquisition software to monitor body functions such as breathing rate and body strength. Students will forensically analyze bones, complete DNA electrophoresis, and dissect cow eyes, pig kidneys, and rabbit leg muscles. Students will also perform a blood-type lab, urinalysis, a visual perception lab, and analysis of broken bones with x-rays. This course culminates with a written exam and a project. Students need to be concurrently enrolled in a Regents science class.

**UHS/PLTW Medical Interventions****HS1283**

Grade 11, 12

Credit 1 Unit

Final Assessment: School Exam and Final Project

*Prerequisite: Successful completion of Human Body Systems and two Regents Science classes.**Corequisite: College Preparatory Science Class and teacher recommendation*

Medical Interventions is a full year course which covers the design and development of various medical interventions that extend and improve the quality of life. Topics in the course include diagnostics, pharmacology, surgery, cancer, gene therapy, prosthetics, rehabilitation, and supportive care. College level labs are an essential part of this course and students will develop a skill set for performing these labs. Students will study the design and developments of various medical interventions including robotic surgery, cochlear implants, and prosthetic limbs. Students will learn about the history of medical interventions, and read current scientific literature to be aware of cutting edge developments. The course culminates with a written exam and a project. Students need to be concurrently enrolled in a Regents or AP science class.

**Non-Regents Science Courses****Physical Science - Physics****HS3151**

Grade 11, 12

Credit 1/2 Unit

Final Assessment: School Exam

*Prerequisite: Successful completion of Algebra and a passing score on the NYS Algebra Regents exam.*

Physical Science - Physics is a semester course anchored in phenomena - observable events in the natural world. Students will use the science and engineering practices to explore and develop an understanding of phenomena. The course is project based and will cover forces and interactions (mechanics), energy, electricity and magnetism. Students will work in teams therefore academic success is dependent on attendance. Students need to have successfully completed Algebra prior to taking this course.

**Physical Science - Chemistry****HS3104**

Grade 11, 12

Credit 1/2 Unit

Final Assessment: School Exam

Physical Science - Chemistry is a semester course anchored in understanding phenomena - observable events in the natural world related to chemistry. Students will use the science and engineering practices to explore and develop an understanding of phenomena related to the structure of matter and chemical reactions.

**Forensics****HS1265**

Grade 11, 12

Credit 1/2 Unit

Final Assessment: School Exam

Forensics is a semester life science course that focuses on crime scene management, evidence collection, and analysis. Labs may include fingerprinting, organic analysis of drugs and poisons, hair and fiber identification, glass analysis, document analysis and blood work, and will culminate in thorough investigation and processing of crime scenes. Students will complete labs for many of the topics in the course. Therefore, academic success in this class is dependent on regular attendance.

**Animals and Plants of the Northeast****HS1275**

Grade 11, 12

Credit 1/2 Unit

Final Assessment: School Exam

Animal & Plants of the Northeast is a semester survey life science course that acquaints students with the wealth of plant and animal life found primarily in the Northeastern United States. Topics covered in the course include trees, birds, fish, reptiles, amphibians, insects, and mammals. Each topic will include classification schemes, anatomy, physiology, and species identification. This course is designed for students interested in developing an appreciation for and sense of stewardship toward our wildlife resources. The course culminates with a final project.

### CHS Astronomy - Exploring Space HS1256 (College # AST 123)

Grade 11, 12 Credit 1/2 Unit  
Final Assessment: School Exam/Research Paper  
*Recommended Achievement Levels: Successful completion of at least two Regents science classes, Algebra, and Geometry*

This semester course examines present and future methods of space exploration, and looks at what scientists have learned so far about our solar system. Topics include the basic science, instruments, technology, dangers, benefits, costs, and practical and political importance of space exploration. Discussion topics include space stations, moon colonies, manned missions from Mercury through Apollo, and current international space missions. Students have the option to enroll in the SCCC College in the High School Program (CHS) with Schenectady Community College (SCCC) and students must complete an SCCC application in the beginning of the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits are accepted at most institutions of higher learning.

### CHS Astronomy - Cosmic Systems HS1262 (College # AST 127)

Grade 11, 12 Credit 1/2 Unit  
Final Assessment: School Exam/Research Paper  
*Recommended Achievement Levels: Successful completion of at least two Regents science classes, Algebra, and Geometry*

This semester course introduces students to the scientific study of the cosmic system. Emphasis is placed on the evolution, life cycle, and characteristics of the stars and galaxies. Information from recent discoveries by the space-based telescope and other 21st century telescopes are presented. Other topics include constellation identification, life in the universe, and current theories of cosmology. Students have the option to enroll in the SCCC College in the High School Program (CHS) with Schenectady Community College (SCCC) and students must complete an SCCC application in the beginning of the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits are accepted at most institutions of higher learning.

### AP/CHS Physics 1 HS1267 (College # PHY 153/154)

Grade 11, 12 Credit 1 Unit  
Final Assessment: NYS Regents  
*Recommended Achievement Levels: Successful completion of Regents Chemistry and Algebra 2 with a 90 or better for the courses/exams*

AP Physics is a full year college level, in-depth algebra-based course that provides a systematic introduction to the main principles of physics. Topics covered are aligned with both the NYS Regents Physical Setting/Physics Core Curriculum and the AP Physics Year 1 syllabus. Topics include Newtonian Mechanics, Electricity and Magnetism, Waves, and Atomic Physics. AP Physics Year 1 emphasizes the development of problem-solving skills. It is intended for strong students who have shown exceptional success in Science and Math courses. Students should have a firm understanding of algebra and trigonometry. Students will be expected to complete a summer assignment for the course. At the end of the course, students will take both the NYS Physical Setting/Physics Regents and the AP Physics Year 1 exam. Students have the option to enroll in the SCCC College in the High School Program (CHS) with Schenectady Community College (SCCC) and students must complete an SCCC application in the beginning of the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits are accepted at most institutions of higher learning.



**AP/CHS Biology****(College # BIO 141/142)**

Grade 11, 12

**HS1252**

Credit 1 Unit

Final Assessment: School Exam

*Recommended Achievement Levels: Successful completion of both Regents Chemistry and Algebra 2 with a 90 or better for the courses/exams. In addition, students should have either successfully completed Regents or AP Physics with a 90+ average OR should be concurrently enrolled in Regents or AP Physics*

AP Biology is a full year college level introductory biology course designed to cover the material typically presented in a two-semester college class. It is a rigorous, fast-paced course covering topics including biochemistry, cells, organisms, populations, ecology, evolution, and genetics. The course is intended for strong students who have shown exceptional success in both Biology and Chemistry courses. Students will complete a summer assignment for the course. At the end of the course, students will take the AP Biology exam as well as a local written final exam. Students are expected to enroll in the SCCC College in the High School Program (CHS) with Schenectady County Community College and register for the opportunity to earn college credits. Students will complete registration online in class and must turn in a Certificate of Residency. Upon receiving a final grade of C or better, students will be awarded 8 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

**AP Chemistry**

Grade 11, 12

**HS1258**

Credit 1 Unit

Final Assessment: School Exam

*Recommended Achievement Levels: Successful completion of Honors Chemistry and Algebra 2 with a 90 or better for the courses/exams. Students should be enrolled in either Pre-Calculus or Calculus. In addition, students should have either successfully completed Regents or AP Physics with a 90+ average, OR should be concurrently enrolled in Regents or AP Physics*

AP Chemistry is a full year college level introductory chemistry course designed to cover the material typically covered in a two-semester college class. The course will encompass lecture, lab, and independent study. AP Chemistry is a rigorous, fast-paced course covering topics including structure and states of matter, reactions, and descriptive chemistry. It is intended for students with strong academic skills who have shown exceptional success in high school science and math courses. Students who have experienced success in Honors level science classes are much better prepared for the workload and

expectations of an AP science class. Students will be expected to complete a summer assignment. At the end of the course, students will take the AP Chemistry exam and complete a culminating project.



# Social Studies

## Graduation Requirements

### 9th Grade

Global History 9  
or  
AP Human Geography

### 10th Grade

Global History 10  
or  
AP European History  
(AP Human Geography is strongly recommended)

### 11th Grade

US History and Government  
or  
CHS Interpretations of American History  
or  
AP United States History

### 12th Grade

Participation in Government (Semester)      AND      Economics (Semester)  
or  
AP/CHS Government and Politics (Full Year)  
or  
AP/CHS Macroeconomics (Full Year)

*\*Students can take both AP Government and AP Macroeconomics*

### Social Studies Electives

- Sociology
- CHS Psychology
- AP Psychology

# Social Studies

All students must earn four credits by passing Global History 9 and 10, US History, Economics, and Participation in Government. In addition all students must take a NYS Regents exam in Global History and US History.

## 9th Grade

### Global History 9 Regents

Grade 9

Final Assessment: School Exam

**HS1159**

Credit 1 Unit

Global History 9 is the first of four required units of social studies. Global History 9 is designed to focus on the five social studies standards, common themes that recur across time and place, and eight historical eras. The course stresses methods of social sciences as applied to a chronological study of history from ancient civilizations to the eve of the French Revolution. Students will be required to take a local exam in June.

### AP Human Geography

Grade 9

Final Assessment: School Exam

*Prerequisite: 90% or higher English and Social Studies*

**HS1169**

Credit 1 Unit

AP Human Geography is organized around the major themes of human interactions within a shared world. It focuses on the question - where and why. Where do people live? Why or how do cultures influence human behavior? The course introduces students to the systematic study of patterns and processes that have shaped human understanding, use, and alteration of the Earth's surface. Students will employ spatial concepts and landscape analysis to examine human social organization and its environmental consequences. The course is based on the syllabus developed by the College Board for AP Human Geography. The seven topics explored in the course are Geography: Its Nature and Perspectives, Population, Cultural Patterns and Processes, Political Organization of Space, Agriculture and Rural Land Use, Industrialization and Economic Development, and Cities and Urban Land Use. AP Human Geography is designed to mirror an entry-level college Introduction to Human Geography course. Thus, students should expect nightly homework reading and/or writing assignments. They should also expect challenging but engaging classwork. Students should be prepared to take the Advanced Placement Human Geography exam in May. Students may be eligible

for college credit for successfully completing the exam, but the AP exam grade will not impact their Ballston Spa grade point average. NOTE: Completion of this class fulfills the NYS ninth grade social studies requirement for the first half of the Global History and Geography course.

## 10th Grade

### Global History 10 Regents

Grade 10

Final Assessment: NYS Regents

*Prerequisite: Global History 9*

**HS1158**

Credit 1 Unit

Global History 10 is the second of four required units of social studies, and serves as the second year of the 9-10 Global History sequence. Global History 10 is designed to focus on the five social studies standards, common themes that recur across time and place, and eight historical eras. The course stresses methods of social science as applied to a chronological study of history from the 1750's to the present. Students are required to take a Regents exam on material from Global History 10 at the end of the course.

### AP European History

Grade 10, 11, 12

Final Assessment: NYS Regents

*Prerequisite: AP Human Geography and/or Teacher*

*Recommendation*

**HS1156**

Credit 1 Unit

AP European History is an introductory college-level European history course. Students cultivate their understanding of European history through analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like interaction of Europe and the world; economic and commercial developments; cultural and intellectual developments; states and other institutions of power; social organization and development; national and European identity; and technological and scientific innovation. Students enrolled in this course are expected to take the AP European History examination which could result in earning college credits. Students will also take the Regents Exam in Global history in June. This course fulfills the requirement for Global History 10.

**11th Grade****United States History and Government Regents**

Grade 11

Final Assessment: NYS Regents

*Prerequisite: Global History 10***HS1152**

Credit 1 Unit

United States History and Government provides students with an understanding of the basic principles of the Constitution, the cultural heritage of the United States that support our democracy, and how individuals and groups have influenced public policy and change. All students will be required to take a Regents examination in June.

**CHS Interpretation of American History****(College # HIST 110 and HIST 111)**

Grade 11 (or 12 as an elective)

There will be a potential summer assignment to be posted on the school website and instructor's Schoology pages by June.

*Prerequisite: Successful completion of 10th grade Global History, Mastery level on NYS Regents Exam (85%), as well as Global 10 teacher recommendation.*

**HS1194**

Interpretations of American History is a full year college course offered to juniors to satisfy the 11th grade NYS United States History Requirement. The course covers First European Contact with the New World through Reconstruction during the fall semester and the United States since 1877 during the spring semester. An honors level history course, Interpretations of American History is designed to prepare students for the challenges of intermediate and/or advanced level college course work, while also gaining the understanding of the institutions, ideologies, and events that gave rise to the United States Republic and American democracy. This course is designed for students with a strong interest in US history, along with the willingness to devote time to outside preparations through assigned readings and writing assessments. Students have the option of enrolling in the College in the High School Program through Hudson Valley Community College (HVCC) to potentially earn 6 credits (3 per course/semester)

**AP/CHS United States History (College # HIST 110 and HIST 111)**

Grade 11

Final Assessment: NYS Regents

*Prerequisite: AP World History II or Global History 10***HS1175**

Credit 1 Unit

AP United States History is a course that provides a general overview of the history of the United States. In chronological order, students will explore America's past, examining the cultural, political, geographic, economic and technological changes that have taken place and have helped to shape us and guide us as a nation today. Topics will include issues relating to the discovery of the New World through the latter part of the 20th century. The program prepares students for intermediate and advanced college courses by making demands upon them equivalent to those made by full-year introductory college courses. Students should learn to assess historical materials – their relevance to a given interpretive problem, their reliability, and their importance and to weigh the evidence and interpretations presented in historical scholarship. Students enrolled in this course will read extensively, interpret a wide variety of primary and secondary sources, and interact with electronic media. Students enrolled in this course will be expected to complete a summer reading program. This Advanced Placement course prepares students for the AP United States History examination. Students enrolled in this course are expected to take the AP United States History exam. Students will also take the Regents Exam in United States History & Government in June. This course fulfills the requirement for United States History & Government. Students can receive both HVCC credit and AP credit.



**12th Grade****Economics, The Enterprise System & Finance HS1153**

Grade 12 Credit 1/2 Unit

Final Assessment: School Exam

*Prerequisite: United States History & Government or equivalency*

Economics, The Enterprise System, and Finance course offers a comprehensive survey of the basic economic components of the United States economy, the world economic system, and the relationships that these components share. Students will become acquainted with the vocabulary of economics and will explore such topics as personal finance, fiscal and monetary policy, economic indicators, taxation, and the role of the United States in the world economy. Students will be required to take a local exam at the end of the course.

**Participation in Government HS1154**

Grade 12 Credit 1/2 Unit

Final Assessment: School Exam

*Prerequisite: United States History & Government or equivalency*

Participation in Government is designed to bring together all of the Social Studies skills needed to become an effective citizen. The course includes a review of the structures of federal, state, and local governments, analysis of rights and liberties through the use of court cases, and the investigation of political beliefs and behaviors using current issues. Students will work to develop their political beliefs and positions on issues. The course emphasizes personal responsibility and individual initiative. Students will be given the opportunity to become involved in their community to witness the links between participation and policy making in real life.

**AP/CHS Macroeconomics HS1157  
(College # ECON 100)**

Grade 12 Credit 1 Unit

Final Assessment: School Exam or project

*Prerequisite: United States History & Government or equivalency, with an 85% or better for the course and exam*

AP Macroeconomics will provide students with a thorough understanding of the principles of economics that apply to the economic system as a whole. Economics is the study of scarcity, the study of how people use resources and respond to incentives, or simply the study of decision-making. Students learn to use graphs, charts, and data to analyze human behavior. Students are prepared to meet the rigor and intensity of college-level course work. The course is based on the syllabus developed by the College Board for Economics AP. Students will focus on

the study of national income and price-determination, economic performance measures and growth, the financial sector, economic stabilization policies, and international trade and finance. Students should expect challenging assignments. Students will also complete most requirements of the NYS Seal of Civic Readiness when enrolled in this course. This course is recommended for all seniors with an interest in the content, and those considering a major in accounting, business, economics, finance, law, public policy, education, the social sciences, the natural sciences, etc. NOTE: Completion of this class fulfills the NYS fourth year social studies requirement for Economics and Participation in Government.

**AP/CHS US Government and Politics HS1160  
(College # POLS 105)**

Grade 12 Credit 1 Unit

Final Assessment: School Exam or Equivalent

*Prerequisite: United States History & Government or equivalency*

AP United States Government and Politics is a course that provides an analytical perspective on government and politics in the United States. This course involves both the study of general concepts used to interpret U.S. politics and the analysis of specific case studies in government. It also requires familiarity with various institutions, groups, and beliefs, that constitute the politics of the nation. Topics include constitutional democracy, civil rights and civil liberties, American political culture and beliefs, political participation, and interaction among branches of government. Basic economic concepts and their application will be done in a manner which will allow students to better understand American politics and government. This course is rigorous and designed to be the equivalent of an entry-level college political science class. Students should expect nightly readings as well as several written assignments each marking period. NOTE: Completion of this class fulfills the New York State fourth year social studies requirement for Economics and Participation in Government. Students have the option to enroll in the HVCC College in the High School Program (CHS). Students must complete an HVCC application during the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from HVCC. These credits are accepted at most institutions of higher learning.

**Electives****Introduction to Sociology**

Grade 11, 12

Final Assessment: Portfolio Project

*Prerequisite: 85% or higher in Social Studies Global History or U. S. History***HS1162**

Credit 1/2 Unit

Introduction to Sociology is a semester-long elective designed to study the social forces that influence individuals, groups, and institutions. Through a combination of class discussions, readings, and projects students will gain a greater awareness of the social issues that impact the human experience. In the first ten weeks the course explores how stereotypes shape our perceptions, the origins of sociological thought and an examination of sociological perspectives. The second ten weeks covers an exploration of global cultures, agents of socialization, and stratification and social inequality. A semester-long portfolio project is offered as the final assessment grade for the course.

**CHS Introduction to Psychology**

(College #PSYC 100)

Grade 11 or 12

Final Assessment: School Exam

*Prerequisite: Teacher Recommendation. 85 or better in Global History and an 85 or better on the Global History Regents. 85 or better in Honors Biology***HS1155**

Credit 1/2 Unit

Psychology is the systematic study of human behavior and mental processes. It is rooted in both the natural and human sciences, and based on empirical research. This course begins with an exploration of the foundational figures and theories in psychology and an introduction into basic research methods in psychology. Students will then examine the biological approach to understanding human behavior, studying basic concepts in behavioral genetics, neurochemistry, structure and function of the brain and evolutionary psychology. Additionally, students will investigate sleep, memory, intelligence and personality theory. The course concludes with an exploration of psychological disorders, with a focus on their prevalence, causes, diagnostic criteria and treatment. This course is designed for students with a strong interest in biology and social science. Students have the option to enroll in the CHS with Hudson Valley Community College (HVCC). Upon receiving a final grade of C or better, students will be awarded 3 credits from HVCC. These credits are accepted at most institutions of higher learning.

**AP/CHS Psychology**

Grade 10, 11, 12

Final Assessment: School Exam or Equivalent

*Prerequisite: Biology and/or Chemistry and/or teacher recommendation***HS1170**

Credit 1 Unit

AP Psychology introduces you to the systematic and scientific study of human behavior and mental processes. In this course, you will explore key concepts and theories in psychology, and the ideas that have shaped the field. Major areas of study include biological bases of behavior, cognition, development across the lifespan, learning, social psychology, personality, and mental and physical health.

You will develop an understanding of the application of research methods in human science and sharpen your ability to evaluate claims and analyze evidence. You will also develop skills in data interpretation and effective communication.

Whether you are curious about the brain, interested in understanding social dynamics, or eager to explore how psychology impacts everyday life, AP Psychology provides a comprehensive introduction to this field. By the end of the course, you will be prepared to take the AP exam and may earn college credit while gaining a deeper understanding of yourself and others.



# World Languages

All students must earn one unit of high school credit by either passing the world language final (Checkpoint A) exam and the level 1 course in 8th grade or successfully completing a 9th grade course of study for both a Local or Regents Diploma. For a Regents Diploma with Advanced Designation, two additional credits in world language plus a score of at least 65% on the level 3 Checkpoint B exam is required, or students may substitute a 5-unit sequence in Art, Music, or Career Technical Education for the additional world language requirement.

## French – Level 1

**HS1302**

Grade 9

Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: Below 65% on the 8th grade final or no previous language*

French 1 is intended for students who did not achieve at least a 65% on the final exam at the end of 8th grade, or students who have never studied a language before. In this course students will learn the basic vocabulary, idioms, and grammar structures found in Checkpoint A of the NYS learning standards. Upon successful completion of French 1, students will earn one unit of World Language credit required for graduation from high school.

## French – Level 2

**HS1300**

Grade 9, 10, 11, 12

Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: 70% or better on the 8th grade final exam or teacher recommendation*

French 2 is intended for students who received a 70% or higher on the Checkpoint A exam and passed the level 1 French class in 8th grade. French 2 advances the student to the intermediate level of language acquisition. The study of grammar structures, vocabulary, and idioms becomes more intensive in this course. The study of French culture and aspects of everyday life is continued. Students are expected to demonstrate proficiency in listening, speaking, reading, and writing in order to progress to the next level.

## CHS French – Level 3

**HS1315**
**(College #FRE 122)**

Grade 10, 11, 12

Credit 1 Unit

Final Assessment: Checkpoint B Exam

*Prerequisite: French 2 and teacher recommendation*

In CHS French 3 the study of grammar structures, vocabulary, and idioms progresses to a more sophisticated level. Emphasis is on conversation, compositions, authentic readings, written assignments, and oral reports of more advanced content. The study of geography, culture, and lifestyles of French speaking countries is continued. Students must demonstrate competency in listening, speaking, reading, and writing skills in order to be successful on the local final (Checkpoint B) exam in June. Students have the option to enroll in a CHS Program (college in the high school) and student must complete a registration in the beginning of the course. Upon receiving a final grade of C or better, students will be awarded 3 100 level college credits. These credits are accepted at most institutions of higher learning.

## CHS French 4

**HS1302**
**(College # AFRE 221Y)**

Grade 11

Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: French 3 and teacher recommendation*

A major component of CHS French 4 is to develop an awareness of the relationship between language and culture. The class provides for intense language acquisition through listening comprehension, reading comprehension, oral expression, written communication, and cultural understanding. The majority of class will be conducted in French, and students are expected to communicate in French most of the time. A variety of authentic texts from several French-speaking countries will be used and students will perform both individual and group work in order to build upon and improve communication skills. This course is designed for highly motivated students who have a strong background and interest in French. Students have the option to enroll in a CHS Program (college in the high school) and student must complete a registration in the beginning of the course. Upon receiving a final grade of C or better, students will be awarded 3 100 level college credits. These credits are accepted at most institutions of higher learning. This is the first year of a 2 year sequence on a pathway towards the Seal of Biliteracy. Students must maintain an average of 85% or higher over the 2 years.

**CHS French 5  
(College # AFRE 222Y)**

Grade 12

Final Assessment: School Exam

*Prerequisite: CHS French 4 and teacher recommendation***HS1305**

Credit 1 Unit

This accelerated course is intended to refine skills practiced in CHS French 4. Students will work towards increasing listening and reading comprehension, oral expression, written communication, and cultural understanding. The majority of class will be conducted in French, and students are expected to speak French most of the time. Students will work individually and in groups to analyze, debate, and discuss a variety of issues and authentic texts in French. This course is designed for highly motivated students who have a strong background and interest in French. Students have the option to enroll in a CHS Program (college in the high school) and student must complete a registration in the beginning of the course. Upon receiving a final grade of C or better, students will be awarded 3 100 level college credits. These credits are accepted at most institutions of higher learning. This is the second year of a 2 year sequence on a pathway towards the Seal of Biliteracy. Students must maintain an average of an 85% or higher over the 2 years.

**Spanish – Level 1**

Grade 9

Final Assessment: School Exam

*Prerequisite: Below 65% on the 8th grade final or no previous language***HS1310**

Credit 1 Unit

Spanish 1 is intended for students who did not achieve at least a 65% on the final exam at the end of 8th grade, or students who have never studied a language before. In this course students will learn the basic vocabulary, idioms, and grammar structures found in Checkpoint A of the NYS learning standards. Upon successful completion of Spanish 1, students will earn one unit of World Language credit required for graduation from high school.

**Spanish – Level 2**

Grade 9, 10, 11, 12

Final Assessment: School Exam

*Prerequisite: 70% or better on the 8th grade final exam or teacher recommendation***HS1306**

Credit 1 Unit

Spanish 2 is intended for students who received a 70% or higher on the Checkpoint A exam and passed the level 1 Spanish course in 8th grade. Spanish 2 advances the student to the intermediate level of language acquisition. The study of grammar structures, vocabulary, and idioms becomes more intensive in this course. The study of Spanish culture and aspects of everyday life is continued. Students are expected to demonstrate proficiency in

listening, speaking, reading, and writing in order to progress to the next level.

**CHS Spanish – Level 3  
(College # SPA 122)**

Grade 10, 11, 12

Final Assessment: Checkpoint B Exam

*Prerequisite: Spanish 2 and teacher recommendation***HS1314**

Credit 1 Unit

In CHS Spanish 3 the study of grammar structures, vocabulary, and idioms progresses to a more sophisticated level. Emphasis is on conversation, compositions, authentic readings, written assignments, and oral reports of more advanced content. The study of geography, culture, and lifestyles of Spanish speaking countries is continued. Students must demonstrate competency in listening, speaking, reading, and writing skills in order to be successful on the local final (Checkpoint B) exam in June. Students have the option to enroll in the SCCC College in the High School Program (CHS) with Schenectady Community College (SCCC) and students must complete an SCCC application in the beginning of the course and return it promptly to the teacher. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits are accepted at most institutions of higher learning.



### UHS Spanish 4 (College # ASPN 200)

Grade 11

Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: Spanish 3 and teacher recommendation*

A major component of UHS Spanish 4 is to develop an awareness of the relationship between language and culture. The class provides for intense language acquisition through listening comprehension, reading comprehension, oral expression, written communication, and cultural understanding. UHS Spanish 4 requires students to continue developing their communicative competence by interacting orally and in writing in Spanish. The majority of class will be conducted in Spanish, and students are expected to communicate in Spanish most of the time. A variety of authentic texts from several Spanish-speaking countries will be used, and students will perform both individual and group work in order to build upon and improve communication skills. This course is designed for highly motivated students who have a strong background and interest in Spanish. Eligible students will complete a UHS application and submit the tuition payment directly to SUNY Albany. The curriculum and grades are determined by the high school teacher. Upon receiving a final grade of “C” or better, students will be awarded 4 credits from SUNY Albany. All UHS Spanish 4 students will be required to take the final exam at the end of the course. This is the first year of a 2 year sequence on a pathway towards the Seal of Biliteracy. Students must maintain an average of 85% or higher over the 2 years.

HS1308



### UHS Spanish 5 (College # ASPN 201)

Grade 12

Credit 1 Unit

Final Assessment: School Exam

*Prerequisite: UHS Spanish 4 and teacher recommendation*

This accelerated course is intended to refine skills practiced in UHS Spanish 4. Students will work towards increasing listening and reading comprehension, oral expression, written communication, and cultural understanding. The majority of class will be conducted in Spanish, and students are expected to speak Spanish most of the time. Students will work individually and in groups to analyze, debate, and discuss a variety of issues and authentic texts in Spanish. This course is designed for highly motivated students who have a strong background and interest in Spanish. Eligible students will complete a UHS application and submit the tuition payment directly to SUNY Albany. The curriculum and grades are determined by the high school teacher. Upon receiving a final grade of “C” or better, students will be awarded 4 credits from SUNY Albany. All UHS Spanish 5 students will be required to take the final exam at the end of the course. This is the second year of a 2 year sequence on a pathway towards the Seal of Biliteracy. Students must maintain an average of an 85% or higher over the 2 years.

HS1309

# Student-Athletes and the NCAA Eligibility Center

If you are a prospective college athlete for competition at the Division I or II level, you must meet academic and amateurism standards set by the National Collegiate Athletic Association (NCAA). The NCAA is an independent organization with no affiliation with the New York State Education Department or any other formal entity as it relates to academics at the secondary level. Each high school in the country must submit courses to the NCAA for approval. It is strongly urged that students who are candidates for collegiate athletics meet with their school counselor on a regular basis to review their transcript and verify which courses will be accepted by the NCAA. Visit the NCAA Eligibility Center website, [www.eligibilitycenter.org](http://www.eligibilitycenter.org), to find the information you need to begin your college experience as a student-athlete. We encourage you to register with NCAA at the beginning of your sophomore year.

In order for core courses on a student's transcript to be used in an academic certification, it must appear on Ballston Spa High School's list of NCAA-approved courses.

## Courses that have been approved by the NCAA are:

### English

- AP English Language & Composition
- AP English Literature & Composition
- Best Sellers
- CHS College Composition
- CHS College Literature and Writing
- CHS Public Speaking
- English 11
- English 12
- English 10 Honors
- English 9 Regents
- English 10 Regents
- English 11 Regents
- Expressive Writing
- Fantasy & Mythology in Literature
- Mysteries
- Short Stories
- Sports Literature

### Social Science

- AP Human Geography
- AP World History I
- AP World History II
- AP/CHS Macro Economics
- AP/CHS United States History
- AP/CHS United States Government & Politics
- CHS Interpretation of American History I
- CHS Psychology
- Economics
- Global History 9 Regents
- Global History 10 Regents
- Green Economics & Public Policy
- Participation in Government
- Social Change: Race and Gender
- Sociology

- Turning Points in US History
- US History & Government Regents

### Mathematics

- Algebra
- Algebra A
- Algebra B
- Algebra 2
- AP Calculus AB
- AP Calculus BC
- AP/CHS Statistics
- CHS College Algebra with Trig
- CHS Mathematical Topics
- CHS Pre-Calculus
- CHS Pre-Calculus H
- Geometry

### Natural/Physical Science

- Animals and Plants of the Northeast
- AP/CHS Biology
- AP Chemistry
- AP/CHS Physics 1
- Biology Honors
- Biology Regents
- Biomedical Research
- Chemistry Honors
- Chemistry Regents
- CHS Astronomy
- CHS/PLTW Digital Electronics
- CHS/PLTW Principles of Engineering
- Earth Science Regents
- Environmental Science and Sustainability
- Forensics
- Nanotechnology
- Physical Science Chemistry
- Physical Science Physics
- Physics Regents
- PLTW Human Body Systems

- PLTW Medical Interventions
- PLTW Principles of Biomedical Science

### Additional Core Courses

- French – Level 1
- French – Level 2
- French - Level 3
- Spanish – Level 1
- Spanish – Level 2
- CHS Spanish 3
- CHS French 4
- CHS French 5
- UHS Spanish 4
- UHS Spanish 5

