



Ballston Spa High School PROGRAM PLANNING GUIDE 2017-18

Ballston Spa High School

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Mision Statement

The Ballston Spa Central School District is committed to meeting the educational needs of each student in becoming a responsible adult. In partnership with the family and community, we strive to prepare each student intellectually, emotionally, physically, and socially, while encouraging individual talents and abilities.

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Connect With Us



2016 Class Profile

Class Size

295

Graduation Rate

90%

Future Plans

87%

4 Year **58%**

2 Year **29%**

Military **3%**

Achieve Regents Diploma

94%

Advanced Regents/Honors
& Mastery with Honors

30%

Advanced Regents
with Honors

19%

Regents with Honors

45%

SAT Testing Mean Scores

2016	National	State	Ballston Spa
Critical Reading	494	489	526
Mathematics	508	501	538
Writing	482	477	503

AP Scholars	33
AP National Scholars	2
AP Scholar with Distinction Award	17
AP Scholar with Honor Award	8
AP Scholar Award	33

District Achievements

Suburban Council Athletic Teams

25

NYSPHSAA Scholar-Athlete Team Status

24/25



Clubs

27

Participated in NYSSMA Solo Music Festivals

100+



2016 College and University Acceptances

State University of New York

University Centers

Albany
Binghamton
Buffalo
CUNY – Queens College
Environmental Science & Forestry
Stony Brook

Colleges of Arts & Sciences

Brockport
Buffalo State
Cortland
Fredonia
Geneseo
New Paltz
Oneonta
Oswego
Plattsburgh
Potsdam
Purchase

Colleges of Technology

Alfred State
Canton
Cobleskill
Delhi
Morrisville
Polytechnic Institute

Community Colleges

Adirondack
Clinton
Fulton-Montgomery
Genesee
Herkimer
Hudson Valley
Mohawk Valley
Onondaga
Schenectady

New York State Private Colleges and Universities

Alfred University
Albany College of Pharmacy
Bard College
Canisius College
Clarkson University
Colgate University
Culinary Institute of America
Daemen College
Elmira College
Fordham University
Hamilton College
Hartwick College
Hobart & William Smith College
Hofstra University
Iona College
Ithaca College
Keuka College
Le Moyne College
Long Island University
Manhattan College
Marist College
Marymount Manhattan College
Medaille College

Mercy College
Nazareth College
New York Conservatory for Dramatic Arts
Niagara University
Pace University, New York City
Rensselaer Polytechnic Institute
Roberts Wesleyan College
Rochester Institute of Technology
Russell Sage College
Sage College of Albany
Siena College
Skidmore College
St. John Fisher College
St. John's University
St. Lawrence University
St. Thomas Aquinas College
Syracuse University
The College of St. Rose
Union College
University of Rochester
Utica College
Vassar College

Out of State Colleges, Universities and Academies

AMDA – College and Conservatory of the
Performing Arts
American Academy of Dramatic Arts
American University
Aurora University
Arizona State University
Becker College
Boston College
Boston University
Bridgewater College
Brigham Young University, Idaho
Brigham Young University, Utah
Brown University
Bucknell University
Campbell University
Castleton University
Champlain College
Clark University
College of the Atlantic
College of the Holy Cross
College of William and Mary
Creighton University
DeSales University
Drexel University
Duke University
Eckerd College
Endicott College
Florida Atlantic University
Florida Institute of Technology
Full Sail University
Framingham State University
Gallaudet University
George Mason University
Georgetown University
George Washington University
Hawaii Pacific University
High Point University
Jacksonville University
Johnson State College
Johnson & Wales University, Providence

Keene State College
King's College
Lafayette College
Liberty University
Lynn University
Massachusetts College of Liberal Arts
Massachusetts College of Pharmacy & Health
Sciences
McGill University
Mercer University
Mitchell College
Monmouth University
Mount Ida College
Muhlenberg College
Newbury College
New England College
Northeast Texas Community College
Norwich University
Nova Southeastern University
Odessa College
Ohio State University
Pennsylvania State University, University Park
Plymouth State University
Quinnipiac University
Regent University
Rider University
Roanoke College
Robert Morris University
Roger Williams University
Rosemont College
Saint Francis University
Saint Michael's College
Seton Hall University
Simmons College
Southern New Hampshire University
Southern Vermont College
Springfield College
Stephen F. Austin State University
Suffolk University
Suffolk University – Madrid Campus

Temple University
Trinity College
Trinity College – Dublin Campus
Tufts University
University of Arizona
University of California, Berkeley
University of Chicago
University of Colorado at Boulder
University of Connecticut
University of Delaware
University of Denver
University of Hartford
University of Hawaii at West Oahu
University of Maine
University of Massachusetts Amherst
University of Miami
University of Michigan
University of New England
University of New Hampshire
University of New Haven
University of North Carolina at Wilmington
University of Pittsburgh
University of Rhode Island
University of South Carolina
University of Southern Maine
University of Tampa
University of Tennessee, Knoxville
University of Tennessee, Martin
University of Utah
University of Vermont
Virginia Commonwealth University
Virginia Tech
Washington College
Wentworth Institute of Technology
Western New England University
West Texas A&M University
Western Texas College
Westfield State University
Williams College
Worcester Polytechnic Institute

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. To learn more about our programs offered we have several opportunities to provide additional information, which are included on our school calendar and website.

Dates	Events
February 3, 2017	International Baccalaureate Diploma Programme Candidate applications are due for interested sophomores.
February 2017	Program Planning Guide is posted on the high school website. Students should start their course selection planning with their parents during this period by reading about possible course options.
February 2017	Parents receive a letter regarding the course selection process, which includes teacher course recommendations.
February 13-March 17, 2017	Students are scheduled to meet with their counselor to review their course recommendations and options to help make their course selections. <i>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 Program Planning Guide due to enrollment or fiscal considerations.</i>
February 28, 2017	Clean Technologies ECHS applications due for interested 8th graders.
March 2, 2017	8th grade parent night with school administrators on transitioning to the high school and curriculum choices, including AP World History.
March 2017	Student course requests are mailed home for parental review and discussion.
March 17, 2017	BOCES CTE Enrollment Applications are due for returning seniors.
March 31, 2017	BOCES CTE Enrollment Applications are due for juniors.
April 3-28, 2017	Meetings are scheduled for parents who wish to override a teacher's course recommendation.
May 5, 2017	Last day to submit course change requests. <i>Note: Change requests must be received in the guidance office by 3 p.m.</i>
May/June 2017	Students will be informed of unfulfilled requests and meet with counselors to resolve those conflicts.
July 2017	List of courses scheduled for the 2017-2018 school year are mailed home with student's report card.
First Day of School	Students receive schedules in homeroom (freshmen will receive their first copy at 9th Grade Orientation).

Four-Year Planning Worksheets

This form is provided to help students and families plan for required courses and to prioritize electives for each school year.

Ballston Spa High School offers a variety of academic programs. It is important to take the time to review options that may be available to you in high school so that you can make the best choices based on your academic talents, interests, needs and career goals. This Program Planning Guide provides detailed information on Advanced Placement (AP) and College/University in the High School (CHS/UHS) offerings, our International Baccalaureate Diploma Programme (IBDP), our Clean Technologies & Sustainable Industries Early College High School (ECHS), and Career and Technology Education (CTE) career pathways. Take the time to read course/program descriptions and make informed decisions when selecting courses. For an interactive four-year planning worksheet please click [here](#).

8 th GRADE	Credits	Credits
-----------------------	---------	---------

LOTE*: _____

Art/Music**: _____

9 th GRADE	Credits	10 th GRADE	Credits
-----------------------	---------	------------------------	---------

1. English: _____

1. English: _____

2. Global History: _____

2. Global History: _____

3. Math***: _____

3. Math***: _____

4. Science: _____

4. Science: _____

5. Physical Education: _____

5. Physical Education: _____

6. LOTE: _____

6. LOTE: _____

7. _____

7. Health (half year course)/ _____

8. _____

8. _____

11 th GRADE	Credits	12 th GRADE	Credits
------------------------	---------	------------------------	---------

1. English: _____

1. English: _____

2. U.S. History: _____

2. Economics/Government: _____

3. Math: _____

3. _____

4. Science: _____

4. _____

5. Physical Education: _____

5. Physical Education: _____

6. _____

6. _____

7. _____

7. _____

8. _____

8. _____

* Advanced Regents Diploma- Requires a 3 credit sequence in LOTE or a 5 credit sequence in Art, Music, Fine Arts, or CTE. Many students earn 1 credit of LOTE in 8th grade.

** All students must earn one credit of Art/Music. Options include Band, Orchestra, Studio in Art, Music in Our Lives, Introduction to Design & Drawing for Production and Introduction to Theatre. Many students earn this required credit in 8th grade.

*** A math course with a lab will use an additional scheduling period.

Four-Year Planning Worksheets

Utilize the space below to list the courses you are interested in within the academic options available at Ballston Spa High School.

Advanced Placement (AP) Courses

College/University in the High School (CHS/UHS) Courses

Clean Technologies & Sustainable Industries Early College High School (ECHS)

International Baccalaureate Diploma Programme (IBDP)/Courses

Career & Technology Education (CTE)-BOCES

Schooltool/Parent Portal

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

- Student Record (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 presents to the student and parents 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 the four marks with the final examination mark.

Honor Roll

An Honor Roll is printed after each ten 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 the Honor Roll. In addition, any work to receive credit 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 wise choices 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 scheduling 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 credits to include 2 units of English and Social Studies and at least 3 units in the combination of math and science
- **To enter grade 12:** 15 units of credit and the potential to graduate in June

Course Selection

Our course offerings and master schedule are determined by student course selection 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 specified deadline. Ballston Spa High School will not allow students to drop or switch courses after the deadline. 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:

- If students drop a course at the first 5 week interim reporting period of a course, the course is dropped from the schedule and not noted on the transcript.
- If students drop a course after the first 5 week interim reporting period, the course grade and drop is reflected on the transcript. For example, the transcript will denote "WP - withdrew, passing or WD - withdrew, failing."
- If a course level change is permitted, then the earned grade 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, the 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. It is also important to differentiate between a student in need of a level changes versus a student who does not like the selected elective and wants a different course based on interest. **Course level changes are the only acceptable condition for students to drop a course in order to add a different course.**

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 four possible diplomas (Local, Regents, Advanced Regents and the NYS CDOS), with some offering additional accolades.

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. School counselors notify students of their failures and are available to discuss summer school options. Fees to attend summer schools outside the district are the responsibility of the student. 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 highest score. Should a student retake a Regents exam, only the highest Regents score will prevail on a transcript.

Course Requirements

Students must earn the following credits to graduate with one of the four possible diplomas¹

	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
Foreign Language	1	3
Electives	3.5	1.5
Total	22	22

Examination Requirements – Students must earn a minimum grade of 65 of ALL the following Regents²

Regents Diploma (5 exams)

- English Regents³
- Global Studies Regents
- U.S. History Regents
- One Math Regents⁴
- One Science Regents

Advanced Regents Diploma (8 exams)

- English Regents³
- Global Studies Regents
- U.S. History Regents
- Algebra I, Geometry and Algebra II/Trigonometry Regents⁴
- Two Science Regents

Notes:

¹Details about the NYS CDOS are available online at <http://www.p12.nysed.gov/specialed/publications/CDOScredial-memo-613.htm>

²Examination requirements for a Local Diploma are the same as the Regents Diploma, except students may score between 55-64. For students with disabilities a score of 45-54 on a requirement Regents exam other than English and Math can be compensated with a score of 65 or above on another requirement Regents exam. In all cases, students must achieve a 55 on English and Math, and pass the course in which s/he earned a score of 45-54.

³Students who enter grade 9 in 2013 and beyond must pass the Regents Exam in ELA (Common Core). Students who enter grade 9 prior to 2013 may pass the Regents Comprehensive Examination in English or Regents exam in ELA (Common Core).

⁴In 2013 and thereafter, any student regardless of grade level who begins their first commencement level course in math that culminates in a Regents exam must be provided with math instruction aligned with the NYS P-12 Common Core Learning Standards for Mathematics and take the corresponding Common Core Regents exam.



4+1 Diploma

The NYS CDOS Commencement Credential is a credential recognized by the NYS 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. Please access the following link for more information: <http://www.nysed.gov/news/2015/board-regents-approves-new-graduation-options>

Additional Diploma Accolades

Honors

Students who earn an overall average of a 90 or higher on the 5 required exams needed for a Regents Diploma receive an Honors Distinction. Students who earn an overall average of a 90 or higher on all 8 Regents exams needed for the NYS Regents Diploma with Advanced Designation receive an Honors Distinction.

Math and/or Science Seal

Students who earn an 85 or higher on 3 Math Regents exams will earn a Math Seal on the diploma. Students who earn an 85 or higher on 3 Science Regents will earn a Science Seal on the Diploma (note: one of the three must be the Living Environment exam).

Career & Technical Endorsement

Students who passed the 5 required Regents exams and passed the certification examination relative to their specific vocational field of study receive a CTE Endorsement Seal.

Specific to Students with Disabilities Accolade

NYS Career Development and Occupational Studies Commencement Credential:

- The student must have developed a Career Plan that includes documentation of the student's self-identified career interests, career-related strength and needs, career goals, and career and technical coursework and 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 students employability profile that documents the student's employability skills and experiences, attainment of each of the commencement level CDOS learning stands, and, as appropriate, attainment of technical knowledge and work-related skills, work experiences, performance on industry-based assessment and other work-related an academic achievements.

Appeal to Graduate with a Lower Score on a Regents Examination

Students who have a 65 course average but whose highest score on the corresponding Regents examination after two attempts is below, but within 5 points of 65 may appeal to graduate. If a student appeals one exam, with a score ranging 60-64, the student may be eligible for a Regents Diploma, using this lower score. However, if a student appeals two exams, with scores ranging 60-64, 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.

Alternatives to Regents Exams

- College Entrance Examination Board (CEEB's) SAT II's as appropriate.
- or
- Advanced Placement Tests as appropriate. Details for alternative testing requirements may be obtained from school counselor.

TASC (Formerly G.E.D.)

The NYS Department of Education has adopted the Test Assessing Secondary Completion (TASC) to replace the GED exam. TASC assesses five subject areas including Reading, Writing, Mathematics, Science, and Social Studies. The test has been nationally-normed and measures one's level of achievement relative to that of graduating high school seniors and readiness for college and the workforce as outlined by the Common Core State Standards. <http://www.wswhebores.org/AdultEducation.cfm?subpage=74>

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 most 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 requires that every student enrolled in these courses apply for college credit or take the AP exam or IB exam.

College in the High School (CHS) offerings:

All students enrolled in classes through SUNY Adirondack and/or Schenectady County 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: \$170*

Cost of similar courses at the same college: \$498

Course Title	Course College #	College Credits
CHS Graphic Design 1	ART 222	3
CHS Graphic Design 2	ART 252	3
CHS Photography	ART 104	3

SUNY Schenectady County Community College

Cost to high school student: None

Cost of similar courses at the same college: \$450-\$1064

Course Title	Course College #	College Credits
AP Biology	BIO 141/142	8
AP Physics	PHY 153/154	8
CHS Advanced Computer Applications	CIS 121/221	6
CHS American History Since 1877	HIS 229	3
CHS American History to 1877	HIS 227	3
CHS Astronomy – Exploring Space	AST 123	3
CHS College Algebra	MAT 148	3
CHS College Composition	ENG 123	3
CHS College Literature & Writing	ENG 124	3
CHS Drawing & Painting II	ART 128	3
CHS Intro to Acting	DRA 150	3
CHS Intro to Theater	DRA 123	3
CHS French – Level 3	FRE 121/122	6
CHS Mathematical Topics	MAT 145	3
CHS Mathematics for Business Finance	BUS 113	3
CHS Music Fundamentals I	MUS 147	3
CHS Government & Politics	POS 123	3
CHS Pre-Calculus	MAT 167	3
CHS Principles of Business Marketing	MKT 223	3
CHS/UHS Psychology	PSY 121	3
CHS Public Speaking	COM 105	3
CHS Spanish – Level 3	SPA 121/122	6
IB Environmental Systems & Societies	SL ENV 100	4

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

University in the High School (UHS) Offerings

Rochester Institute of Technology

Cost to high school student: \$225*

Cost of similar courses at the same college: \$3993

Course Title	College Credits
UHS/PLTW DDP	4
UHS/PLTW Civil Engineering & Architecture	4
UHS/PLTW Computer Integrated Manufacturing Systems	4
UHS/PLTW Digital Electronics	4
UHS/PLTW Principles of Engineering	4

SUNY University at Albany

Cost to high school student: \$150*

Cost of similar courses at the same college: \$810-\$1080

Course Title	Course College #	College Credits
AP Calculus AB/BC	AMAT 112	3
AP Statistics	AMAT 108	3
CHS/UHS Psychology	PSY 121	3
IB French SL Year 1	AFRE 221Y	4
IB French SL Year 2	AFRE 222Y	4
IB Spanish SL Year 1	ASPN 200	4
IB Spanish SL Year 2	ASPN 201	4
UHS French 4	AFRE 221Y	4
UHS French 5	AFRE 222Y	4
UHS Spanish 4	ASPN 200	4
UHS Spanish 5	ASPN 201	4

Syracuse University

Cost to high school student: \$448*

Cost of similar course at the same college: \$7276

Course Title	College Credits
UHS Forensics	4

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

Advanced Placement (AP) Offerings

Cost to high school student: \$92*

Course Title

AP Art Portfolio
AP Biology
AP Calculus AB
AP Calculus BC
AP Chemistry
AP Computer Science Principles
AP English 11 Literature & Composition
AP English 12 Language & Composition
AP Physics
AP Statistics
AP United States Government & Politics
AP United States History
AP World History II

International Baccalaureate (IB) Offerings

Cost to high school student per individual course: \$116*

Cost to Full Diploma Programme Candidate: None

Our partners at GLOBAL FOUNDRIES celebrate the alignment of their company's mission with that of the IB and fund all exam fees for full IBDP (International Baccalaureate Diploma Programme) students.

Course Title

IB Biology HL
IB Environmental Systems & Societies SL
IB French SL
IB History of the Americas HL
IB Language & Literature HL
IB Mathematical Studies SL
IB Mathematics SL
IB Music SL/HL
IB Physics HL
IB Psychology SL
IB Spanish SL
IB Theatre SL/HL
IB Visual Arts SL/HL

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

International Baccalaureate Diploma Programme

What is the Diploma Programme?

The International Baccalaureate Diploma Programme (IBDP) is a rigorous college-level program for motivated students in the last two years of high school. The program of study leads to exams in six different subject areas and is aimed at developing global citizens and life-long learners who are committed to serving their communities.

Profile of an IB Student

Students in the IB Diploma Programme strive to be:

- Inquirers
- Open-Minded
- Knowledgeable
- Caring
- Thinkers
- Risk-takers
- Communicators
- Balanced
- Principled
- Reflective

Why Choose IB?

The IB Diploma Programme at Ballston Spa High School prepares students to succeed in college and to effectively participate in an increasingly global society. The IBDP helps students become confident learners and critical thinkers who desire to create a better world through intercultural understanding and respect.

Want More Information About IB?

Visit the International Baccalaureate at www.ibo.org

Contact an IB Coordinator:

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The IB Curriculum

IB Diploma Programme students must choose one course from each of five subject groups including studies in language and literature, language acquisition, individuals and societies, the sciences, and mathematics. Furthermore, students must also choose either an arts course from the arts group or a second course from one of the other subject groups. All courses listed are two year courses unless noted otherwise.

Students must successfully complete three HL (higher level) and three SL (standard level) courses in two years.

IB Courses Offered at Ballston Spa High School

(See department pages for course descriptions)

Group 1: Studies in Language and Literature

English Language and Literature HL

Group 2: Language Acquisition

French SL

Spanish SL

Group 3: Individuals and Societies

History of the Americas HL

Environmental Systems and Societies SL (1 year course)

Psychology SL (1 year course)

Group 4: Experimental Sciences

Biology HL

Physics HL

Environmental Systems and Societies SL (1 year course)

Group 5: Mathematics

Math Studies SL (1 year course)

Mathematics SL (1 year course)

Group 6: Arts

Theatre SL/HL

Music SL/HL

Visual Arts SL/HL



Core Elements

To earn an IB Diploma, students must also successfully complete three required core elements, throughout the 2 year program of study. Completion of Theory of Knowledge and the Extended Essay account for up to 3 of the minimum 24 points that students must earn for a full diploma.

Creativity, Activity and Service (CAS)

2 Year **½ Credit (Pass/Fail)**
Grades 11, 12

Students engage in a range of self-selected extracurricular activities, including a project, which encourages Creativity, (i.e. engagement in the arts), Activity (i.e. participation in athletics) and Service (i.e. community and social service activities). Experiences cannot be obtained from other IB courses. In this self-propelled course, students will engage in systematic self-evaluations of their experiences in various formats (i.e. blogs, video, pictures, etc.).

Extended Essay (EE)

2 Year **1 Credit (Combined with TOK)**
Grades 11, 12

Students engage in independent research and write a 4,000 word essay on a topic of their choice. The extended essay gives the student an opportunity to explore a self-selected, academic topic in depth. Students begin the research process in the fall of their junior year, with the selection of a topic due early in the second semester. Final essays are submitted in the senior year. While students work under the guidance of the EE Coordinator and a teacher-mentor, the extended essay is written outside of the classroom on a student's own time. The International Baccalaureate Organization recommends that a student devote a total of about 40 hours of private study and writing time to the essay.

Theory of Knowledge (TOK)

2 Year **1 Credit (Combined with EE)**
Grades 11, 12

Students will explore the values and limits of knowledge in all subject areas and examine this fundamental question: How do we know what we know, and how reliable is the knowledge we possess? The course is organized primarily as a seminar discussion where students will practice writing, listening, and discussion skills. The course culminates in the writing of a 1200-1600 word essay which is submitted to the external IB examiners. Students are also required to conduct an oral presentation on a contemporary issue that is assessed by the instructor.

Facts & Figures

- 95% of IB Diploma Programme graduates in the US enroll in four-year institutions (60% national average).
- IBDP students not only do well academically while in high school, but also go on to perform well at the university level.
- University admissions officials say the IBDP is the best qualification for developing students' non-academic skills (independent inquiry, open-mindedness, global awareness, self-management skills) and preparing them for further education and careers.
- Studies find that the alumni of the IBDP attend top-ranking universities.
- 89% of IBDP students recommend that other students participate in the IBDP.
- IBDP alumni report the IB has profound, long-lasting effects on students' lives. It helps them develop critical thinking, analytical and writing skills and a broader world view. In addition, they point out that they earned advanced credits for university.

** Source: www.ibo.org*



IB Assessments

The IB Diploma Programme uses both internally and externally assessed components to assess student performance. In the IBDP, students receive grades ranging from 7 to 1, with 7 being the highest. Students receive a score for each exam attempted.

A student's final diploma result score is made up of the combined scores for each subject. The diploma is awarded to students who gain at least 24 points, subject to minimum levels of performance including successful completion of the three essential elements of the DP Core (EE, TOK and CAS).

Colleges and Universities Accepting Ballston Spa IB Diploma Programme Candidates

The IB curriculum is internationally recognized for its rigor and quality. Completion of the full Diploma Programme or of individual courses can give students advanced standing in college and an advantage in the college admissions process.

More than 1,000 colleges and universities in North America have recognition policies on how they weigh IB in admissions, advanced standing, college credit and scholarships.

Albany College of Pharmacy	Rochester Institute of Technology
American University	Siena College
Bard College	Skidmore College
Boston College	St. Lawrence University
Brandeis University	SUNY Albany
Brown University	SUNY Binghamton
Bryn Mawr College	SUNY Brockport
Clark University	SUNY Cortland
Clarkson University	SUNY ESF
Colgate University	SUNY Geneseo
College of the Atlantic	SUNY New Paltz
College of the Holy Cross	SUNY Oneonta
Connecticut College	SUNY Plattsburgh
Cornell University	SUNY Stony Brook
Dartmouth College	SUNY University at Buffalo
Drew University	Syracuse University
Florida Institute of Technology	Trinity College Dublin
Fordham University	Union College
George Washington University	University of Chicago
Georgetown University	University of Connecticut
Hamilton College	University of Delaware
Hobart and William Smith Colleges	University of Denver
Hofstra University	University of Florida
Ithaca College	University of Hartford
Marist College	University of Mass. Amherst
Marymount Mnhattan College	University of Miami
McGill University	University of Michigan
Muhlenberg College	University of New Hampshire
Nazareth College	University of New Haven
New York Conservatory for Dramatic Arts	Univ. of N. Carolina at Wilmington
Northeastern University	University of Rhode Island
Oberlin College	University of Rochester
Pennsylvania State University	University of Vermont
Providence College	Washington College
Rensselaer Polytechnic Institute	Williams College



Clean Technologies & Sustainable Industries

Early College High School

Number of Students: 256
 College Acceptance Rate: 100%
 Participating School Districts: 21

Program support includes:

- NYS Smart Scholars grant, NYS P-TECH grant, and corporate partner donations.
- The program provides equity and access for all students.
- Students earn concurrent high school and college credits each year.

2015 Post Secondary Majors

- Engineering (various)
- Sustainable Energy
- Criminal Justice
- Semiconductor Manufacturing
- Business Administration
- Biological Sciences
- Computer Science
- Environmental Sciences
- Architecture
- Biotechnology
- Pre-law

Scholarship Offerings:

- Astria Solutions
- Sage College
- 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.

Additional information about the program and its mission can be found at:
www.bscsd.org/cleanTech.cfm



The mission of the Clean Technologies & Sustainable Industries Early College High School (Clean Tech ECHS), a NYS Smart Scholars Program and 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:

- Clean Energy
- Computer Science & Information Systems
- Entrepreneurship, Leadership & Innovation
- Mechatronics

The Clean Tech ECHS program includes partners from K-12 education, higher education, and business & industry collaborating together to provide students a distinct opportunity to pursue coursework towards an Associate's 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.

Program Design Principles

The Clean Technologies & Sustainable Industries Early College High School believes that through a transdisciplinary approach to STEM teaching and 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:

- A week long Summer Academy for incoming 9th graders to be held on the TEC-SMART campus focused on community building, the Habits of Mind, and the engineering design process.
- Virtual Learning Program – 21st Century Skills focused on design projects and exploration of professional skills.
- Students are enrolled in high school coursework at their home schools.
- Monthly visits to TEC-SMART with peer and professional mentoring.
- Site visits at home schools by program staff.

The program includes the following for 10th grade:

- A week long 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 – Each module will focus on a particular pathway.
- Students are enrolled in high school coursework at their home school.
- Monthly visits to TEC-SMART with peer and professional mentoring.
- Job Shadowing.
- Site visits at home schools by program staff.
- HVCC College Coursework – one online course each semester taught by HVCC professors.

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

- Pathways of study focused on industry clusters that are fueling our economic development region:
 - Clean Energy
 - Computer Science
 - Semiconductor/Advanced Manufacturing (Mechatronics)
 - Innovation/Leadership/Entrepreneurship
- Students attend school at TEC-SMART for high school AND college classes in the morning; return to home school in the afternoon.

9th Grade: Summer Bridge Programming and
P-TECH 21st Century Skills – Impact of Technology on Society Course

10th Grade: Summer Bridge Programming,
P-TECH 21st Century College and Workplace Readiness and HVCC college coursework

**Pathway:
Clean Energy**

MKTG 120
Principles of Marketing

ECMN 120
Electrical Theory for Renewable Energy

ESY100
Introduction to Wind Energy

ECMN 210
Photovoltaic Theory and Design

BADM 110
Legal & Ethical Env. of Business

ECMN 211
Photovoltaic Installation and Maintenance

ECMN 190
Electrical Power Systems

College Math

**Pathway:
Computer Science &
Information Systems**

CISS 100
Introduction to Computer Inf. Science

CISS 110
Programming & Logic I

CISS 220
Intro. to Webiste Design and Development

CISS 111
Programming & Logic II – Data Structures

CMPT 115
Introduction to Business Analytics with Microsoft Excel

ENGL 101
English Composition

CISS 180
Robotics

College Math

**Pathway:
Mechatronics**

BADM 200
Business Communications

ECMN 120
Electrical Theory for Renewable Energy

SOCL 120
Cultural Diversity in American Society

CISS 105
IT Essentials (A+) PC Hardware and Software

ECON 101
Intro. to Microeconomics

ENGL 101
English Composition

ECMN 190
Electrical Power Systems

College Math

**Pathway:
Entrepreneurship,
Leadership &
Innovation**

MKTG 120
Principles of Marketing

ENTR 110
Introduction to Entrepreneurship

CMPT101
Computer Concepts and App 1

ENTR 120
Entrepreneurship Process

BADM 220
Statistics

BADM 207
Organization & Management

ENGL 125
Public Speaking

College Math

Full Matriculation into Higher Education Institution

Clean Technologies & Sustainable Industries

High School Course Descriptions

Students study Environmental Science and Sustainability, Mathematics, and English in blocks through a transdisciplinary lens to solve authentic real world problems during the junior year. The 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 –
Impact of Technology on Society**
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. At the end of the course students will prepare a portfolio demonstrating the 21st Century Skills they have developed. This course is a pass or fail class.

**P-TECH 21st Century College and
Workplace Readiness**
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 in each quarter. Students will be exposed to renewable energies, coding, 3-D Printing, and creating an invention. This course is a pass or fail class.

Environmental Science and Sustainability **HS2060**
Grade 11 **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 of the sustainability of human societies and of how the biodiversity that supports them require 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 Common Core Standards adopted by New York State in 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 Grade 11

HS2063
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. This course is for students who have successfully completed an English 10 course. Students will be prepared to take the English Comprehensive Regents exam.

English 12 Grade 12

HS2066
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. This course is for students who have successfully completed English 11 and have passed the English Regents Exam.

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 the world economies at a faster rate than was known to any previous generation. Green Economics and Public Policy examines economics 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 ethics, 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 which links government policy making with real life needs.

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 for course descriptions for the college courses.



Career and Technical Education

Ballston Spa High School offers courses in Career and Technical Education (CTE). CTE is a general heading which includes the following departments: Business, Engineering and Technology and BOCES/Education. Students may substitute of 5-unit credit sequence in CTE for the Foreign Language Requirement of the Regents Diploma with Advanced Designation. For a list of course descriptions, please visit: www.careerandteched.org.



Board of Cooperative Education – BOCES

Students in grades 11 and 12 may select any of the following course offerings at the F. Donald Myers Education Center if they have successfully completed 2 units of credit in English, Global History, Mathematics and Science and passed the required Regents exam for these classes.

Engineering/Technology

- Auto Body Repair
- Automotive Technology
- Construction Trades
- 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
- Environmental Conservation and Forestry
- Horse Care



Business

Students may use a 5-unit sequence in business to substitute for the Foreign Language requirement for a Regents Diploma with Advanced Designation. Schenectady County Community College has authorized our Business department to offer College in the High School (CHS) courses in Principles of Business Marketing, Computer Applications and Mathematics for Business Finance. All students enrolled in these courses are expected to register with SCCC for the college credit.

1/2 UNIT COURSES

Personal Finance **HS1713**
Grade 10, 11, 12 **Credit 1/2 Unit**
Final Assessment: Project

Personal Finance is an introductory course that will provide a foundation for informed decision making skills with regard to personal and financial decisions. The students will learn real world applications such as household income, money management, lines of credit, spending saving and investing. Students will design household budgets, simulate the use of checking accounts, evaluate investment options, and demonstrate the proper use of credit and determine insurance needs.

The Fashion Industry **HS1717**
Grade 10, 11, 12 **Credit 1/2 Unit**
Final Assessment: Project

The Fashion Industry is an introductory course that will explore the impact of the fashion industry on society. The students will learn the basic terminology and fundamentals of the fashion industry, an emphasis will be placed on the concepts of product development, manufacturing, wholesale markets, sales promotion, textiles, visual displays, distribution and fashion retail.

Hospitality and Tourism **HS1718**
Grade 10, 11, 12 **Credit 1/2 Unit**
Final Assessment: Project

Hospitality and Tourism is an introductory course that will explore the exciting and diverse industry of hospitality and tourism. The students will focus on various aspects of the industry with an emphasis on hotels, motels, restaurants, resorts, theme parks, gaming and other travel-related components. The course will also provide an overview of marketing, management, customer service principles and career exploration.

Sports Marketing and Management **HS1720**
Grade 10, 11, 12 **Credit 1/2 Unit**
Final Assessment: Project

Sports Marketing and Management is an introductory course that will explore the activities and organizations within the sports industry. The students will learn aspects of producing, promoting and organizing sport related businesses and products. This project-based course will also cover sponsorships and endorsements, facility and event management, collegiate and professional sports, and careers in the industry, including sports agents.

CEIP – Career Exploration Internship Program **HS1704**
Grade 12 **Credit 1/2 Unit**
(Pass/Fail)
Final Assessment: Project and Time Requirement

CEIP – Career Exploration Internship Program includes both an internship and seminar instruction. The purpose of the program is to provide hands on opportunities for students to learn about a potential career, and become informed, successful employees. It is a pass/fail course that requires 54 hours of internship experience and completion of independent assignments. Students will complete two unpaid internships in which their interests are considered when placements are assigned; however some career areas are limited and students must be willing to participate regardless. Seminars cover topics such as self-assessments, workplace safety, job searches, mock interviews, ethics in the workplace, and college selection. The independent assignments include creating a career portfolio, resumes, cover letters, letters of reference, and thank you letters. Requirements: computer access, current health physical, working papers, personal transportation to the internship site, and acceptance into the program (see application for criteria).

Introduction to CTE (Career and Technical Education)**CTE I: Introduction to CTE****(Career and Technical Education)****HS1721****Grade 9, 10****Credit 1/2 Unit****Final Assessment: School Exam**

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 work force skills during their work-based learning activities. Topics to be addressed include methods of communication, styles of leadership, the management processes, personal aptitudes and interests, and the responsibilities of various life roles for students as individuals and as contributing members of a community. It is important to note that this course requires student participation in work-based learning experiences.

CTE II: Introduction to CTE**(Career and Technical Education)****HS1721****Grade 9, 10, 11, 12****Credit 1/2 Unit****Final Assessment: School Exam****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 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. It is important to note that this course requires student participation in work-based learning experiences as scheduled.

1 UNIT COURSES**Accounting****HS1701****Grade 11, 12****Credit 1 Unit****Final Assessment: Project**

Accounting is a course designed to provide knowledge of business papers, office procedures and business practices in bookkeeping and accounting. The students will learn the skills to maintain ledger accounts and interpret financial data. Students will learn how debits and credits are used in the journalizing process; as well as the concepts of posting assets, liabilities, owner's equity, revenues, expenses, financial statements, and payroll.

Principles of Business Management**HS1702****Grade 11,12****Credit 1 Unit****Final Assessment: School Exam and Project**

Principles of Business Management is an introductory course that allows students to explore the diverse world of business, its structure and its impact upon society. Students will learn the basic principles of management including the environment of business, forms of business ownership, laws governing business, production, marketing, financial management, human resource management, leadership, and other management responsibilities.

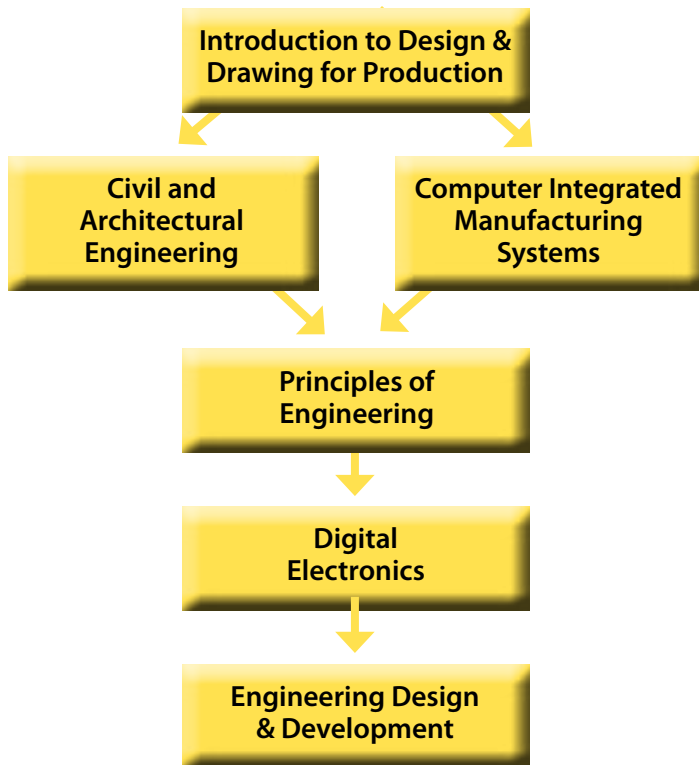
**CHS Principles of Business Marketing
(College# Mkt 223)****HS1710****Grade 11, 12****Credit 1 Unit****Final Assessment: School Exam and Project**

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 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 with NO tuition charges. 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 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

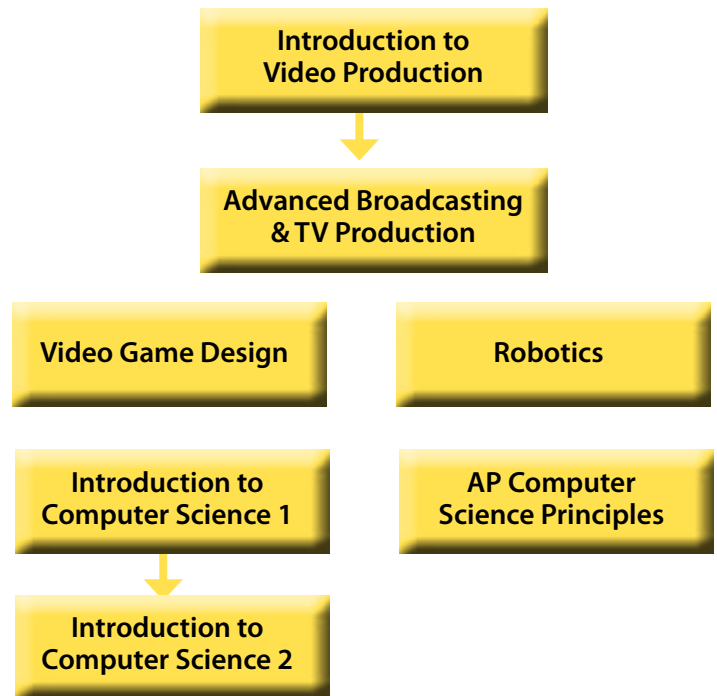
Engineering and Technology

Recommended Pathways in Technology

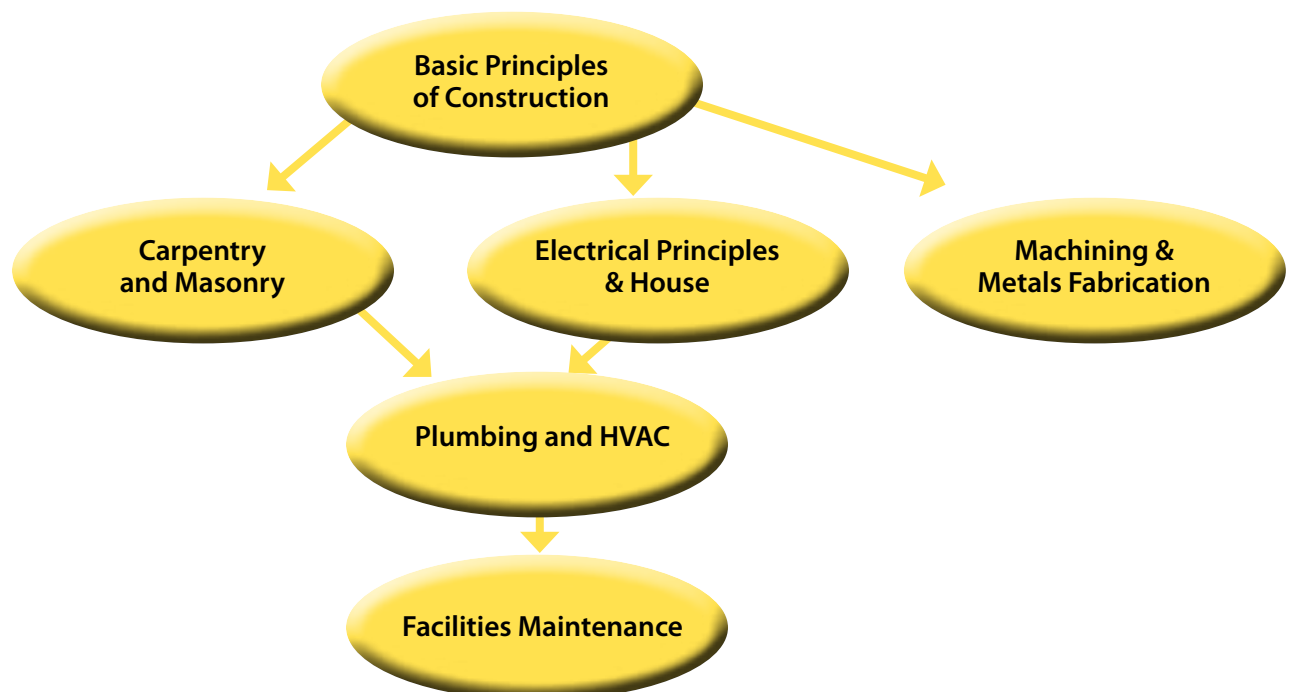
Pre-Engineering Strand



Computers and Communication



Construction Strand



**CHS Mathematics For Business Finance HS1712**
(College# Bus 113)**Grade 11, 12****Credit 1 Unit****Final Assessment: School Exam**

CHS Mathematics For Business Finance 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. Students are strongly encouraged to successfully complete three years of mathematics prior to enrolling in this course. 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 with NO tuition charges. 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 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

CHS Advanced Computer Applications
(College # CIS 121/221)**HS1901****Grade 11, 12****Credit 1 Unit****Final Assessment: School Exam**

CHS Advanced Computer Applications introduces the student to fundamental concepts of computers and computing including number systems, hardware, architecture, information processing, operating systems, networks (including the Internet) and web design. Additionally, students will complete significant projects utilizing contemporary word processing, spreadsheet, and presentation graphics software. Fundamentals of programming will be explored using modern programming languages. This course also provides students with the opportunity to increase their knowledge of several components of the Microsoft Office suite of software applications. Upon completion of this course, students will be prepared to test as certified Microsoft Office User Specialists. 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 with NO tuition charges. 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 6 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.



Engineering and Technology

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 may complete a 5-unit sequence in Technology as a substitute for the Foreign Language requirement necessary for a Regents Diploma with Advanced Designation. Principles of Engineering (POE) or Digital Electronics (DE) may be used to fulfill the third year of Science required for graduation.

Ballston Spa High School participates in Project Lead the Way (PLTW), a pre-engineering program that awards college credit for the work students complete in high school, to prepare more of our students for careers in STEM. Courses are indicated as part of this program in this course description handbook if the title of the course is followed by 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 score at least a 6 on the PLTW end of course assessment are eligible to apply for 4 college credits from (RIT). STEM foundational course sequence in Engineering is: DDP, DE, and POE.

Many of the courses in the Construction Strand on Residential Construction allow students to earn national certifications if they pay for and successfully pass a test at the end of the course.

Students interested in pursuing college studies or careers in Engineering and Technology have a wide variety of opportunities in course work. In addition, the Technology Club, Robotics Club and Communication Club are available for students to expand and apply their knowledge and talents outside the classroom.

Construction Strand

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. Students are encouraged to register and pay for the national online certification exam. Successful completion of the course and a passing score on the national online certification exam will result in students earning a nationally recognized certificate that demonstrates their knowledge.

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 Basics Principles of Construction course and covers the essentials of residential construction, carpentry and masonry. Student will learn about tools and materials, rough carpentry and exterior and interior finish carpentry ensuring professional success on any jobsite. 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 are encouraged to register and pay for the national online certification exam. Successful completion of the course and a passing score on the national online certification exam will result in students earning a nationally recognized certificate that demonstrates their knowledge.

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 course that builds on the Basics of Residential 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. Students are encouraged to register and pay for the national online certification exam. Successful completion of the course and a passing score on the national online certification exam will result in students earning a nationally recognized certificate that demonstrates their knowledge.

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, materials 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****(Available 2018-2019)****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 Basics of Residential 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, 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. Students are encouraged to register and pay for the national online certification exam. Successful completion of the course and a passing score on the national online certification exam will result in students earning a nationally recognized certificate that demonstrates their knowledge.

Facilities Maintenance**HS1715****(Available 2018-2019)****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. Students are encouraged to register and pay for the national online certification exam. Successful completion of the course and a passing score on the national online certification exam will result in students earning a nationally recognized certificate that demonstrates their knowledge.

Pre-Engineering Strand

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 score at least a 6 on the PLTW end of course assessment are eligible to apply for 4 college credits from Rochester Institute of Technology (RIT). This course can fulfill the NYS requirements for 1 unit in Art or Music.

UHS/PLTW CIMS (Computer Integrated Manufacturing Systems) HS1680
Grade 9, 10, 11, 12 Credit 1 Unit
Final Assessment: End of Course Assessment & Project
Recommended Achievement Levels:
Successful completion of 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 score at least a 6 on the PLTW end of course assessment are eligible to apply for 4 college credits from Rochester Institute of Technology (RIT).

UHS/PLTW Civil Engineering & Architecture HS1655
Grade 9, 10, 11, 12 Credit 1 Unit
Final Assessment: End of Course Assessment & Project
Recommended Achievement Levels:
Successful completion of 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 learn 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 score at least a 6 on the PLTW end of course assessment are eligible to apply for 4 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
Recommended Achievement Levels:
Successful Completion of 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 score at least a 6 on the PLTW end of course assessment are eligible to apply for 4 college credits from Rochester Institute of Technology (RIT). This course may count for the third year of Science required for high school graduation.

UHS/PLTW Digital Electronics

Grade 10, 11, 12

HS1653

Credit 1 Unit

Final Assessment: End of Course Assessment & Project*Recommended Achievement Levels: Successful**Completion of UHS/PLTW DDP and Algebra*

Digital Electronics is a full year course that explores basic uses for circuit instrumentation like meters, oscilloscopes, and logic probes. Introductory circuit analysis, discrete electronic components, integrated circuits, and their applications in electronic circuits will be studied. High reliability soldering techniques are introduced. Students learn to build circuits in the laboratory and on computer simulations. Students will fabricate a practical application of digital electronics for a semester project. Because of the intrinsic math component of the course, completion of Algebra is strongly recommended. This course culminates with a final project and an end of course assessment. Students who maintain an 85% average in this course and score at least a 6 on the PLTW end of course assessment are eligible to apply for 4 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

Grade 12

Credit 1 Unit

Final Assessment: School Exam

Engineering Design and Development is a full year course that applies the principles developed in their preceding Project Lead The Way courses. Students will work in teams of two to four to 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 team and approved by the teacher. The problems will involve a wide range of engineering applications. Each team 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 students apply to college. This course culminates with an engineering notebook and portfolio of the designed solution.

Computers and Communications Strand

Introduction to Video Production**HS1658**

Grades 9, 10, 11, 12

Credit 1/2 Unit

Final Assessment: Project

Introduction to Video Production is a semester long course designed to teach students the necessary skills to produce digital videos. Students will learn various shot sizes & angles, and when to use them. Students will experience each phase of production including: writing, planning, shooting, editing; for a news story, a talk show, and a scripted short film.

Advanced Broadcasting & TV Production HS1661

Grades 9, 10, 11, 12

Credit 1/2 Unit

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

Advanced Broadcasting & TV Production is a semester long course where students will spend a half year developing and producing their own TV show to be aired on YouTube. The course will cover the production process from concept through post-production allowing students to create a show that is entirely their own.

Introduction to Robotics**HS1679**

Grade 9, 10

Credit 1/2 Unit

Final Assessment: Portfolio

Robotics is a semester long 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 complete as a class in the FIRST Tech Challenge competition.

Drawing and Video Game Design**Grade 9, 10, 11, 12****Final Assessment: School Exam***Prerequisite: Studio in Art or UHS/PLTW DDP***HS1522****Credit 1 Unit**

Drawing and Video Game Design is an introductory class designed to give students proficiency in game design and development. Students will learn about game design from the perspective of both the artist and the engineer. Students will create original computer art and will program all aspects of the game. Students are expected to design and create a working game each quarter.

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

This one semester course is offered in striving to introduce our students to the field of computer science. We will encourage collaboration and presentation using the available tools of Google 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****HS1905****Credit 1/2 Unit**

A one 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 latter computer science classes such as AP CSP or introductory computer science in college. There is potential to explore Mobile programming based on time and enrollment.

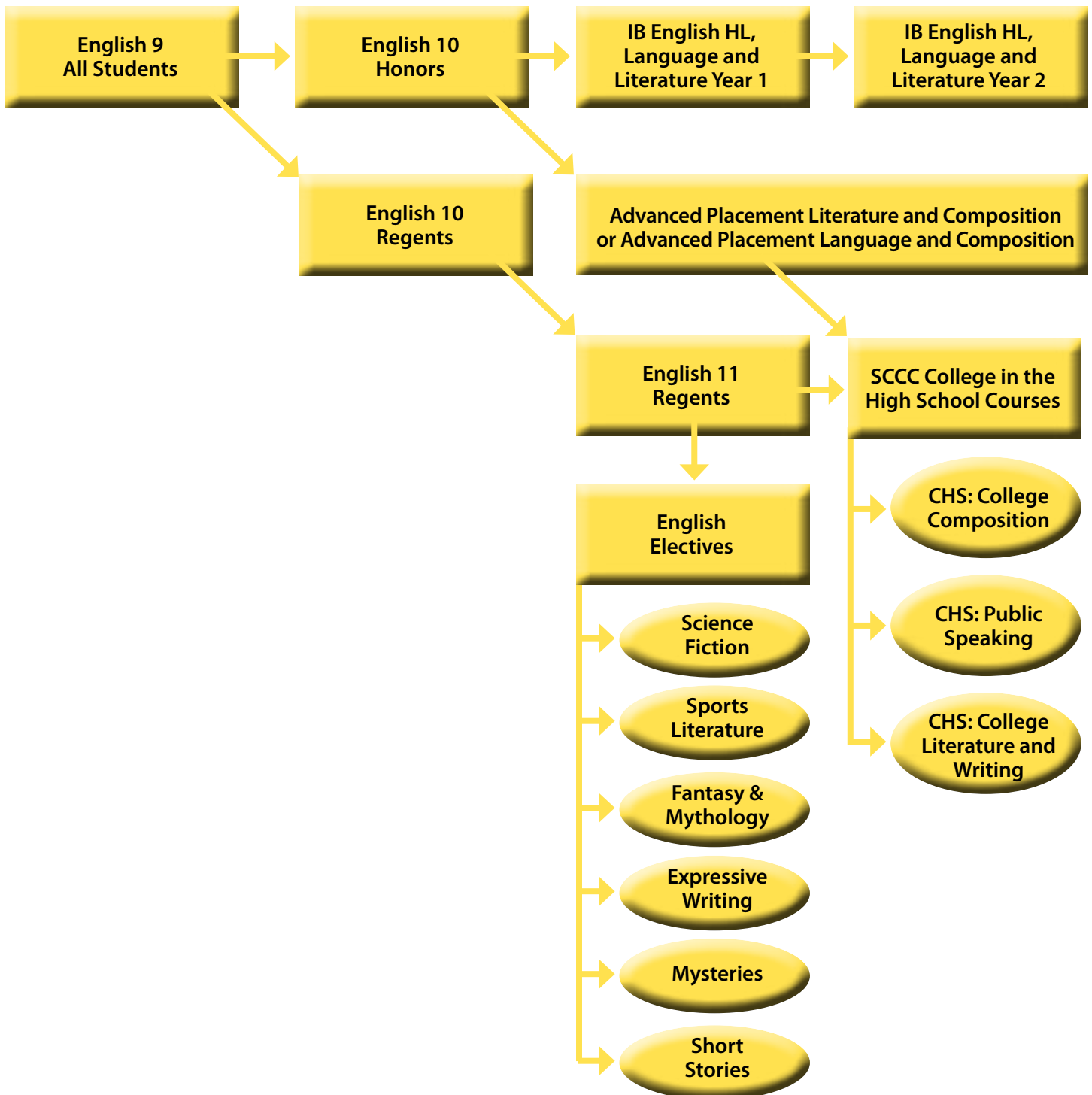
AP Computer Science Principles**Grade 10, 11, 12****Final Assessment: School Exam***Prerequisite: Geometry***HS1906****Credit 1 Unit**

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 (Common Core). 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 course requires extensive reading outside of class, introduces students to the 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 will incorporate the New York State Common Core standards, and it will provide practice for the tasks that will be addressed on the COMPREHENSIVE ENGLISH REGENTS examination. 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. There will be several sections of English 9 taught in collaboration with an artist-in-residence from Proctor's Theater that incorporates media production and development in a project-centered course to meet the English 9 standards. Recommended students will receive more information.

English 10 Honors

Grade 10

Final Assessment: School Exam

Prerequisite: English 9 Regents

Recommended Achievement Levels: 90 or better for English 9 Regents course work and final exam

HS1102

Credit 1 Unit

English 10 Honors course is designed for highly motivated students who have a strong interest in reading, writing and critical analysis. Students will read complex literary and non-literary 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 will be stressed.

Students will be expected to work independently, and they must be responsible and capable of taking ownership of their learning. Students intending to enroll in AP or IB English classes in their 11th and 12th grade years should take this class. Students will be required to complete a summer reading and writing assignment. A comprehensive exam will be given at the end of the 1st and 2nd semesters.

English 10 Regents

Grade 10

Final Assessment: School Exam

Prerequisite: English 9 Regents

HS1101

Credit 1 Unit

English 10 Regents course concentrates on the mastery of a variety of composition forms, comprehension of literature, application of literary techniques, and extensive vocabulary development. This course will incorporate the New York State Common Core standards. Students will practice tasks that will be addressed on the NYS Regents Examination in English Language Arts (Common Core), as well as complete an extensive historical fiction research project. Students are expected to assume a high degree of personal responsibility for their own learning outside of class. This class is for all students who have successfully completed English 9R. A comprehensive exam will be given at the end of the 1st and 2nd semesters.

English 11 Regents

Grade 11

Final Assessment: NYS Regents

Prerequisite: English 10 Regents

HS1105

Credit 1 Unit

English 11 Regents course 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. This course is for all students who have successfully completed an English 10 course. All students must take the NYS Regents Examination in English Language Arts (Common Core). Four credits in English are also required for all students. Students will spend considerable time at the end of the second semester reviewing for the NYS Regents Examination in English Language Arts (Common Core).

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.

AP English Literature and Composition is a rigorous course requiring extensive weekly outside reading and writing assignments. Throughout the course, students will engage in complex, critical analysis of American Literature. The course not only emphasizes preparation for the AP Literature exam, but also provides the foundations of college level literary research. Students will be expected to thoroughly research each assigned text, considering the text's social and historical influences, author biography, and critical response. At this level of interpretation, students will be expected to craft original thesis statements while also framing their written analysis in the larger context of published literary criticism. All their arguments must be well-supported, their research thoroughly documented, and their language artfully crafted. The course is designed for highly motivated students who have a strong interest in reading, writing and critical analysis. Students will be prepared for the required AP Literature exam given in May. 11th grade students will also be required to take the NYS Regents Examination in English Language Arts (Common Core).

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.

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, and they will 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. Students will be prepared for the required AP Language and Composition exam given in May.

IB Language and Literature HL Year 1 IB1130
Grade 11 **Credit 1 Unit**
Final Assessment: NYS Regents

IB Language and Literature HL is the first course in a two-year program of advanced English studies. The course examines how language develops in specific cultural contexts, how it impacts on the world, and how language shapes both individual and group identity. Students will read literary and non-literary texts in order to develop the skills of close reading and textual analysis. Helping students to focus closely on the language of texts they study and to become aware of the role of each text's wider context in shaping its meaning is central to the course. Emphasis will also be placed on the writing process, and students will have the opportunity to complete essays of considerable depth and breadth. This course is designed for highly motivated students who have a strong interest in reading, writing and critical analysis. Students will take the NYS Regents Examination in English Language Arts (Common Core) in June. Students will be required to complete a summer reading/writing assignment.

IB Language and Literature HL Year 2 IB1131
Grade 12 **Credit 1 Unit**
Final Assessment: School Exam

Prerequisite: IB Language and Literature HL Year 1

IB Language and Literature HL is the second course in a two-year program of advanced English studies. The course examines the way language is used in the media (news-papers, magazines, internet and film). The course also includes the compulsory study of a translated text which will encourage students to reflect on their own cultural assumptions. Students will read literary and non-literary texts in order to further develop their close reading skills. As in the previous year, students will have multiple opportunities to hone their writing skills. Argumentation and persuasion – a key rhetorical mode for college writing – will be emphasized. This course is designed for highly motivated students who have a strong interest in reading, writing and critical analysis. The curriculum will prepare students for the IB assessments. Students will be required to complete a summer reading/writing assignment.

1/2 UNIT COURSES

All fall English courses will spend time working on writing application essays.

CHS College Composition**HS1126****(College # Eng 123)****Grade 12****Credit 1/2 Unit****Final Assessment: School Exam**

Prerequisite: English 11 Regents or AP English 11 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 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 with NO tuition charges. 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 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

CHS College Literature and Writing**HS1120****(College # Eng 124)****Grade 12****Credit 1/2 Unit****Final Assessment: School Exam**

Prerequisite: Successful completion of CHS College 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 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 with NO tuition charges. 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 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

CHS Public Speaking**HS1123****(College # Com 105)****Grade 12****Credit 1/2 Unit****Final Assessment: School Exam**

Prerequisite: English 11 or AP English 11

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 experience 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 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 with NO tuition charges. 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 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

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. They will study the writing process, with an emphasis on revision. 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 a research project on a myth of their choice, and they will read 3 full-length fantasy novels.

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 such as reading 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.

SAT Prep Math and Verbal**Grade 11, 12****Credit 1/2 Unit (Pass/Fail)****HS2263**

SAT Prep Math and Verbal is offered by both the Mathematics and English departments. Instruction is based on the individual areas tested on college entrance examinations. The instructors will use review books, practice

tests and the school's computer resources. (This course is not approved by NCAA.)

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 to demonstrate an in-depth understanding of the genre. (This course is not approved by NCAA.)

Short Stories**Grade 11, 12****Final Assessment: School 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; they will examine how a sports team can influence and reflect the history, politics, values, stereotypes, and expectations of a society. Students will read a variety of fiction and non-fiction, news and magazine articles, and short stories. Writing assignments, including journals and longer analytical responses to the readings, are required. 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 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.

Music In Our Lives

Grade 9, 10, 11, 12

Final Assessment: School Exam

HS1526

Credit 1 Unit

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.

Concert Band

Grade 8, 9

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

Grade 10, 11, 12

Final Assessment: School Exam and Portfolio Assessment

Prerequisite: One Year of Concert Band

HS1525

Credit 1 Unit

Wind Ensemble is a 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.

CHS Music Fundamentals I

(College # MUS 147)

Grade 9, 10, 11, 12

Final Assessment: School Exam, Performance Journal

Prerequisite: Musical Training, Experience in Music Performance

HS1553

Credit 1 Unit

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 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 with NO tuition charges. 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 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

Music Fundamentals II**Grade 11, 12****HS1536****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.

IB Music SL/HL Year 1**Grade 11, 12****IB1563/IB1553****Credit 1 Unit****Final Assessment: School Exam, Performance Journal***Prerequisite: Music Fundamentals I*

IB Music SL/HL 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. Projects comparing and contrasting musical pieces from different cultures are preparation for the IB External Examination, which takes place in May of the second year of IB Music. Discussions of how music affects our world; and how our world is affected by music will be a big 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 the first year of this two year course will begin to prepare for the

Internal Assessment of the IB Exam - one of either 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 year 1 will be based on the projects assigned, and a local final exam.

IB Music SL/HL Year 2**Grade 12****IB1564/IB1556****Credit 1 Unit****Final Assessment: School Exam, Final Project and Performance Journal***Prerequisite: IB Music SL/HL Year 1 or Music Fundamentals II*

IB Music SL/HL is the second year of IB Music and is designed to prepare students for the Internal and External Assessments. Further study of Music Theory and Music History will take place, as well as more intense study of world music. This course will offer in-depth, college level analysis of western classical and non-western world music. The following IB requirements will be met: Musical Investigation (a written work of 1,200 to 1,500 words), performance requirements - solo performance for HL, or solo or group performance for SL and creating-composition, and preparation for the exam in May.

Concert Chorus**Grade 8, 9, 10****HS1535****Credit 1 Unit****Final Assessment: Performance, Sight Singing, and Written Evaluation****Final Assessment: Performance, Sight Singing and Written Evaluation**

Concert Chorus is a performance based course that is designed for students that want to sing in an ensemble. Basic sight reading, vocal technique, basic music theory skills are studied. Students are evaluated on sight-reading and part-singing every quarter. Willingness to participate in performances is needed. Attendance at all concerts is part of the course requirement. Choir is a performance based course that is designed for students who have ongoing instruction in choral singing and want to sing in a NYSSMA Level IV-VI ensemble.

**Festival Choir****HS1510****Grade 9, 10, 11, 12****Credit 1 Unit****Final Assessment: Multiple Performances, Sight Singing, and Written Evaluation**

Prerequisite: At least one year of previous choir singing experience, ability to match pitch, and strong understanding of vocal technique and breath support

Festival Choir is a high-performance based 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. 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.

Applied Music**HS1502****Grade 9, 10, 11, 12****Credit 1/2 Unit****(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

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.

Concert Orchestra**HS1521****Grade 8, 9****Credit 1 Unit****Final Assessment: School Exam and Portfolio Assessment**

Concert Orchestra is a performance based course that is designed for students who have had ongoing instruction on traditional orchestra instruments. 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**HS1551****Grade 10, 11, 12****Credit 1 Unit****Final Assessment: School Exam and Portfolio Assessment**

Prerequisite: One Year of Concert Orchestra

Symphonic Orchestra is a performance based 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.



Fine and Performing Arts – Theatre

Successful completion of Introduction to Theatre 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.

**It's important to remember that your communication skills will help you throughout your entire life. Take the time now to perfect them. Taking a theatre course is helpful in developing these communication skills through verbal language as well body language. You can learn how to best present yourself and express yourself!*

CHS Introduction to Theatre

HS1569
Grade 9, 10, 11, 12
Credit 1 Unit
Final Assessment: Performance Based Final Project

Introduction to Theatre is a full year course that will include study and practical application of performance skills and character development, as well as study of scenic, costume, and lighting design. Directing, stage managing and acting will also be studied and speakers in many of these fields will act as resources for skill development. Dramatic criticism and playwriting will also play a major role in this course. (This course may potentially become a CHS course through SCCC)

CHS Introduction to Acting

HS1568
Grade 11, 12
Credit 1 Unit
Final Assessment: Performance Based Final Project
Prerequisite: Introduction To Theatre

Introduction to Acting is a full year course that will explore the many methods of acting. Students will refine communication skills through verbal Language as well as body language. History of acting and different types of literature are included in this performance-based class. (This course may potentially become a CHS course through SCCC.)

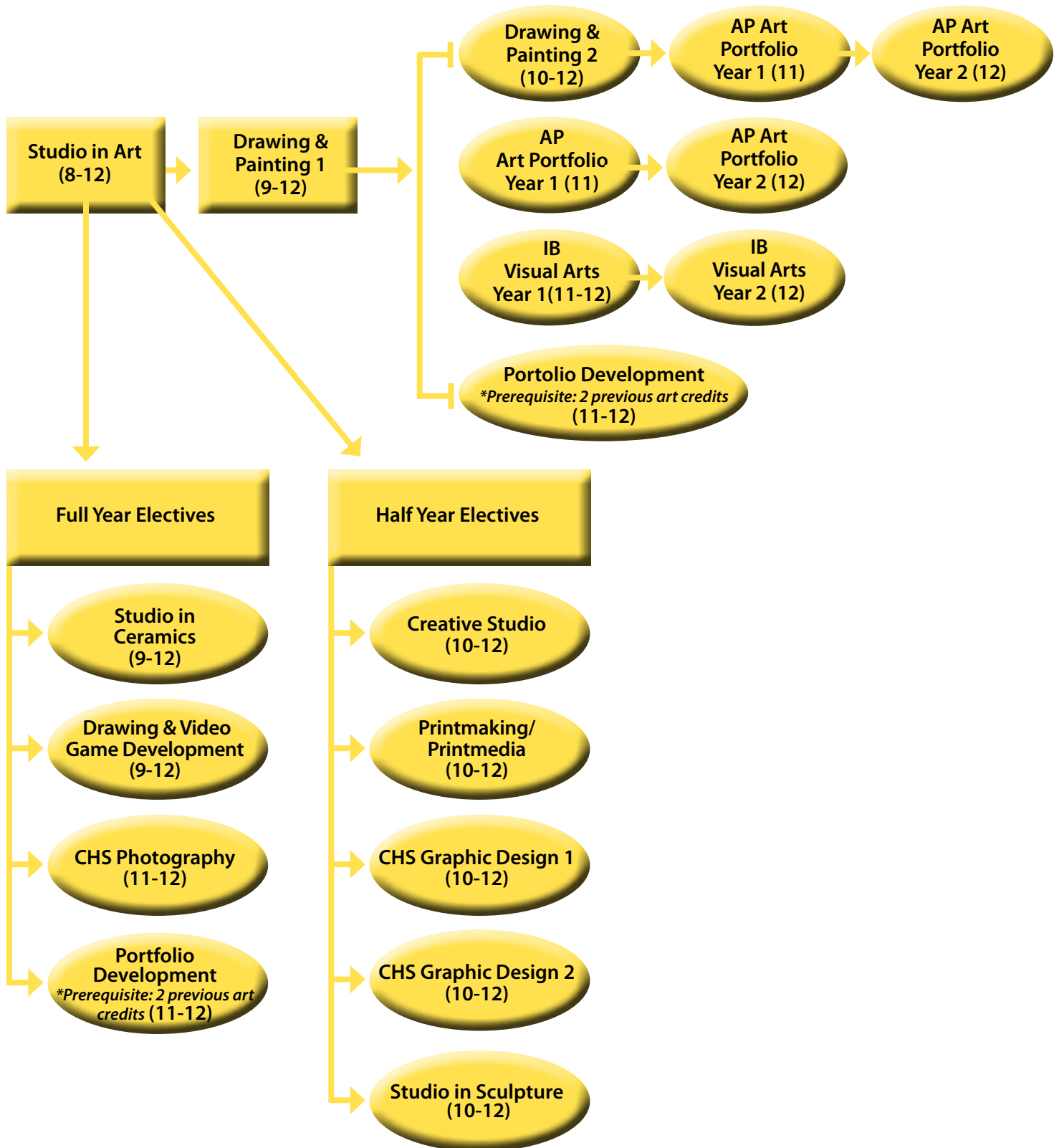
IB Theatre Arts SL /HL

IB1558/IB1561/IB1559/IB1562
Grade 11, 12
Credit 1 Unit Per Year
Final Assessment: Year 1 – Performance Portfolio
Year 2 – IB Assessment

IB Theater Arts SL or HL is a two-year course, which, at the discretion of the IB learner, can be taken at the Standard Level (SL) or the Higher Level (HL) provides a balance of practical theatre experience and analysis of theatre literature and history. Students will be involved in performance technique workshops as well as stage craft workshops. Literature and history study will include an exciting array of international plays in their historical context. At Standard Level, students will complete an independent project that is largely self-motivated, directed and practical in nature; prepare an independent project portfolio in 2000 words that demonstrates the dynamic stages of a creative process; present a 20 minute oral theatre performance and production presentation based on research of two theatre traditions; and write a 1,500-1750 word research investigation paper discussing a specific aspect of a theatre piece. At Higher Level, students will complete an independent project that is largely self-motivated and directed and practical in nature; prepare an independent project portfolio in 3000 words that demonstrates and integrates research and practice of the dynamic stages of a creative process, present a 30 minute oral theatre performance and production presentation based on applied research of two theatre traditions; and write a 2,000-2,500 word research investigation paper discussing a specific aspect of a theatre piece. Students at HL are required to write a critique of the sources used in the research investigation. This class is designed for inquiring, open-minded, risk-taking, principled students interested in a balanced and reflective experience with theatre.

Fine and Performing Arts – Visual Arts

Recommended Pathways in Art (Grade Requirements in Parentheses)



Fine 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

HS1558

Credit 1/2 Unit

Graphic Design is a semester 2D media course emphasizes 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 the guidance office. Upon successful completion of the course with a C or better students will receive 3 credits from SUNY Adirondack.

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

This course explores the creative possibilities of multiple software applications currently used in the graphic arts field. Class instruction, demonstrations, and exploration prepare students to create a series of electronic images and digital illustrations. Students are encouraged to explore topics and conceptual themes related to their personal interests. 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. Students will also participate in group discussions and critiques. Eligible students will complete an application and submit payment and Certificate of Residency to the guidance office. Upon successful completion of the course with a C or better students will receive 3 credits from SUNY Adirondack.

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 two year course which begins junior year. Students learn to create original 2-dimensional artwork using advanced skills and techniques based on their personal interests. 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.

Drawing and Painting I

Grade 9, 10, 11, 12

Final Assessment: Final Assessment

Prerequisite: Studio in Art

HS1514

Credit 1 Unit

Drawing and Painting I is a foundation 2-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. 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.

CHS Drawing and Painting II **HS1515**
(College # Art 128)
Grade 10, 11, 12 **Credit 1 Unit**
Final Assessment Project Based
Prerequisite: Studio in Art, Drawing and Painting I

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 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 with NO tuition charges. 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 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

Printmaking /Printmedia **HS1520**
Grade 10, 11, 12 **Credit 1/2 Unit**
Final Assessment: Project
Prerequisite: Drawing and Painting I

Printmaking or Printmedia will enable the student to recognize the major printing and layout techniques as well as traditional techniques for the production and communication of ideas. Print-media is a semester long class with a pre-requisite of the student's successful completion of Drawing & Painting 1. Students are expected to have and use a sketchbook throughout the duration of the class. Students will be guided through a scaffolding program which includes historical, cultural and conceptual aspects of printmaking. Basic elements of Art and

principles of design will be stressed along with an overview of a wide range of techniques with a closer introduction to four: Monoprint, Reduction, Collagraph, and Stencil. Class activities are project based and give students an opportunity to effectively experiment with a variety of materials and practice art fundamentals while learning technical skills in Printmaking. In order to succeed in this class, students must meet the required criteria given for all assignments, be prepared to question and critique their own work as well as the work of other artists. Upon completion of this course, students will have completed the following:

- Develop vocabulary of printmaking terms and techniques.
- Develop an understanding of the principles of design and composition in relation to the printmaking process
- Organize printing procedures in a logical/ sequential manner.
- Compare and contrast printing techniques.
- Develop critique criteria and words in printmaking techniques.

Studio in Ceramics **HS1508**
Grade 9,10,11,12 **Credit 1 Unit**
Final Assessment: School Exam/Project

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.

CHS Photography **HS1552**
(College # Art 104)
Grade 11, 12 **Credit 1 Unit**
Final Assessment: Final Assessment
Prerequisite: Studio In Art

Introduction to 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 a form of 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. Students are responsible for purchasing 35 mm black and white film (Ilford or

Kodak) and photo paper. Eligible students will complete an application and submit payment and Certificate of Residency to the guidance office. Upon successful completion of the course with a C or better students will receive 3 credits from SUNY Adirondack.

Drawing and Video Game Design **HS1522**
Grade 9, 10, 11, 12 **Credit 1 Unit**
Final Assessment: School Exam
Prerequisite: Studio in Art or Drawing and UHS/PLTW DDP

Drawing and Video Game Design is an introductory class designed to give students proficiency in game design and development. Students will learn about game design from the perspective of both the artist and the engineer. Students will create original computer art and will program all aspects of the game. Students are expected to design and create a working game each quarter.

Studio in Sculpture **HS1523**
Grade 10, 11, 12 **Credit 1/2 Unit**
Final Assessment: Final Project
Prerequisite: Studio in Art

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.

IB Visual Arts SL/HL, Year 1 **IB1550/IB1554**
Grade 11 **Credit 1 Unit**
Final Assessment: Final grade will be a combination of formal portfolio of artwork and the Visual Arts Investigative workbook
Prerequisite: Successful completion Drawing & Painting I

IB Visual Arts SL/HL is an advanced level art course that will allow students to develop a comprehensive portfolio of student work. Students can expect to work with a variety of artistic mediums including, drawing, painting, printmaking, mixed media, digital media and sculpture. This work will showcase and relate to many forms of art in their many social, cultural and historical contexts, while encouraging a global view of the art world around them. In addition, students will enhance their study and creation of

art through the research and writing of art history. Student growth will also be evident through a detailed use of the Visual Arts Investigative Workbook. This workbook will serve as a personal record of knowledge and growth as students will develop their ideas, techniques, visual organization, and most importantly a written record of their self reflection. Student work will conclude with an external review of their well developed portfolio of artwork, Investigative Workbook and a final interview with an IB examiner. In this interview, students can expect to fully explain the development of their inspiration, ideas, process and final work.

IB Visual Arts SL/HL, Year 2 **IB1551/IB1555**
Grade 12 **Credit 1 Unit** **Final Assessment:**
Final grade will be a combination of formal portfolio of artwork and the Visual Arts Investigative workbook
Prerequisite: Successful completion of IB Visual Arts, year 1

IB Visual Arts SL/HL is the second year of IB Visual Arts and will allow students to continue higher level development of a competitive portfolio of advanced student artwork. Students can expect in depth work with a variety of artistic mediums and look to refine their ideas and processes from their work in the SL course. Students will continue to showcase and relate to many forms of art in numerous social, cultural and historical contexts, while encouraging a global view of the art world around them. In addition, students will continue to enhance their study and creation of art through the research and writing of art history. Student growth will advance from year 1 and be evident through a detailed use of the Visual Arts Investigative Workbook. This workbook will serve as a personal record of knowledge and growth as students will develop their ideas, techniques, visual organization, and most importantly a written record of their self reflection. Student work will conclude with an external review of their well developed portfolio of artwork, Investigative Workbook and a final interview with an IB examiner. In this interview, students can expect to fully explain the development of their inspiration, ideas, process and final work.

Creative Studio**Grade 10, 11, 12****Final Assessment: Project Based***Prerequisite: Studio in Art***HS1540****Credit ½ Unit**

Creative Studio is a half year 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 2D and 3D works of art. The learning artist will plan, implement, and evaluate their experiences and creative focus.

**Portfolio Development****Grade 11, 12****Final Assessment: Portfolio Review***Prerequisite: 2 previous art credits and teacher recommendation***HS1541****Credit ½ Unit**

Designed for students who wish to prepare for art schools or other advanced study in the arts. Students in this course will complete a visual portfolio that consist of 12-20 pieces of their best work. Portfolios should consist of five works from observation. In addition, portfolios should contain a variety of media and approaches that include assignment-based projects, self-directed work or pieces of collaborative nature. Portfolios will be developed on an individual basis according to the college or career the student is considering. This course will assist with portfolio, video, slide and photographic requirements for entry and scholarship opportunities.



Health

All students must earn ½ credit in Health Education to meet the New York State requirement for graduation.

Health Education

Grade 10, 11, 12

HS1352

Credit 1/2 Unit

Final Assessment: School Exam and Project

Health is a semester course that is required by New York State for High School graduation. 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

HS1388

Credit 1/2 Unit

Final Assessment: Project

Health is a 1/2 credit course that is required by New York State for High School graduation. This rigorous online option is ideal for highly organized, conscientious, independent learners. 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 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, the online learning platform. Only students who are unable to fit Health Education in the typical classroom setting in their schedule will be considered.

Basic Principles of Nutrition

Grade 10, 11, 12

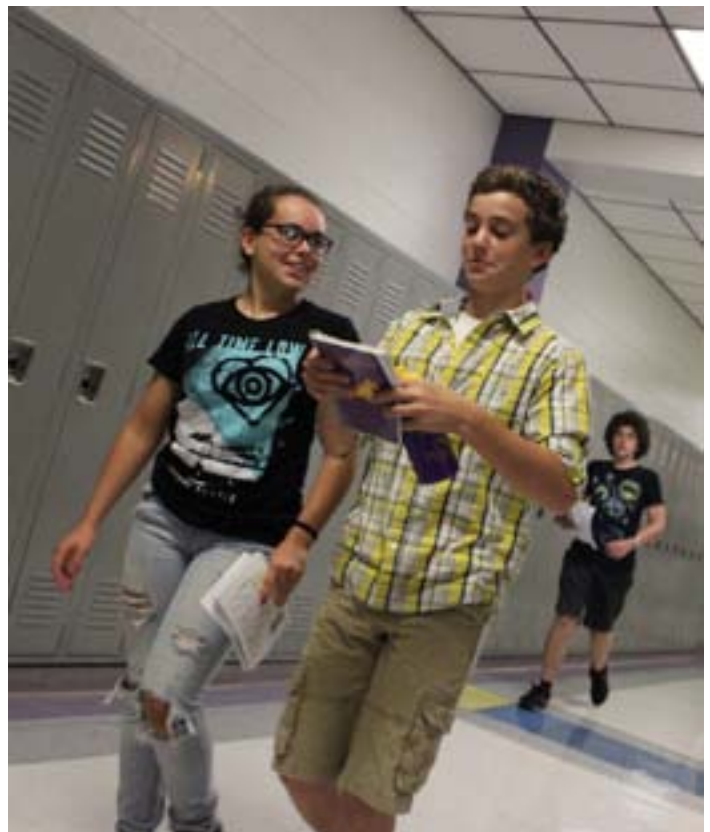
HS1387

Credit 1/2 Unit

Final Assessment: Project

Prerequisite: Biology (Final Average Above 85) and Health (Final Average Above 90)

Basic Principles of Nutrition is a semester science course that introduces the role of nutrition in health maintenance. Students will learn food sources, functions and the interrelationships of the six major nutrient categories, as well as, energy requirements and balance. It also includes the principles of nutrient needs throughout the life cycle and their application to nutritional assessment, menu planning and food preparation. All students must earn ½ credit in Health Education to meet the New York State requirement for graduation



Languages Other Than English

All students must earn one unit of high school credit by either passing the second language final(Checkpoint A) exam at the end of grade 8 or successfully completing a ninth grade course of study for both a Local or Regents Diploma. For a Regents Diploma with Advanced Designation, two additional credits in foreign 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 foreign language requirement.

French – Level 1

Grade 9

Final Assessment: School Exam

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

HS1302

Credit 1 Unit

French 1 is intended for students who did not achieve at least a 65 on the final exam at the end of grade 8 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 Foreign Language credit required for graduation from high school.

French – Level 2

Grade 9, 10, 11, 12

Final Assessment: School Exam

Prerequisite: 65% or better on the 8th grade final exam and teacher recommendation

HS1300

Credit 1 Unit

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

(College #FRE 121/122)

Grade 10, 11, 12

Final Assessment: School Exam

Prerequisite: French 2 and teacher recommendation

HS1315

Credit 1 Unit

CHS French 3 includes the study of grammar structures, vocabulary and idioms and 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 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 with NO tuition charges. 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 6 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

UHS French 4

(College # AFRE 221Y)

Grade 11

Final Assessment: School Exam

Prerequisite: French 3 and teacher recommendation

HS1303

Credit 1 Unit

UHS French 4 is the first 200-level college course that is offered through SUNY Albany at Ballston Spa High School. A major component of this class 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 French 4 requires students to continue developing their communicative competence by interacting orally and in writing in French. 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. 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 French 4 students will be required to take the final exam at the end of the course.

IB French SL Year 1
(College # AFRE 221Y)

IB1303

Grade 11

Credit 1 Unit

Final Assessment: School Exam

Prerequisite: French 3

IB French 4 course is the first year of an intensive two-year course. This class is required for IB Diploma candidates who have chosen French as their Language B. This class may also be taken for UHS college credit. A major component of this class 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. Both IB and UHS French 4 require students to continue developing their communicative competence by interacting orally and in writing in French. Class will be conducted entirely in French and students are expected to communicate in French at all times. 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. Summer reading and writing assignments will be assigned for those planning to take this class. 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. UHS candidates will be required to take the UHS final exam in June of 11th grade.

UHS French 5
(College # AFRE 222Y)

HS1304

Grade 12

Credit 1 Unit

Final Assessment: School Exam

Prerequisite: UHS French 4 and teacher recommendation

UHS French 5 is the second 200-level college course that we offer through SUNY Albany at Ballston Spa High School. This accelerated course is intended to refine skills practiced in UHS 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. 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 French 4 students will be required to take the final exam at the end of the course.

IB French SL Year 2
(College # AFRE 222Y)

IB1304

Grade 12

Credit 1 Unit

Final Assessment: IB Assessments

Prerequisite: IB or UHS French 4

IB French 5 SL course is the second part of the two year IB French course or year two of the UHS French Program. This rigorous, accelerated course is intended to refine skills practiced in IB / UHS French 4. Students will work towards increasing listening and reading comprehension, oral expression, written communication, and culture understanding. The class will be conducted entirely in French and students are expected to speak French at all times. 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. Summer reading and writing assignments will be assigned for those planning to take this class. IB candidates must take one (oral) internal assessment and one (written) external assessment which will be given between January and April of 12th grade. Two additional external (written) assessments will take place in May of 12th grade. 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. UHS candidates will be required to take the UHS final exam in June of 12th grade.

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 course is intended for students who did not achieve at least a 65 on the final exam at the end of grade 8 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 Foreign Language credit required for graduation from high school.

Spanish – Level 2**Grade 9, 10, 11, 12****Final Assessment: School Exam***Prerequisite: 65% or better on the 8th grade final exam and teacher recommendation***HS1306****Credit 1 Unit**

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 121/122)****Grade 10, 11, 12****Final Assessment: School Exam***Prerequisite: Spanish 2 and teacher recommendation***HS1314****Credit 1 Unit**

CHS Spanish 3 is the third year of the study of grammar structures, vocabulary and idioms and 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 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 with NO tuition charges. 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 6 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

**UHS Spanish 4
(College # ASPN 200)****Grade 11****Final Assessment: School Exam***Prerequisite: Spanish 3 and teacher recommendation***HS1308****Credit 1 Unit**

UHS Spanish 4 is the first 200-level college course that we offer through SUNY Albany at Ballston Spa High School. A major component of this class 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.

IB Spanish SL Year 1
(College # ASPN 200)
IB1308**Grade 11****Credit 1 Unit****Final Assessment: School Exam***Prerequisite: Spanish 3*

IB Spanish 4 SL is the first year of an intensive two-year course. This class is required for IB Diploma candidates who have chosen Spanish as their Language B. This class may also be taken for UHS college credit. A major component of this class 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. Both IB and UHS Spanish 4 require students to continue developing their communicative competence by interacting orally and in writing in Spanish. Class will be conducted entirely in Spanish and students are expected to communicate in Spanish at all times. 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. Summer reading and writing assignments will be assigned for those planning to take this class. 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. UHS candidates will be required to take the UHS final exam in June of 11th grade.

UHS Spanish 5
(College # ASPN 201)
HS1309**Grade 12****Credit 1 Unit****Final Assessment: School Exam***Prerequisite: UHS Spanish 4 and teacher recommendation*

UHS Spanish 5 is the second 200-level college course that we offer through SUNY Albany. 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

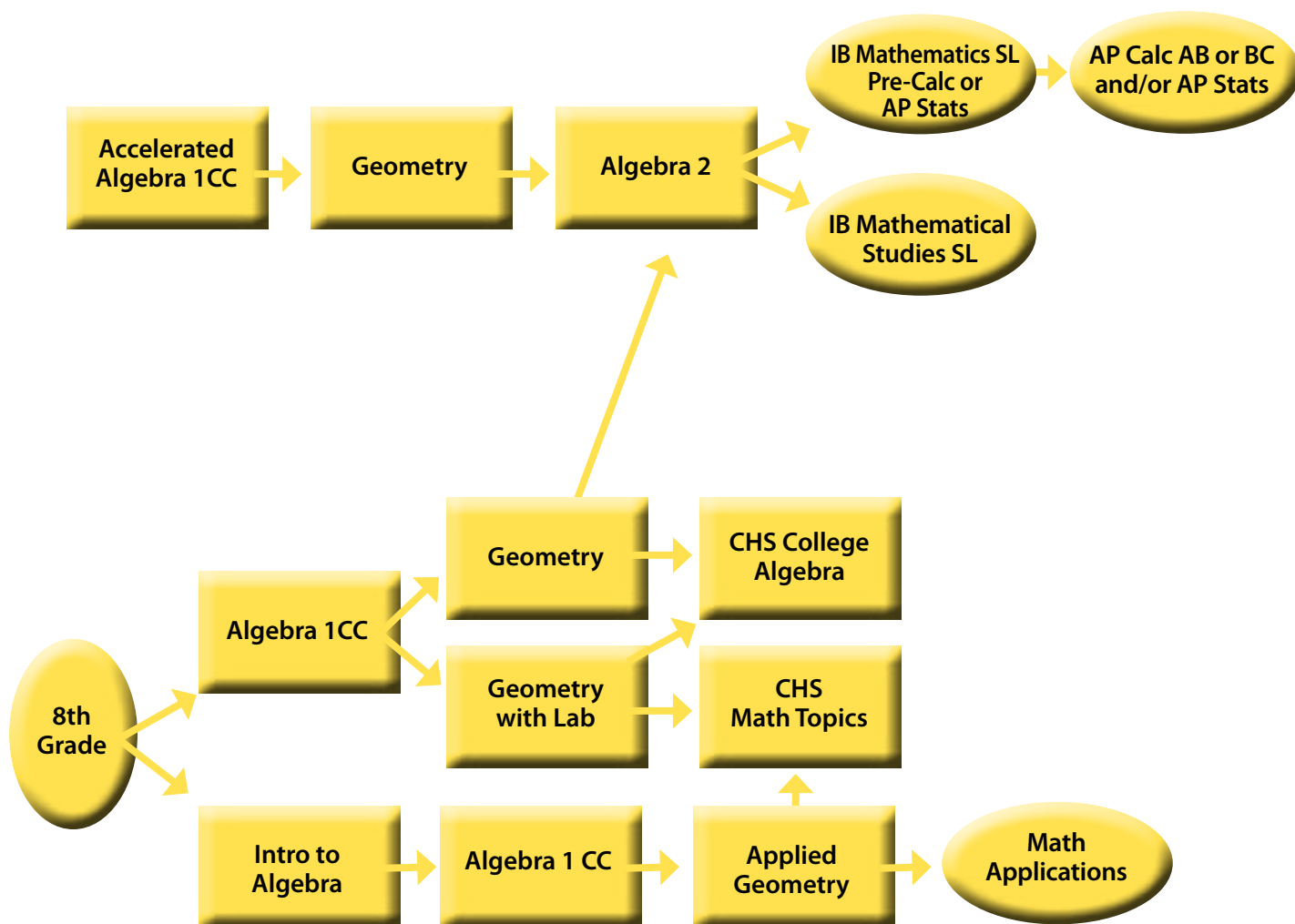
payment directly to SUNY Albany. The curriculum and grades are determined by the high school teacher. Upon receiving a final grade of "C" or better, students will be awarded 4 credits from SUNY Albany. All UHS Spanish 4 students will be required to take the final exam at the end of the course.

IB Spanish SL Year 2
(College # ASPN 201)
IB1309**Grade 12****Credit 1 Unit****Final Assessment: IB Assessments***Prerequisite: IB or UHS Spanish 4*

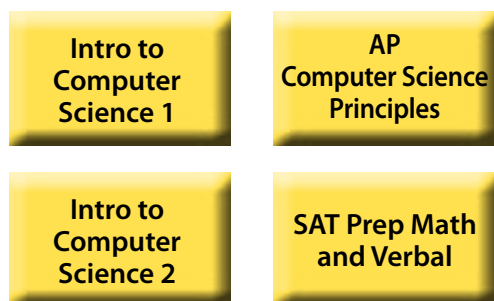
IB Spanish 5 SL is the second part of the two year IB Spanish course or year two of the UHS Spanish Program. This rigorous, accelerated course is intended to refine skills practiced in IB / UHS Spanish 4. Students will work towards increasing listening and reading comprehension, oral expression, written communication, and culture understanding. The class will be conducted entirely in Spanish and students are expected to speak Spanish at all times. 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. Summer reading and writing assignments will be assigned for those planning to take this class. IB candidates must take one internal (oral) assessment and one external (written) assessment which will be given between January and April of 12th grade. Two additional external assessments (written) will take place in May of 12th grade. 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. UHS candidates will be required to take the UHS final exam in June of 12th grade.

Mathematics

Recommended Pathways in Math



Other Math Courses



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.

Introduction to Algebra

Grade 9, 10, 11, 12

Final Assessment: School Exam

Prerequisite: Math 8

HS1724

Credit 1 Unit

Introduction to Algebra is a full year course designed to help students who have traditionally struggled with mathematics and need additional time to master foundational skills before enrolling in Algebra. Students will study properties of real numbers, fractions, rational numbers, equations, and linear functions. The course will conclude with a school final exam. A TI-84 graphing calculator is required for this course. (This course is not approved by NCAA.)

Algebra

Grade 9, 10, 11, 12

Final Assessment: Regents in Algebra (Common Core)

Recommended: Math 8 Grade Point Average of 75 % or higher or successful completion of Introduction to Algebra

HS1215

Credit 1 Unit

Algebra is a full year course, including a weekly lab, to address the curriculum outlined by the Common Core State Standards. It 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 (Common Core). A TI-84 graphing calculator is required for this course.

Applied Geometry

Grades 10, 11, 12

Final Assessment: School Exam

Pre-Requisite: 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 given 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 concludes in a school 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 (Common Core)

Prerequisite: Algebra

HS1212

Credit 1 Unit

Geometry Lab is a full year course and covers geometry curriculum that follows common core learning standards with additional time built into the schedule for practice and activities that will strengthen skills. Students will study concepts of geometry, problem solving, logical reasoning, proofs, and the integration of algebra and geometry with real life applications. This course will conclude with the Regents in Geometry (Common Core). A TI-84 graphing calculator is required for this course.

Geometry

Grade 9, 10, 11

Final Assessment: Regents in Geometry (Common Core)

Prerequisite: Pass Algebra with an average of 80% or higher

HS1210

Credit 1 Unit

Geometry is a full year course covering geometry curriculum that follows common Core learning standards. The purpose is to offer a more complex study of geometric relationships. Students will learn logic, congruent and similar triangles, transformations, congruency, and similarity. Other topics include constructions, planar figures, and solid geometry. This course concludes with the Regents in Geometry (Common Core). A TI-84 graphing calculator is 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 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 topics including linear, exponential, and quadratic functions. Other topics include statistics and probability, geometric sequences, geometry concepts, graph theory and logic. This course will conclude with a school 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 with NO tuition charges. 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 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

CHS College Algebra**(College # Mat 148)****Grade 11, 12****Final Assessment: School Exam***Prerequisite: Algebra And Geometry***HS1727****Credit 1 Unit**

CHS College Algebra is a full year course for students who desire to begin their college pathway. Students will learn application and analysis of algebraic problems. Topics include linear, quadratic, absolute value, radical, rational, exponential, and logarithmic functions, with an emphasis on regression analysis and mathematical models. Also included in this course are the following topics: matrices, sequences, and series. 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 with NO tuition charges. 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 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

Algebra 2**Grade 10, 11, 12****Final Assessment: Regents in Algebra 2 (Common Core)***Prerequisite: Regents Algebra and Geometry. It is strongly recommended students entering this course earned an overall average of 85% or better in both prerequisite courses.***HS1219**

Algebra 2, a one year course following NYS common core learning standards, is the expanded study of functions that builds 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 (Common Core) in June. A TI-84 graphing calculator is required for this course.

**CHS Pre-Calculus
(College # MAT 167)****Grade 11, 12****Final Assessment: School Exam***Prerequisite: Successful completion of Algebra 2 and a passing grade on the Regents in Algebra 2 (Common Core)*

CHS Pre-Calculus is for students planning to take calculus or 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, and an introduction to differential calculus. Pre-Calculus 11 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 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 with NO tuition charges. 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 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

**AP Calculus AB/BC and/or UHS
(College # AMAT 112)****Grade 12****Final Assessment: School Exam***AB Prerequisite: CHS Pre-Calculus 11 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; the application of transcendental functions. 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.

HS1204(11)/HS1205(12)**Credit 1 Unit****AP Statistics and/or UHS
(College # AMAT 108)****Grade 11, 12****Final Assessment: School Exam***Prerequisite: Successful completion of Algebra 2 and a passing grade on the Regents in Algebra 2 (Common Core)*

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.

HS1213**Credit 1 Unit****IB Mathematical Studies SL****Grade 11, 12****Final Assessment: School Exam***Prerequisite: CHS College Algebra or Algebra 2***IB1228****Credit 1 unit**

IB Mathematical Studies course focuses on math as a tool that can be used to solve problems in many different fields. Students will develop a solid understanding of basic concepts that will allow them to recognize when to apply mathematical tools to solve problems. Math topics we will study include functions and equations, analytical geometry and trigonometry, set theory, probability, statistics, and elementary differential calculus. Students will be active participants in class and will be expected to work independently and cooperatively, make presentations, conduct research, learn and teach. Students will be responsible for an independent piece of mathematical work (internal assessment) in which they ask a mathematical question, collect data, analyze the data and present their findings in a coherent essay of no more than 2000 words. Mathematical Studies SL is designed for students who are planning a career in such fields as education, finance, social science, health sciences, arts and the humanities. In addition to the internal assessment, students will take the IB Mathematical Studies SL external assessment in May and will take a school final exam in June.

**IB Mathematics SL****IB1227****Grade 11, 12****Credit 1 Unit****Final Assessment: School Exam***Prerequisite: Algebra 2*

IB Mathematics SL is a one-year course that introduces several important mathematical concepts such as: algebra and functions, trigonometry, vectors, probability, statistics, and differential and integral calculus. The intention of the class is to expose students to these concepts in a clear and consistent way. The course is designed to foster independence in their mathematical learning. This course will provide the students an opportunity to learn how students across the world see and learn mathematics. Students will be encouraged to use alternative notation and to study lives and contributions of several mathematicians. Students will be expected to learn how the attitudes of different societies towards specific areas of mathematics are demonstrated and how the language of mathematics is spoken by all countries. Students are provided with opportunities to take a considered approach to these activities and to explore different ways of approaching a problem. Students will be required to develop skills they need for communicating mathematical ideas. Mathematics SL is designed for students who possess a strong background in mathematics and are looking to pursue a career in which a deeper understanding and appreciation of mathematical concepts is required. The internally assessed component, the mathematical exploration, offers students a framework for developing independence on their mathematical learning by engaging in mathematical investigation and modeling. At the end of the course, students will take the IB Mathematics SL external assessment.

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

This one semester course is offered in striving to introduce our students to the field of computer science. We will encourage collaboration and presentation using the available tools of Google 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**HS1905****Grades 9, 10, 11, 12****Credit 1/2 Unit****Final Assessment: School Exam**

A one 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 latter computer science classes such as AP CSP or introductory computer science in college. There is potential to explore Mobile programming based on time and enrollment.

AP Computer Science Principles**HS1906****Grade 10, 11, 12****Credit 1 Unit****Final Assessment: School Exam**

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.

Physical Education 9/10

Grade 9, 10

Final Assessment: None Given

HS1390/HS1391

Credit 1/2 Unit

Physical Education 9/10 is an essential and basic part of the total education program. Participating students will learn activities designed for lifetime fitness and wellness. Our students develop the skills, knowledge, and attitudes necessary for a healthy lifestyle. Activities include, but are not limited to: Field Hockey, Lacrosse, Archery, Soccer(indoor and outdoor), Badminton, Dance and choreography, Floor Hockey, Aerobics, Cooperative Games, Introduction to weight training, Tennis, Swimming activities, Orienteering, Softball, Tennis, Adventure Education, Flag Football, Ultimate Frisbee, Speedball, and Fitness Testing.

Physical Education 11/12

Grade 11, 12

Final Assessment: None Given

HS1378/1379

Credit 1/2 Unit

Physical Education 11/12, is a full year course where the students obtain knowledge of team sports, practice individual sports, and gain an understanding of the importance of lifetime wellness. A wide variety of sports and activities are provided so that the student has the opportunity to develop an understanding of health, wellness, fitness, and sport in a safe and healthy environment.

Alternate Study Physical Education

HS1361

Grade 10, 11, 12

Credit 1/2 Unit (Pass/Fail)

Final Assessment: None Given

Alternate Study Physical Education program is a student based course that provides an alternative pathway to students for Physical Education credit. This course has an application process for students in good academic standing who are highly involved in and committed to physical activity outside the traditional school day. Offered as Pass/Fail, this alternative option is designed by the student, under the supervision of a certified physical education teacher, in direct accordance with New York Physical Education Learning Standard Three. Students must demonstrate participation in an activity at least two or three times per week for a minimum of three hours per week, for a total of 20 concurrent weeks. Proof of this participation will be in the form of 4 daily logs of activities and 2 reflective pieces for the semester. Acceptable activities in this program are as follows but are not limited to: crossfit, travel sports teams, tae kwon do, ice skating and dance. A student MUST apply the semester before participation and must reapply each semester.





Physical Education: Prevention & Care of Injuries Online
Grade 11, 12 **HS1389**
Credit 1/2 Unit (Pass/Fail)

Prevention and Care of injuries is a full year course that provides an introduction to current philosophies, procedures and practices related to the care and prevention of athletic injuries. Students will study contemporary principles and methods of conditioning, prevention, and first-aid care. In addition, the fundamentals of taping and wrapping techniques, inspection & physical examination of injuries, and training room procedures will be covered. This course is offered as Pass/Fail, full year course for full International Baccalaureate Diploma Programme students.

Physical Education: Therapeutic Modalities Online
Grade 11, 12 **HS1362**
Credit 1/2 Unit (Pass/Fail)

Physical Education: Therapeutic Modalities will offer an overall perspective for therapeutic modality use with basic anatomy. It will define the therapeutic modalities and help the student to understand their place in orthopedic injury management and explain how they related to total rehabilitation. A rationale for using a standardized system approach to application will also be presented. Lastly the course will include a case for proper record keeping, indicating how doing so can strengthen both the efficacy of your treatments and the quality of health care provided. This course is offered as a Pass/Fail, full year course for full International Baccalaureate Diploma Programme students.

Physical Education: Smart Steps CTE/BOCES Online
Grade 11, 12 **HS1364**
Credit 1/2 Unit (Pass/Fail)

Smart Steps is an exercise walking program. It requires no gym, no exercise machines, and no personal trainers. This program is all about movement- 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 Pass/Fail, full year course for any BOCES student.

Physical Education: Guard Start
Grade 9, 10 **HS1351**
Credit 1/4 Unit

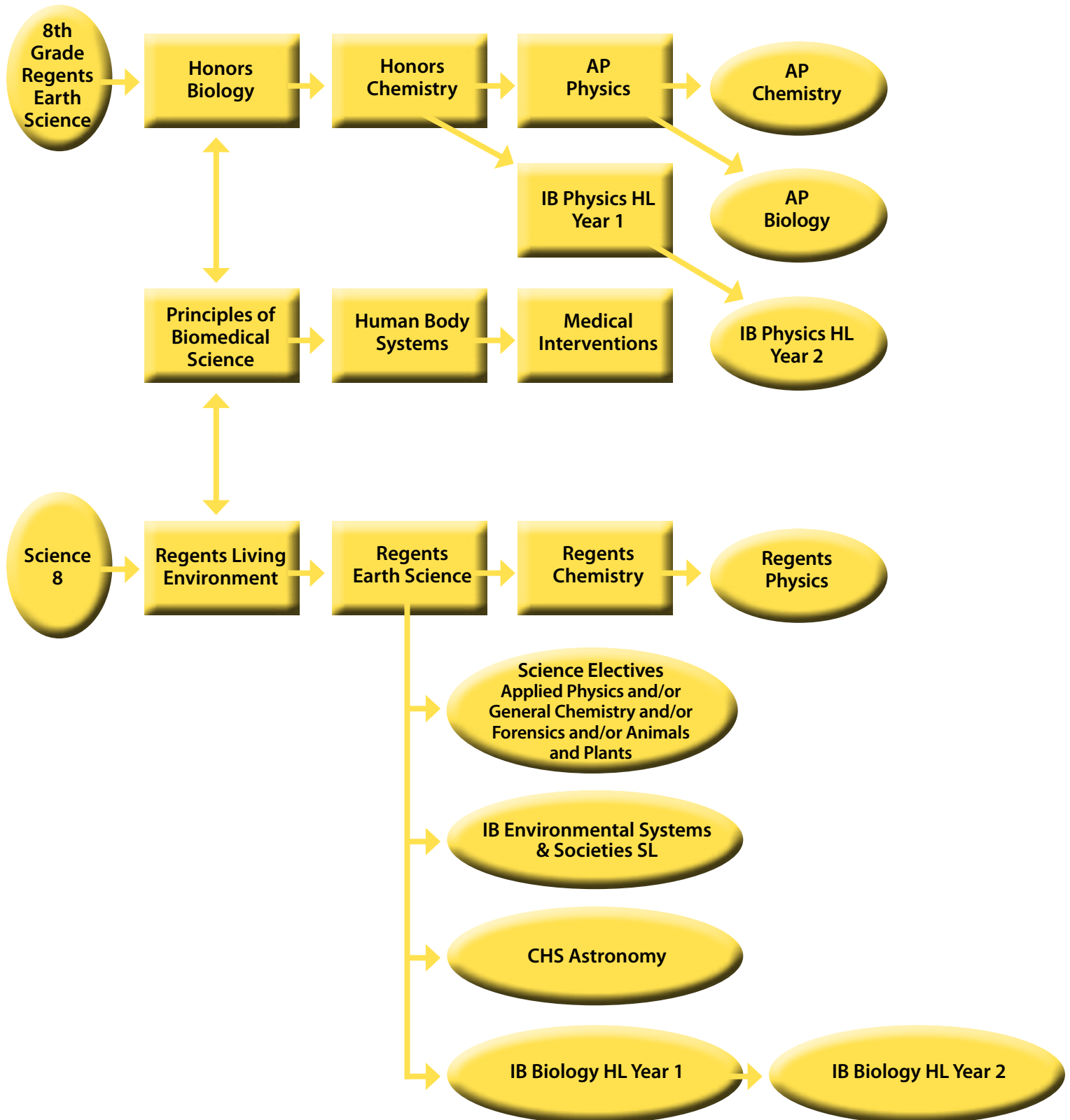
Guard Start will teach water safety and the duties and responsibilities of a lifeguard. However, this course will not certify students to be a lifeguard. It will build a foundation of knowledge, attitudes, and skills in preparation for the American Red Cross Lifeguard Training course. Upon completion and when turning 15 years of age, participants will be prepared to enroll in the American Red Cross Lifeguard Training Course.

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

Physical Education: Lifeguarding course 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. You must be 15 years old to take this course. Students who achieve 80% on written exam and successfully complete practical skills test will earn lifeguard certification

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 exam 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

Biology Regents is a full year laboratory course in modern biology following the New York State Living Environment Core Curriculum. It is designed to provide broad general understandings of the fundamental principles of biology and to provide an extension of understanding in selected areas. Units include: biochemistry, animal and plant life, reproduction and development, genetics, evolution and diversity, and ecological relationships. 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.

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 which covers the New York State Living Environment Core Curriculum but in much greater detail and at a much faster pace in order to challenge students with exceptional ability. The course will include additional laboratory

work in biotechnology – electrophoresis and bacterial transformation. 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. Students will be prepared to take the SAT II Subject Test in Biology.

Earth Science Regents

Grade 10, 11, 12

Final Assessment: NYS Regents

HS1261

Credit 1 Unit

Earth Science is a full year laboratory course that follows the New York State Physical Setting/Earth Science Core Curriculum. 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 courses/Regents exams. Students must have successfully completed Algebra with at least a 70 on the Regents exam

HS1260

Credit 1 Unit

Regents Chemistry is a full year laboratory course based on the New York State Physical Setting/Chemistry Core Curriculum 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

HS1259

Credit 1 Unit

Chemistry Honors is a full year laboratory course based on the New York State Physical Setting/Chemistry Core Curriculum with significant supplemental content and a faster pace of instruction. The students will seek abstract patterns that unify the relationships between matter and

energy. This course is designed for highly motivated students that want to challenge themselves with a fast pace course and are willing to work independently to solve complex problems. 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. Students will also be prepared to take the SAT II Subject Test in Chemistry.

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 based on the New York State Physical Setting/Physics Core Curriculum 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.

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 on-going 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.

PLTW Human Body Systems

HS1282

Grade 10, 11, 12

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 "parts of a whole," work together to maintain homeostasis, good health and to 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 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.

PLTW Medical Interventions**Grade 11, 12****Final Assessment: School Exam***Prerequisite: Successful completion of Human Body Systems**Corequisite: College Preparatory Science Class*

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**Applied Physics****Grade 11, 12****Final Assessment: School Exam***Prerequisite: Successful completion of Algebra*

Applied Physics is a one year general level, hands-on, project based course. It will be taught using only basic algebra skills. The class will cover mechanics, energy, simple machines, electricity, and magnetism. Students need to have successfully completed Algebra prior to taking this course. Students will work in teams to complete projects therefore academic success in this class is dependent on regular attendance.

General Chemistry**Grade 11, 12****Final Assessment: School Exam**

General Chemistry is a semester long course that focuses on traditional chemistry topics including atomic structure, bonding, solutions, gas laws, and nuclear chemistry. Students will perform lab activities for all topics. The course culminates with a written final.

HS1283**Credit 1 Unit****Forensics****Grade 11, 12****Final Assessment: School Exam**

Forensics is a semester long 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, 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**Grade 11, 12****Final Assessment: School Exam****HS1265****Credit 1/2 Unit****HS1275****Credit 1/2 Unit**

Animal & Plants of the Northeast, is a semester long survey course that acquaints students with the wealth of plant and animal life found primarily in the Northeastern Section of the 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.

Basic Principles of Nutrition**Grade 10, 11, 12****Final Assessment: Project***Prerequisite: Biology (Final Average Above 85) and Health (Final Average Above 90)***HS1387****Credit 1/2 Unit**

Basic Principles of Nutrition is a semester long science course that introduces the role of nutrition in health maintenance. Students will learn food sources, functions and the interrelationships of the six major nutrient categories, as well as, energy requirements and balance. It also includes the principles of nutrient needs throughout the life cycle and their application to nutritional assessment, menu planning and food preparation. (This course is not approved by NCAA.)

UHS/PLTW Principles of Engineering **HS1654**
Grade 10, 11, 12 **Credit 1 Unit**
Final Assessment: End of Course Assessment & Project
Recommended Achievement Levels: Successful completion of 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 score at least a 6 on the PLTW end of course assessment are eligible to apply for 4 college credits from Rochester Institute of Technology (RIT). This course may count for the third year of Science required for high school graduation.

UHS/PLTW Digital Electronics **HS1653**
Grade 9, 10, 11, 12 **Credit 1 Unit**
Final Assessment: End of Course Assessment & Project
Recommended Achievement Levels: Successful completion of UHS/PLTW DDP and Algebra

Digital Electronics is a full year course that explores basic uses for circuit instrumentation like meters, oscilloscopes, and logic probes. Introductory circuit analysis, discrete electronic components, integrated circuits, and their applications in electronic circuits will be studied. High reliability soldering techniques are introduced. Students learn to build circuits in the laboratory and on computer simulations. Students will fabricate a practical application of digital electronics for a semester project. Because of the intrinsic math component of the course, completion of Algebra is strongly recommended. This course culminates with a final project and an end of course assessment. Students who maintain an 85% average in this course and score at least a 6 on the PLTW end of course assessment are eligible to apply for 4 college credits from Rochester Institute of Technology (RIT). This course may count for the third year of Science required for high school graduation.

UHS Forensics **HS1264**
Grade 11, 12 **Credit 1/2 Unit**
Final Assessment: School Exam
Recommended Achievement Levels: Successful completion of Regents Chemistry

UHS Forensics is a semester long 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, 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. Students must register and pay tuition of approximately \$100 per credit hour for 4 credits to Syracuse University.

CHS Astronomy – Exploring Space **HS1256**
(College # AST 123)
Grade 11, 12 **Credit 1/2 Unit**
Final Assessment: School Exam
Recommended Achievement Levels: Successful completion of at least two Regents science classes, Algebra, and Geometry

CHS Astronomy – Exploring Space is a semester long course that examines present and future methods of space exploration. 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 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 with NO tuition charges. 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 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

AP Physics 1/CHS**HS1266****(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 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 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 with NO tuition charges. 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 Biology/CHS**HS1253****(College # BIO 141/142)****Grade 11, 12****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 with NO tuition charges. 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**HS1258****Grade 11, 12****Credit 1 Unit****Final Assessment: School Exam**

Recommended Achievement Levels: Successful completion of Regents/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 strong students 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.

IB Biology HL Year 1/Year 2**IB1294/IB1298****Grade 11, 12****Credit 2 Units****Final Assessment Year 1: School Exam**

Prerequisite: Successful completion of at least 2 Regents Science classes. Chemistry is strongly recommended.

IB Biology HL is a rigorous, fast paced, two-year experimental science course for students who wish to understand the unity and diversity of living organisms on the molecular, cellular, organic and ecological level. The general aims of IB Biology HL are to: provide content; develop an understanding of how biological information is collected, analyzed and evaluated; develop experimental skills; and understand how biology has social consequences in the global context. The course is intended for strong students who have shown exceptional

success in their previous science courses. Topics covered during the course include: measurement and error analysis, genetics, evolution, ecology, the interrelationships between organisms and the environment, human reproduction and physiology, biochemistry, plants, microbiology, and biotechnology. Students will be expected to complete a summer assignment for the course. Laboratory investigations are an integral part of the course. Through this course students will design and carry out appropriate experiments, at times self-directed, and communicate the results. Students will complete a collaborative experimental science project with students in other experimental science courses. The independent laboratory work produced by each student will be moderated by the IBO and will contribute to the student's overall IB score in the subject. At the end of the two-year sequence, students will be ready to sit for the IB Biology HL exam.

IB Environmental Systems and Societies SL/CHS

IB1295**(College # ENV 100)****Grade 11, 12****Credit 1 Unit****Final Assessment: School Exam**

Prerequisite: Successful completion of at least 2 Regents Science classes

IB Environmental Systems and Societies (ES&S) is a one year, standard level, interdisciplinary course that combines the techniques and knowledge of the experimental sciences with the theories and concepts relating to the nature of societies. Systems, models, internationalism and environmental values are central themes throughout the course. The course will afford students the opportunity to be self-directed learners, and provide them with a variety of perspectives concerning many pressing environmental issues enabling them to adopt an informed personal response. Students will evaluate the scientific, ethical and socio-political aspects of various environmental issues while focusing on five major areas of study: Ecosystems, human population and resource use, conservation and biodiversity, pollution management, and global climate change. This course is designed for students in their junior or senior year who wish to better understand the relationship between the natural and social sciences. The internally assessed portion of the course requires students to independently design and carry out multiple, authentic laboratory experiments and then be able to communicate the results to a wide audience. The independent laboratory work produced by each student will be moderated by the IBO and will contribute to the student's overall IB score in the course. All students enrolled in the course are required to take the IB Environmental Systems and

Societies exam in May. Students are encouraged to enroll in the SCCC College in the High School Program (CHS) with Schenectady County Community College. Students who register for the program have the opportunity to earn college credits with NO tuition charges. Students must complete a 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 4 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

IB Physics HL Year 1/Year 2

IB1296/IB1297**Grade 11, 12****Credit 2 Units****Final Examination Year 1: NYS Regents**

Prerequisite: Successful completion of at least 2 Regents Science classes and Algebra 2

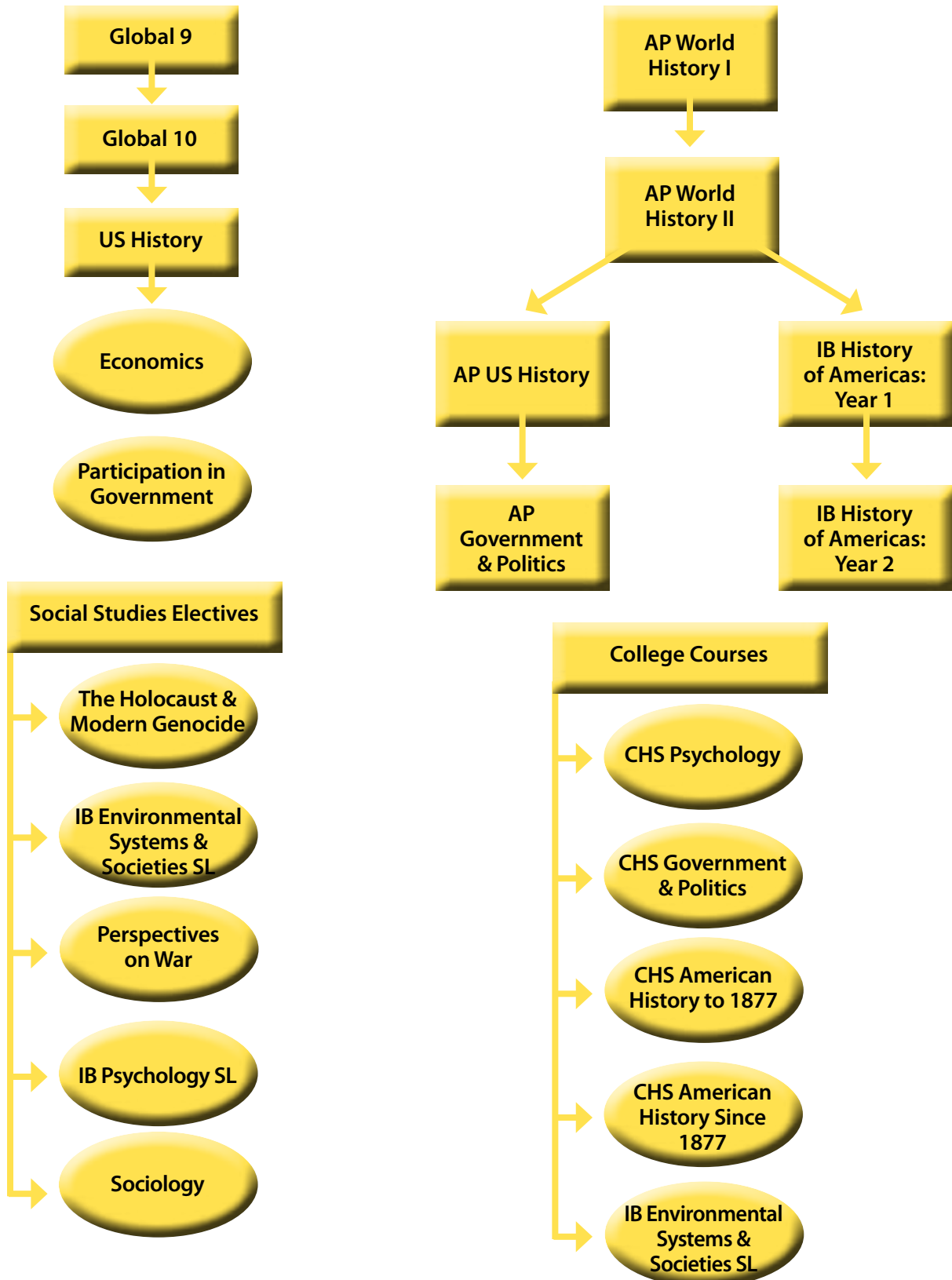
Corequisite: IB Mathematics SL or Pre-Calculus

IB Physics HL is a rigorous two-year experimental science course that provides students with a conceptual and mathematical framework from which to analyze the physical world around them. Topics covered during the course include: measurement and error analysis, mechanics, thermal physics, oscillations and waves, electromagnetism, electric currents, atomic and nuclear physics. Practical (laboratory) investigations are an integral part of the course. Students will be expected to complete a summer assignment. Throughout this course, students will design and carry out appropriate experiments and communicate the results to a wide audience. During year one, students will complete a collaborative experimental science project with students in other experimental science courses. The independent laboratory work produced by each student will be moderated by the IBO and will contribute to the student's overall IB score in the subject. At the end of the first year, students will be required to sit for the NYS Regents Physics examination. At the end of the two-year sequence, students will be required to sit for the IB Physics HL exam.



Social Studies

Recommended Pathways in Social Studies



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.

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. It serves as a prerequisite to Global History 10. Global History 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 World History I

Grade 9

Final Assessment: School Exam

HS1165

Credit 1 Unit

AP World History I is the first half of Advanced Placement World History. Students taking this course should have the intention of continuing on to the second half of AP World History in 10th grade. Course content includes: Prehistory through the foundations of the Age of Revolutions, including the classical world; Byzantine and Islamic Civilizations; Africa, Asia, and the Americas; the Middle Ages; the Renaissance and Reformation; and the Age of Exploration. This course will make demands on students that are equivalent to those of an introductory college course. This course fulfills the requirement for Global History. Students will be expected to read more extensively, complete more in depth and challenging writing assignments, do more individual study, and go into topics in greater depth than in Global History 9. Students will be required to take a local exam in June.

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 French Revolution to the present. Students are required to take a Regents exam on material from Global History 9 and 10 at the end of the course.

AP World History II

Grade 10, 11, 12

Final Assessment: NYS Regents

Prerequisite: AP World History I or Global History 9

HS1166

Credit 1 Unit

AP World History II is the second year of a two year course. Course content focuses primarily on the past thousand years of the global experience from about 1000 C.E. to the present, highlighting changes in international frameworks and comparisons especially among major non-European societies. This course will make demands on students that are equivalent to those of an introductory college course. This Advanced Placement course prepares students for the AP World History examination. Students enrolled in this course are expected to take the AP World History exam. Students will also take the Regents Exam in Global History in June. This course fulfills the requirement for Global History 10.

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 is organized into twenty-seven historical units. This course will provide 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.

AP United States History**Grade 11****Final Assessment: NYS Regents***Prerequisite: AP World History II or Global History 10*

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. This course will make demands on students that are equivalent to those of an introductory college course. 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.

Economics, The Enterprise System, and Finance HS1153**Grade 12****Credit 1/2 Unit****Final Assessment: School Exam***Prerequisite: United States History & Government 11*

Economics, The Enterprise System and Finance course offers 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.

HS1163**Credit 1 Unit****AP United States Government and Politics HS1164****Grade 12****Credit 1 Unit****Final Assessment: School Exam***Prerequisite: AP US History and Government or US History and Government*

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. It also requires familiarity with the various institutions, groups, beliefs, and ideas that constitute U.S. political reality. Topics include: foundations of the Constitution; political beliefs and behaviors; political parties, interest groups, and the media; the Presidency; the Bureaucracy; the Congress; the Federal Courts; multiple public policy issues; civil rights and civil liberties; basic economic concepts and their application will give students an analytical perspective on government and politics in the United States. The 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 requirements in Economics and Participation in Government.

Participation in Government**Grade 12****HS1154****Credit 1/2 Unit****Final Assessment: School Exam***Prerequisite: United States History & Government 11*

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.

CHS Psychology**Grade 12****HS??****Credit 1/2 Unit****Final Assessment: School Exam**

Recommended Achievement Levels: Teacher recommendation. 85 or better in Global History and an 85 or better on the Global History Regents. 85 or better in Honors Biology

Psychology CHS is the systematic study of human behavior and mental processes. It is rooted both the natural and human sciences and based on rigorous, empirical research. This course explores the science of psychology through three levels of analysis: biological, cognitive and sociocultural. The biological level of analysis explores what all humans share – genetics, anatomy and neurochemistry – whereas the cognitive and sociocultural levels of analysis examine the diversity of human behavior and mental processes. Students will also explore abnormal psychology, studying the causes, diagnosis and treatments of mental illness. Specific attention will be paid to the cultural differences in the diagnosis and treatment of mental illness. This course is designed for students with a strong interest in biology and the social sciences. Students are expected to enroll in either the University in the High School program through SUNY Albany or the College in the High School program through SCCC. For those students enrolled in CHS program there is a fee and registration process associated and upon receiving a grade of C or better in this course, students will be awarded 3 college credits by SUNY Albany. These credits are accepted at most institutions of higher learning. For students enrolled in the CHS program, Students must complete a SCCC application and turn in a Certificate of Residency in the beginning of the course and return it promptly to the teacher. There is no fee associated with the CHS program. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

Sociology**Grade 11, 12****HS1162****Credit 1/2 Unit****Final Assessment: School Exam**

Sociology introduces students to the basic patterns of social behavior and the structure and functions of social organizations. Emphasis is placed on research, culture and cultural change, socialization and deviance, population and social stratification, and social institutions.

Perspectives On War**Grade 11,12****HS1177****Credit 1/2 Unit****Final Assessment: School Exam**

Prerequisite: Global History 10 Recommended Achievement Levels: Success in Global History & Geography 10 with a GPA of 85% or higher

Perspectives on War is an elective designed to provide students with the opportunity to examine combat from a variety of perspectives, from technical to tactical to ethical. Topics considered include the evolution of military technology and its impact, the treatment of the physical and the psychological casualties, motivation and leadership in combat, and the morality of individual conduct during war. Students will be asked to read and interpret a variety of primary sources as well as the writings of respected historians. Additionally, they will view and analyze video resources. Students will be assessed through written assignments that may include essays, reflections and/or journal entries. This course is recommended for students with a strong interest in social studies, particularly military history.

IB History of the Americas HL Year 1**Grade 11****IB1172****Credit 1 Unit****Final Assessment: NYS Regents**

Prerequisite: Global History 10 or AP World History II Recommended Achievement Levels: Teacher recommendation; 85 or better in Global History and on the Global History Regents

The International Baccalaureate Programme in History is an intensive two-year study and is designed to provide highly motivated students with a rigorous program that will examine various aspects of history in great depth. In addition to extensive content knowledge, students will develop reading, writing, research, and critical thinking skills. IB History of the Americas is the first year of a two-year course. Students will learn about the history of race relations in the Americas with an in-depth study and analysis of the following three topics: 1) Slavery and the New World (1500-1800); 2) United States Civil War: Causes, Course, and Effects (1840-1877); and 3) Civil Rights and social movements in the Americas. The study of these three topics will prepare students for the IB external assessment to be taken in May of 12th grade. Students will also be prepared for the Regents exam in U.S. History and Government at the conclusion of this year.

IB History of the Americas HL, Year 2 **IB1174**
Grade 12 **Credit 1 Unit**
Final Assessment: IBHL external assessment
Prerequisite: IB History of the Americas Year 1

In the second year of the IB History Programme, students will examine several important turning points from the 20th Century. Students will study one prescribed subject on the “Move to Global War” and two world history topics on “The Cause and Effects of 20th Century Wars” and “The Cold War: Superpower Tensions and Rivalries”. Throughout the prescribed subject, students will examine two case studies on Japanese Expansion in East Asia from 1931 to 1941 and German and Italian Expansion from 1933 to 1940. Topics covered during the course include: the Russo-Japanese War, World War I, World War II, and the rivalry, mistrust, and accord brought on during the Cold War. Students will examine the actions of specific leaders, including Truman, Stalin, Mao, Eisenhower, Khrushchev, Castro, JFK, LBJ, Brezhnev, Nixon, Carter, Reagan and Gorbachev. Students will complete an internal assessment. This assessment is a paper that is an original historical investigation on a topic of the student’s choosing. Throughout the two years of study, students will prepare for external assessment to be taken in May of their second year. The external assessment is a three part examination including paper 1 on “The Move to Global War” (20% of IB History grade), paper 2 on “The Causes and Effects of 20th Century Wars” and “The Cold War” (25% of IB History grade), and paper 3 on “Slavery in the Americas”, “The U.S. Civil War” and Civil Rights and social movements in the Americas. (35% of IB History grade.)

IB Psychology SL **IB1173**
Grade 11 or 12 **Credit 1 Unit**
Final Assessment: IBSL external assessment
Prerequisite: Biology, Global History

IB Psychology is the systematic study of human behavior and mental processes. It is rooted both the natural and human sciences and based on rigorous, empirical research. This course explores the science of psychology through three levels of analysis: biological, cognitive and sociocultural. The biological level of analysis explores what all humans share – genetics, anatomy and neurochemistry – whereas the cognitive and socio-cultural levels of analysis examine the diversity of human behavior and mental processes. Students will also explore abnormal psychology, studying the causes, diagnosis and treatments of mental illness. Specific attention will be paid to the cultural differences in the diagnosis and treatment of mental illness. This course is designed for students with a strong interest in biology and the social

sciences. Students will complete an internal assessment. This assessment will be a rigorous replication of previously conducted research in psychology. Students will also take an external assessment at the end of the course.

IB Environmental Systems and Societies SL/CHS **IB1295**
(College # ENV 100)
Grade 11, 12 **Credit 1 Unit**
Final Assessment: School Exam
Prerequisite: Successful completion of at least 2 Regents Science classes

IB Environmental Systems and Societies (ES&S) is a one year, standard level, interdisciplinary course that combines the techniques and knowledge of the experimental sciences with the theories and concepts relating to the nature of societies. Systems, models, internationalism and environmental values are central themes throughout the course. The course will afford students the opportunity to be self-directed learners, and provide them with a variety of perspectives concerning many pressing environmental issues enabling them to adopt an informed personal response. Students will evaluate the scientific, ethical and socio-political aspects of various environmental issues while focusing on five major areas of study: Ecosystems, human population and resource use, conservation and biodiversity, pollution management, and global climate change. This course is designed for students in their junior or senior year who wish to better understand the relationship between the natural and social sciences. The internally assessed portion of the course requires students to independently design and carry out multiple, authentic laboratory experiments and then be able to communicate the results to a wide audience. The independent laboratory work produced by each student will be moderated by the IBO and will contribute to the student’s overall IB score in the course. All students enrolled in the course are required to take the IB Environmental Systems and Societies exam in May. Students are encouraged to enroll in the SCCC College in the High School Program (CHS) with Schenectady County Community College. Students who register for the program have the opportunity to earn college credits with NO tuition charges. Students must complete a 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 4 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

History of the Holocaust and Modern Genocide HS1175**Grade 11, 12****Credit 1/2 Unit****Final Assessment: School Exam****Prerequisite: Global History 10***Recommended Achievement Levels: 80 or better in Global History and on the Global History Regents*

History of the Holocaust and Modern Genocide is a semester elective designed to investigate the causes, practices, and effects of the 20th and 21st century genocides and human rights violations. Topics to be covered include, but are not limited to: the Holocaust, Stalin's mass murders and forced famine, the "killing fields" of Cambodia, famine in North Korea, and the genocides in Bosnia, Rwanda, and Darfur. The course will provide students with the opportunity to develop an understanding of how genocides and related human rights violations occur and what impact they have upon the international community. Students will also make regular connections between history and current world issues. This course is recommended for students with a strong interest in social studies and current events.

CHS American History to 1877**(College # HIS 227)****Grade 12****Credit 1/2 Unit****Final Assessment: School Exam**

CHS American History to 1877 introduces students to American history from the pre-Columbian period to Reconstruction. It covers political, economic, social, and cultural forces that have shaped the evolving American nation and its interactions with the world during this time. This course is designed for students with a strong interest in American history. Students are expected to enroll in the College in the High School program Through SCCC. For students enrolled in the CHS program, students must complete a SCCC application and turn in a Certificate of Residency in the beginning of the course and return it promptly to the teacher. There is no fee associated with the CHS Program. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

CHS American History Since 1877**(College # HIS 229)****Grade 12****Credit 1/2 Unit****Final Assessment: School Exam**

CHS American History Since 1877 introduces students to key events, people, and ideas in American history from the Reconstruction period to the recent past. It focuses on diverse political, economic, social, and cultural forces that have shaped the American nation and its interactions with the rest of the world during this time. It also explores the methods and skills historians use to reconstruct the past. This course is designed for students with a strong interest in American history. Students are expected to enroll in the College in the High School program through SCCC. For students enrolled in the CHS program, Students must complete a SCCC application and turn in a Certificate of Residency in the beginning of the course and return it promptly to the teacher. There is no fee associated with the CHS Program. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

CHS Government & Politics**(College # POL 123)****Grade 12****Credit 1/2 Unit****Final Assessment: School Exam**

CHS United States Government and Politics introduces students to the institutions, structures, and process of the United States federal government. It examines political theories; the Constitution; federalism; the three branches of government and the federal bureaucracy; political parties and elections; civil liberties and civil rights; the role of the media, interest groups, and social movements; and the interrelationship of economic and political power. Students are expected to enroll in the College in the High School program through SCCC. For students enrolled in the CHS program, Students must complete a SCCC application and turn in a Certificate of Residency in the beginning of the course and return it promptly to the teacher. There is no fee associated with the CHS Program. Upon receiving a final grade of C or better, students will be awarded 3 credits from SCCC. These credits may be transferrable to SUNY schools and other institutions of higher learning.

HS1903**HS1904**

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, 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

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

Social Science

- Global History 9 Regents
- Global History 10 Regents
- United States History & Government Regents
- Economics
- Participation in Government
- AP World History I
- AP World History II
- AP United States History
- AP United States Government & Politics
- IB History of the Americas HL, Year 1
- IB History of the Americas HL, Year 2

- IB Psychology SL
- CHS/UHS Psychology
- Green Economics & Public Policy
- History of the Holocaust
- Perspectives on War
- Sociology

Mathematics

- Algebra
- Geometry
- Algebra 2
- Intermediate Algebra 2
- Algebra 2/Pre-Calculus
- CHS College Algebra
- CHS Mathematical Topics
- CHS Pre-Calculus
- AP Calculus AB
- AP Calculus BC
- AP Statistics
- IB Mathematical Studies SL
- IB Mathematics SL

Natural/Physical Science

- Biology Regents
- Biology Honors
- Earth Science Regents
- Chemistry Regents
- Chemistry Honors
- Physics Regents
- AP Biology
- AP Chemistry
- AP Physics 1
- IB Biology HL, Year 1
- IB Biology HL, Year 2
- IB Physics HL, Year 1

- IB Physics HL, Year 2
- IB Environmental Systems & Societies SL
- PLTW Digital Electronics
- PLTW Principles of Engineering
- PLTW Principles of Biomedical Science
- PLTW Human Body Systems
- PLTW Medical Interventions
- Animals and Plants of the Northeast
- Applied Physics
- Biomedical Research
- Chemistry General
- CHS Astronomy
- Environmental Science and Sustainability
- Forensics
- Nanotechnology
- Natural Disasters

Additional Core Courses

- French – Level 2
- French – Level 3
- UHS French 4
- UHS French 5
- IB French SL, Year 1
- IB French SL, Year 2
- Spanish – Level 1
- Spanish – Level 2
- Spanish – Level 3
- UHS Spanish 4
- UHS Spanish 5
- IB Spanish SL, Year 1
- IB Spanish SL, Year 2