2026-2027

COURSE CATALOG



Williamsville North High School



WILLIAMSVILLE
CENTRAL SCHOOL DISTRICT
Est. 1893

Williamsville Central School District
105 Casey Rd.
P. O. Box 5000
East Amherst, New York 14051

Dr. Darren J. Brown-Hall
Superintendent of Schools

Dr. Marie Balen
Asst. Superintendent for Instruction

Williamsville North High School
1595 Hopkins Road
Williamsville, NY 14221

Andrew Bowen
Principal

Kristen Rizzo, *Asst. Principal*
Patrick Smith, *Asst. Principal*
Julie Ziobro, *Asst. Principal*
Kristin Juergens-Tonge, *Asst. Principal/Athletic Director*

School Counselors
Jennifer Miller-Bushey
Elizabeth Caputi-Schlant
Christina Davidson
Jillian Kaputa
Angela Szwed
Gabriella Tringalli

Williamsville Central School District is an equal opportunity employer in compliance with all applicable laws including New York State Human Rights Law, Title IX, Title VII of the Civil Rights Act of 1964, the Equal Employment Opportunity Law, and section 504 of the Rehabilitation Act. Williamsville Central School District does not discriminate against any person on the basis of age, race, color, creed, national origin, marital status, religion, sex, sexual orientation, military/veteran status, disability or predisposing genetic characteristics.

Please address questions and complaints to the District Compliance Officers: for adults, the Assistant Superintendent for Human Resources, (716) 626-8051; for students, the Assistant Superintendent for Exceptional Education and Student Services, (716) 626-8061.

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2025 SCHOOL PROFILE

1595 Hopkins Road Williamsville, New York 14221
www.williamsvillek12.org/NORTHHIGH
Counseling Office: (716)626-8506
Fax: (716)626-8377

CEEB CODE: 335983

Williamsville North

Superintendent of Schools: Dr. Darren J. Brown-Hall
Principal: Andrew Bowen
Assistant Principals: Patrick Smith
Kristin Juergens-Tonge
Kristen Rizzo
Julie Ziobro
Counselors: Jennifer Miller-Bushey *jbushey@williamsvillek12.org*
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Gabriella Tringali *gatring@williamsvillek12.org*
Elizabeth Caputi-Schlant *ejcaput-schlant@williamsvillek12.org*

COMMUNITY

The Williamsville Central School District is located in the Town of Amherst, a suburb of Buffalo, NY, and serves a community characterized by diversity, high expectations and support for learning. Williamsville is the largest suburban school district in Western New York, with an enrollment of over 9,518 students, K-12, including three high schools with approximately 3,042 students in grades nine through twelve. The District adjoins the University at Buffalo Amherst Campus and encompasses 40 square miles including portions of the towns of Amherst, Clarence and Cheektowaga. Williamsville is consistently ranked as one of the top school districts in Western New York among 98 school districts in an eight-county region.

SCHOOL

Williamsville North is accredited by the NYS Board of Regents and Regional Accreditation Association, with over 146 courses offered to approximately 1,300 students. Students at North complete the NYS Regents level curriculum, with many pursuing accelerated and Advanced Placement courses. Extra-curricular activities and athletics round out the District's commitment to a total education. North High School offers over 43 clubs and activities to our students. The North Spartans athletic teams are traditionally among the best in their division in Western New York with 21 sport programs offered through 60 athletic teams at the Varsity, Junior Varsity, and Modified competitive levels.

Williamsville North is home to the District's Space Lab Planetarium, the only operational school-based planetarium in the Erie Niagara region. The planetarium is available to every teacher, student and classroom in Western New York, offering a variety of science and curriculum-based programs. Annually, about 20,000 people – children and adults of all ages – visit the planetarium.



Class of 2025

National Merit Semi-Finalists: 3

National Merit Commended Students: 4

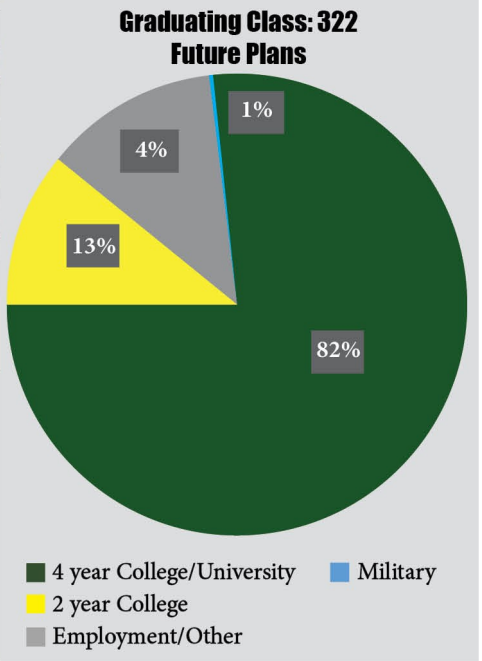
Regents Diploma with Advanced Designation: 137 students-43%

Regents Diploma with Advanced Designation with Honors: 55 students-18%

Regents Diploma with Honors: 0 students-0%

Regents Diploma: 116 students-33%

Local Diploma: 5 students-1%



GRADING SYSYEM

Beginning with the 2020-21 school year, Williamsville no longer ranks students, believing that rank does not reflect the rigorous college preparatory curriculum or individual student achievement found in the Williamsville schools. The academic level of a course is indicated on the transcript by the letters AP (Advanced Placement), A or H (Accelerated/Honors), or R (Regents). The Gifted Math Program (GMP) is offered to select students through the University at Buffalo. Numerical grades are based on a 100 point scale and the grade point average is not weighted. The student's grade point average (GPA) is computed at the end of junior year by using the unweighted final mark in all subjects. Students are required to to carry 6.5 credits each year of high school.

CURRICULUM

ART: Studio In Art, Studio in Photo & Media Arts, Studio in Photography II, (d) Studio In Drawing & Painting, (d) Advanced Studio in Drawing & Painting, (d) Studio in Sculpture & Ceramics, (d) Graphic Design, Exploring Art: Creation & Curation, SUPA (d) Art of Animation, Visual Presentation & Portfolio, AP Art & Design.

BUSINESS: (d) Accounting I, Accounting ll, SUPA: (d) Intro to Financial Accounting, Advertising & Media Relations, (d) Business and Personal Law, (d) College & Career Readiness, Entrepreneurship, International Business, Introduction to Business, (d) Computer Applications & Digital Literacy, (d) Advanced Computer Applications & Digital Literacy, (d) Personal Financial Literacy, (d) Principles of Marketing, Sports & Entertainment Marketing, Youth Leadership, Internship, Work Experience, DECA, FBLA.

COMPUTER SCIENCE: (d) Exploring Computer Science, (d) Computer Programming, (d) AP Computer Science Principles, (d) AP Computer Science A.

ENGINEERING & TECHNOLOGY EDUCATION:
Advanced Woodworking, Architectural Design & Drawing, Automotive Technology, Biotechnical Engineering, Construction/ Production, Electronics & Robotics, Energy & Aerospace, Introduction to Woodworking, Multi-Media 1 & 2, (d) Civil Engineering & Architecture, (d) Computer Integrated Manufacturing, (d) Design & Drawing for Production, (d) Digital Electronics, (d) Principles of Engineering, Video Game Design & Development, (d) Capstone.

ENGLISH: English 9R, English 10R & 10A, English 11R & 11A, English 12R, AP English Language, AP English Literature, SUPA: (d) Intro to Creative Nonfiction, SUPA: (d) Academic Writing, SUPA: (d) Presentational Speaking, SUPA: (d) Class & Literacy Texts, Creative Writing, Film Study, Journalism, Media Literacy, Speech and Communication, Theatre.

WORLD LAGUAGES: French 1R, French 2R, French 2A, French 3R, French 3A, Comprehensive French, (d) French 4A, (d) French 5A, AP French, German 1R, German 2A, German 3A, German 4A, Latin 1R, Latin 2A, Latin 3A, Latin 4A, Spanish 1R, Spanish 2R, Spanish 2A, Spanish 3R, Spanish 3A, Comprehensive Spanish, (d) Spanish 4A, (d) Spanish 5A, AP Spanish, AP Latin.

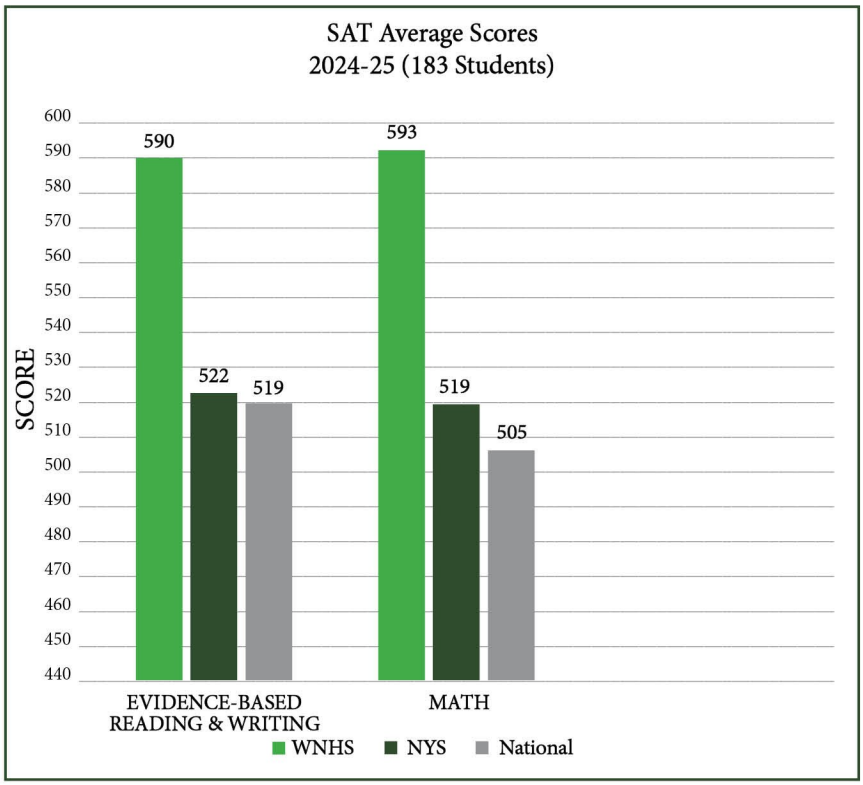
MATH: Fundamentals of Algebra, Algebra 1R, Geometry, Geometry R & A, Algebra 2, Algebra 2R & 2A, Mathematical Connections, Pre-Calculus, Pre-Calculus R & A, (d) Calculus 5R, AP Pre-Calculus, AP Calculus AB, AP Calculus BC, AP Statistics, (d) Statistics.

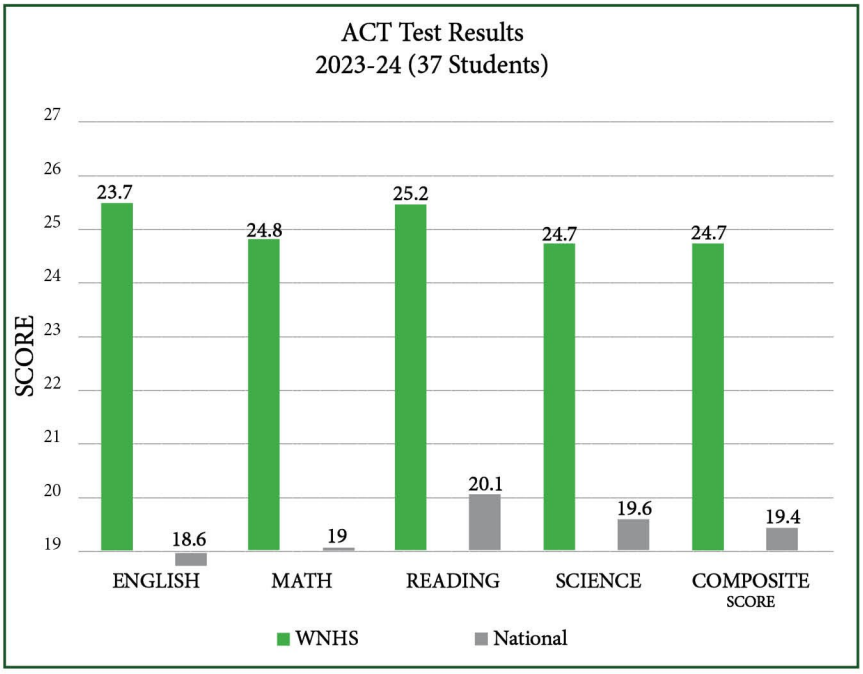
MUSIC: Music In Our Lives, Music in Our Lives II, Music (d) Theory, AP Music Theory, Concert Band, Wind Ensemble, Mixed Chorus, Concert Choir, Dynamics, Choraleers, Concert Orchestra, Symphonic Orchestra, Introductory Jazz Improvisation, Jazz Band & Jazz Ensemble.

SCIENCE: AP Biology, AP Chemistry, AP Environmental Science, AP Physics II, Anatomy & Physiology A, Astronomy, Chemistry, Chemistry R & A, Earth & Space Sciences, Environmental Science, (d) Forensic Science, Great Lakes, Life Science: Biology R & A, Natural Disasters, Physics, Physics R & A.

SOCIAL STUDIES: Global History & Geography 1R & IIR, AP World History, US History & Govt. R, AP United States History, AP US Govt. & Politics, Economics, SUPA: (d) Economic Ideas & Issues, Participation in Gov't., AP African American Studies, AP European History, AP Psychology, AP Comparative Gov't. & Politics, Anthropology, Canadian Studies, Thinking Critically in the Age of Mpisinformation, Current Events, Human Rights & Genocide, History of Woman in the U.S., Humanities, Psychology, Sociology, Turbulent 60's, War in the 20th & 21st Centuries, World Religions.

**Not all courses run each school year.*
(d) Dual Enrollment/College Credit available.





ADVANCED PLACEMENT RESULTS -- 466students took 1045 exams (PERCENTAGE SCORING 3 OR HIGHER)

Biology (87%)
Calculus AB (83%)
Computer Science A (83%)
English Language (95%)
English Literature (87%)
Environmental Science (94%)
Calculus BC 70%)
Chemistry (96%)
Music Theory (100%)
European (100%)
Computer Science Principles (94%)
Chinese (67%)
Government & Politics (92%)
Psychology (81%)
Statistics (83%)
US History (98%)
World History (93%)
Physics 2 (91%)
Precalculus (100%)
2D Art (100%)
3D Art (100%)
Drawing (100%)
Research (100%)
Spanish (100%)

PREFACE

This High School Course Catalog has been developed to assist students and parents in planning high school programs. It will serve to inform both the student and their parents of graduation requirements and the broad range of required and elective courses available in the high schools of the Williamsville Central School District.



It is the responsibility of students to discuss course options with school counselors and other appropriate individuals within their high school building to gather additional information that this Catalog does not convey.

It should also be understood that the three high schools in the Williamsville Central School District, although pursuing the same goals and objectives through their course offerings, represent different learning environments. These environments are a function of the student, as well as the teachers and community surrounding the school. The Williamsville Central School District faculty prides themselves on incorporating the philosophy of Differentiated Instruction into their classroom activities and lessons. By utilizing this philosophy, educators present content material in various ways to address learning styles, readiness levels, and varied interests among students. Differentiated Instruction also offers students the opportunity to work with their peers in groups that are heterogeneously mixed. Structuring lessons in this fashion helps to ensure that students are exercising positive social skills and successfully accessing course material.

It is hoped that through the use of this Catalog and the other services available that the high school educational program decided upon will help all students to reach their personal goals and provide them with satisfying and enlightening life experiences.

This course catalog, at the time of its printing, reflects all of the courses and curriculum approved to be offered to students by the Williamsville Board of Education. Whether or not a course is actually offered or conducted may be influenced by the number of student course requests and availability of staffing due to budgetary considerations.

The State Education Department and the Board of Regents of New York State determine Graduation Requirements and guidelines for all high schools in New York. Changes in these requirements may occur after the printing of this catalog in any given year. The Guidance/Counseling Department will regularly update students with any relevant changes that might affect them.

GUIDANCE/COUNSELING SERVICES and SCHOOL SERVICES

Counselors: Mrs. Jennifer Miller-Bushey (C,G,O,W)
Mrs. Elizabeth Caputi-Schlant (H,M,N,U,Y)
Mrs. Chrissy Davidson (D,J,T)
Mrs. Jillian Kaputa (B,L,P,Q)
Mrs. Gabriella Tringali (A,F,I,K,V,)
Mrs. Angela Szwed (E,R,S,X,Z)

It is the goal of the WSHS Guidance/Counseling Department to promote the potential of each student based upon a realistic understanding of their interests, goals and abilities. It is our desire to work cooperatively with parents to maximize each student's opportunities and achievements through the following:

• Academic Guidance • Placement and Scheduling
• Personal and Social Counseling • Parental Consultation & Referral
• Career Education • Interest Inventories • Individual Counseling • Career Center • Computer Guidance and Internet Information
• College Preparation and Decision-making Opportunities • Visitation Days • Programs • Planning • Application Procedures
• Financial Aid Information • High School Graduation Records • Official Transcripts • Working Papers

Grade 9:
- 8th grade parent/student orientation (January)
- Course selection (with Middle School Counselors)
- Placement and schedule adjustments (as necessary)
- Review of Guidance/Counseling/Career Center services with students (fall)
- Group and individual scheduling for 10th grade

Grade 10:
- Development of schedules, including elective courses
- Attention to progress for high school graduation
- Career exploration on Naviance
- Group and individual scheduling for 11th grade
- Harkness presentations (fall)

Grade 11:
- PSAT/NMSQT - class orientation and preparation (October)
- College Information Night (spring)
- Career/college exploration (September - June)
- College testing - SAT/ACT
- College fair with over 100 schools (fall)
- Continue exploration of college and career interests
- Group and individual scheduling for 12th grade
- Attend National College Fair at the Buffalo Convention Center (spring)
- Class meetings about timeline for college process (spring)
- Discuss New Visions opportunities with interested students
- Meet with school counselor to discuss graduation requirements, post high school plans

Grade 12:
- Senior orientation - career/college selection
- Grade level meeting the first week of school
- Individual meetings with school counselor to review high school transcript, diploma type, graduation credits, college applications, post high school plans
- Individual student meetings with counselor
- Two college fairs are offered in September
- Assistance with scholarships
- Presentation by school counselor on the Common App in the College and Career Class

Student Placement & Scheduling
- Work with teachers and parents to place students in the appropriate academic courses.
- Help students and parents select majors and electives to fulfill diploma requirements.
- Schedule students in courses; counsel students in regard to course drop/add

Counseling for Personal, Social & School Problems
- Difficulty adjusting to high school
- Peer pressure; social problems
- Academic difficulty; report cards; parent phone calls
- Inappropriate behavior

Career Exploration
- College and Career Center offers students opportunities (grades 9-12) to create Naviance accounts where students can take interest inventories, do college research and search for scholarships
- Career Center services - Grades 9-12
- Choices after high school – challenges, opportunities and preparation
- Students should meet with their school counselors to discuss their post high school plans – the challenges, opportunities, and preparation
- Harkness and New Visions opportunities

College Preparation
- Grades and high school transcript
- Activities in and out of school
- Letters of recommendation by teachers, counselors
- Important tests - PSAT - Grade 11 (Fall), SAT and/or ACT - Grade 11 (Spring), and Grade 12 (Fall)
- Applications for SUNY and other public and private colleges
- College and Career Center offers students the opportunities to attend college visits by college representatives and military personnel, participate in instant admit days by local colleges, and get updated scholarship information though Naviance.

CALENDAR FOR COLLEGE BOUND SENIORS

September
- Register for fall SAT/ACT for college admissions if required by college. Many colleges are still test optional.
- Senior review with your school counselor.
- Early decision applications must be initiated. (see your school counselor)
- Meet visiting college representatives at North High School.
- Scholarship/Financial Aid information available.

October
- Attend individual student appointments, with school counselor regarding graduation and post high school plans.
- If needed, register for college entrance testing on the testing websites.
- Meet visiting college representatives; attend college fairs.
- Review college applications process with school counselor.
- Request letters of recommendations from teachers and counselors.
- Submit appropriate Financial Aid Forms as required by each college as soon as it becomes available.

November
- Scholarships processed on an ongoing basis as determined by due date.
- Have your meeting with your school counselor completed and schedule any follow up meetings as necessary.

December
- Finish all college applications

January
- Mid-year grades sent to colleges

March-April
- Common App, SUNY, and other public and private colleges admission notification.
- Financial Aid Awards made. (Some notified at a later date.

May - June
- Decision Day - May 1 - deposits paid to colleges.
- Communicate with school counselor regarding future plans AND make sure to notate what school you will be attending in Naviance so a final transcript can be mailed.

Naviance | *Student*

All students and parents have access to **Naviance Student** – a comprehensive website that students and their parents can use to make plans about colleges and careers. Naviance is a service that we use to track and analyze data about college and career plans, so it provides up-to-date information that's specific to our school.

Naviance Student allows students and parents to:

- **Get involved in the planning and advising process** – Build a resume, complete online surveys, and manage time-lines and deadlines for making decisions about colleges and careers
- **Research colleges** – Compare GPA, standardized test scores, and other statistics to actual historical data from our school for students who have applied and been admitted in the past
- **Research careers** – Research hundreds of careers and career clusters, and take career assessments
- **Create plans for the future** – Create goals and to-dos, and complete tasks assigned by the school to better prepare your student for future college and career goals.
- **Find scholarships** – Search for local and national scholarships with links to apply online for most.

Naviance Student also lets us share information with you about upcoming college visits and events, local scholarship opportunities, and other resources for college and career information.

Student Login:
Once logged in through WITS, students should go to the **Guidance** page then **College and Career Center** page. From there click on the Naviance tab.

On the login screen students should click the "**CONTINUE WITH SINGLE SIGN ON**" button.

Students **DO NOT** need to enter an email or password as long as you are already in WITS and use the **SINGLE SIGN ON** button.

Parent Login:
Parents who wish to have a Naviance account are encouraged to WITS mail Michelle McKinstry at mlmckin@williamsvillek12.from the email address they wish their account to be linked to along with the name of the student.

You will then receive an email with your login credentials. With these credentials, go to:
https://student.naviance.com/williamsvillenh

Note: Parents and students have separate accounts that will be linked together once both have registered with Naviance.

GRADUATION REQUIREMENTS

Regents Diploma	Credits
English	4
Social Studies	4
Math[a]	3
Science[a]	3
World Languages	1[b]
Art/Music	1
Health	.5
Physical Education	2
Sequence/Electives	3.5
TOTAL	**22**

Required Exams

[All exams require a score of 65 or above]

English Comprehensive Exam

1 Regents Math exam

1 Regents Global Studies Exam

Regents Science Exam

1 additional Regents Exam in Math, Science, or Social Studies

Checkpoint A Exam (for 8th grade World Languages credit only)

Regents w/Advanced Designation Diploma	Credits
English	4
Social Studies	4
Math	3
Science	3
World Languages[c]	3
Art/Music	1
Health	.5
Physical Education	2
Sequence/Electives	1.5
TOTAL	**22**

Required Exams

[All exams require a score of 65 or above]

Meet all Exam requirements for a Regents Diploma AND:

Pass 2 additional Math Regents Exams

Pass 1 additional Science Regents Exam with at least 1 Life Science

Complete World Languages Checkpoint B [c]

[a] An integrated course in mathematics/science/technology may be used to satisfy the requirement for a third unit of credit in mathematics or science.

[b] All students, with the exception of special education students exempt from World Languages on their IEP, are required to have completed two units of study and earn 1 credit in World Languages by the end of grade 9.

[c] Students must complete 3 units of credit in a second language resulting in a locally-developed Regents exam (Checkpoint B); or 5 units of credit in career and technical education plus 1 credit in a second language; or 5 units of art/music plus 1 credit in a second language.

[d] Students may earn a mastery level notation on their diploma if they score 85 or above on all three state required math exams.

[e] Students may earn a mastery level notation on their diploma if they score 85 or above on three state assessment science exams.

• ACCELERATED GRADUATION

Should a student desire to graduate early, a procedure will be required prior to approval of accelerated graduation. To begin the process both the student and parent will meet with the student's counselor. After this initial meeting, the request for accelerated graduation must be presented in writing by the student's parents to the principal with approval from the student's counselor. The student must be able to show that he/she can meet all NYS graduation requirements in the shortened time period.

- Students requesting early graduation must have approval of the principal, counselor and parents. (Refer to "Accelerated Graduation" *xvii*).

DIPLOMA OPTIONS

Diploma Type	Available to	Link for More Information
Regents Diploma	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regentsdiploma
Regents with Advanced Designation	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regentsAD
Regents Diploma (through appeal)	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regpasscore
Local Diploma (through appeal)	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regpasscore
Local Diploma	Students with disabilities with an individualized Education Plan or 504 Accommodation Plan	http://www.p12.nysed.gov/part100/pages/1005.html#assessment http://www.p12.nysed.gov/specialed/publications/safetynet-compensatoryoption.html

CREDENTIAL OPTIONS

Diploma Type	Available to	Link for More Information
Career Development and Occupational Studies Commencement Credential	All students	http://www.p12.nysed.gov/specialed/gradurequirements/CDOS-QA-1113.htm
Skills and Achievement Commencement Credential	Students with severe disabilities that are assessed using the NYS Alternate Assessment	http://www.p12.nysed.gov/specialed/publications/SACCmemo.htm http://www.p12.nysed.gov/part100/pages/1006.html

DESIGNATION OF ACADEMIC ACHIEVEMENT

Diploma Type	Available to	Link for More Information
Regents with Honors	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#diplomaHonors
Regents with Advanced Designation with Honors	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#diplomaHonors
Regents with Advanced Designation with annotation that denotes **Mastery in Math**	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regentsAD
Regents with Advanced Designation with annotation that denotes **Mastery in Science**	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#regentsAD
Regents with Advanced Designation and annotation that denotes **Mastery in Science and Math**	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#diplomaHonors
Regents with Advanced Designation with Honors and annotation that denotes **Mastery in Science and Math**	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#diplomaHonors
Local Diploma, Regents Diploma, Regents Diploma with Advanced Designation (with or without Honors) with a **Career and Technical Education Endorsement**	All Students	http://www.p12.nysed.gov/part100/pages/1005.html#carteched

GENERAL COURSE REGULATIONS

1. No course may be taken out of sequence, that is, without first taking its prerequisite(s), unless special arrangements are made with parent, teacher and the school counselor, and approved by the building principal.

2. Upon the completion of a course of study, there shall be a culminating experience that reviews and evaluates the objectives for that course of study. This culminating experience generally takes the form of an examination and results in a final exam mark.

   Students enrolled in Regents courses are required to take the Regents Examination. Exceptions to this regulation, as recommended by the teacher involved, may be approved by the building principal.

   Students enrolled in AP Courses are required to take the AP examinations, and all examinations are paid for by the student.

Summer School:

The Williamsville Summer School program offers both enrichment and remedial academic opportunities:

***NEW COURSES** will allow mature and able students to complete a high school course in six weeks for credit.

***REVIEW COURSES** will enable students to retake a class that they did not successfully complete during the regular school year. **Students who enroll in a review science course must provide proof, at the time of registration, that they have successfully completed the lab requirement.**

***TUTORIAL COURSES** are available for students who earned course credit but failed the corresponding Regents exam.

Any student registering for a New Course or a Review Course must see their counselor to preregister for summer school.

Students may be admitted to August final examinations if:

a. The exam is being offered as a normal part of the Summer School Program;
b. A written request for admission is received from the home school principal;
c. The student has demonstrated evidence of competency in the examination subject area.
d. Summer School grades are calculated based on the following formula:
   ⅓ first marking period, ⅓ second marking period, ⅓ final exam.
e. The final grade is also based on participation in addition to other classroom assignments and work. To receive the maximum participation credit a student must be present, on time, prepared, and actively engaged in the learning process.

Retaking a Final Regents Examination:

- Students who have not passed the final exam and failed the course are encouraged to enroll in summer school or must retake the course during the next school year.
- Students who have failed the exam but passed the course should:
  - Enroll in any of the Summer School Exam Tutorial Courses offered in summer school.
  - Sign up to retake the exam.

- Prepare to take the exam in a course of study approved by the principal. Such courses of study include:
  - Advanced approval must be obtained from the principal if the tutor is not a certified teacher.
    OR
  - Enroll in any of the Summer School Exam Tutorial Courses offered in summer school.
  - Enroll in the regular summer school program.
- Students must retake the exam before the completion of the next course of study in the sequence or one year, whichever comes first.
- Students must receive WRITTEN APPROVAL to retake an exam FROM THE BUILDING PRINCIPAL after completing a form which can be obtained in the Guidance/Counseling office.
- FINAL APPROVAL will be given by the building principal (June or January Exams) or the summer school principal (August Exams) when the student has completed the agreed upon course of study. The tutor/teacher's Report must be completed and presented at the exam room on the day of the exam in order to gain admittance.

- If a student fails a course but has passed the Regents/Local exam, then the student may choose to utilize the passing grade on the Regents/Local exam after re-taking the course. The student may be required, by the teacher of the course that the student is re-taking, to take an alternative assessment if he/she chooses to utilize the passing grade.

- Students who passed the exam and the course but wish to retake a final exam in order to raise their final grade are required to prepare for the exam or enroll in a Summer School Preparation Course.

In all situations, the higher exam grade will be used.

Regents Examinations:

- A student may be barred from taking a Regents examination if the student has not satisfactorily completed the entire course of study -- that is, the state syllabus in that subject. However, "pupils may not be barred from a Regents examination for disciplinary reasons or because their achievement in a subject is considered unsatisfactory" for the entire course of study.
- The score received on the Regents examination is always entered on the report card, permanent record, and transcript; whether the score is passing or failing, and whether the entry is wanted or not.
- Students must pass both the course and the Regents exam.

Independent Study: may be recognized in fulfillment of the requirements for a Regents diploma. The independent study must be academically rigorous and aligned to the New York State commencement level learning standards for the subject in which credit is sought; overseen by a teacher knowledgeable and experienced in the subject area of the independent study; based on a syllabus on file for each independent study; and of comparable scope and quality to classroom work that would have been done in a regularly scheduled class.

Student's participation in independent study is based on the following criteria:

a. the student has demonstrated readiness and has a high likelihood of success in each subject in which he/she seeks to undertake independent study;

b. the student has accumulated the expected number of units of credit for the student's grade level; and

c. the student has passed the appropriate number of Regents examinations or other assessments required for graduation, for the student's grade level

d. the student has met all prerequisites

Independent study is intended to insure appropriate levels of rigor and quality for providing students with the opportunity to earn independent study credit and for awarding independent study credit for successful program completion. To receive credit, the student must successfully complete the independent study and demonstrate mastery of the learning outcomes for that subject.

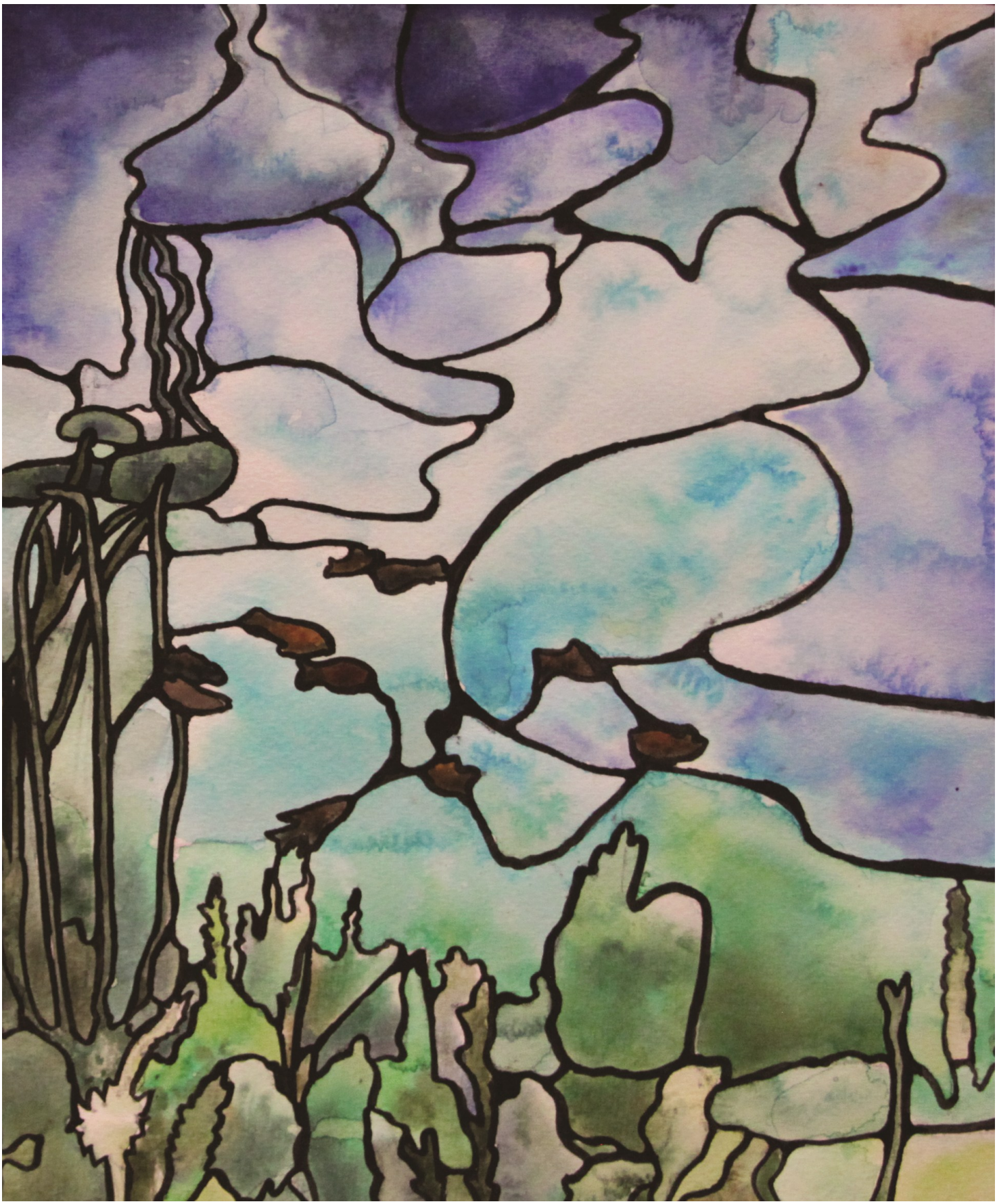
A school may award up to three credits of instruction for independent study courses. Students interested in pursuing independent study credits should meet with their school counselor.

Students who fail an elective subject after two consecutive full years of study will be discouraged from enrolling in the course again. Note that this will not apply to required courses; i.e., required subjects are those which must be taken by all students to become eligible for graduation.

COURSE CREDIT

Students who wish to take a course for high school credit at approved institutions such as high schools or colleges, must have the courses approved by the building principal **prior** to enrollment in the course.

The State Education Department has established standards for earning a high school diploma. These are **minimum** requirements which must be met and *do not necessarily meet the entrance requirements* established by individual colleges. **All students should take the most demanding course of study of which they are capable!**



MARKING SYSTEM

1. Numerical marks are to be used in the Williamsville Central School District.
2. Grade reporting will be issued every 10 weeks. An interim report will be issued at mid 10-week periods for all students whose academic progress is unsatisfactory. Interim reports for the purpose of informing parents of the positive aspects of a student's behavior are encouraged.
3. The minimum passing mark is 65.
4. The final grade for a course is based on one of the following:

Course Type	Q1	Q2	Q3	Q4	Final
Full-Year Course w/ Regents	25%	25%	25%	25%	0%
Full Year Course w/Local Exam or Project	22.5%	22.5%	22.5%	22.5%	10%
Full-Year Course w/NO final exam	25%	25%	25%	25%	0%
Half-Year (Semester) Course w/Local Final Exam or Project	45%	45%			10%
Half-Year (Semester) Course w/NO Final Exam	50%	50%			0%

5. A student passes or fails a course based on the final grade.
   A student will receive school credit for a course only if the final grade for the course is 65 or higher.

The following table should be used when converting scores from a letter grade to a numerical scale:
Letter grade equivalents used for new students entering the District when equivalents are not supplied by the referring school:

A- = 90	A = 95	A+ = 99
B- = 80	B = 85	B+ = 89
C- = 70	C = 75	C+ = 79
D- = 65	D = 67	D+ = 69



GRADE POINT AVERAGE

All courses are considered in figuring the GPA. The total average of the courses is divided by the total number of credits received. Results are calculated to the fourth place. All failing grades are averaged in, and the credit they should be worth is used also.

A 1/2-credit course uses only that part of the student's final average.

Example: Health – 1/2 credit – 90 average – Grade used = 45.0

(Anytime a credit for a course is less than the full unit, you divide by the amount of credit indicated.)

HONOR ROLL/MERIT ROLL

Honor roll/merit roll is determined at the end of each marking period. To be considered for honor roll/merit roll, students must carry a minimum course load of 5 units plus one-half unit of physical education. To be eligible for merit roll, the unweighted grade average must be 85. To be eligible for the honor roll, the unweighted grade average must be 90. Grade average is computed by dividing the number of courses into the total numerical value of grades for all courses, including physical education. One half credit (.5) courses should have the total grades divided by two in the calculation process.

ADDITIONAL INFORMATION RELATIVE TO COURSES

ADVANCED PLACEMENT COURSES

These courses prepare students for the College Entrance Board AP examinations. AP courses may offer the opportunity for students to earn college credit at the discretion of the receiving college or university. This is dependent upon the student's performance on the Advanced Placement examination and policies at the college or university choice. Students who take these examinations may have the results forwarded to the college(s) of their choice by the College Board for evaluation. Some colleges will grant advanced credit, but the passing of AP examinations does not guarantee such credit. Students who plan to take these courses should be firmly committed to completing the courses and [meet any course pre-requisites] begin to arrange their programs as early as possible. ALL STUDENTS ARE REQUIRED TO TAKE THE AP EXAMINATIONS, AND ALL EXAMINATIONS ARE PAID FOR BY THE STUDENT. For information on fee reduction eligibility, please contact your child's counselor.

Students are encouraged to take Advanced Placement courses for the purpose of enhancing their educational background in preparation for post high school career opportunities, to challenge themselves academically and to gain possible advanced credit by a college/ university.

Students are strongly encouraged before scheduling an Advanced Placement course to meet with the Advanced Placement teacher in order to gain an understanding of course expectations, exam preparation and grading policies. Also, students should review with their counselor their course selections in order to ascertain whether or not an AP course would be appropriate in relationship to the other courses the student would be taking.

NATIONAL COLLEGIATE ATHLETIC ASSOCIATION (NCAA)

To be eligible to practice, compete, and receive an athletics scholarship in your first year of full-time enrollment, you must meet the following requirements:

Division I: http://www.ncaa.org/student-athletes/play-division-i-sports
Division II: http://www.ncaa.org/student-athletes/play-division-ii-sports

College-bound student-athletes preparing to enroll in a Division I or II school need to register with the NCAA Eligibility Center to ensure they have met amateurism standards and are academically prepared for college coursework. It is recommended that this registration is completed during the summer prior to the student's junior year.

How to Register: https://www.ncaa.org/sports/2014/10/24/how-to-register.aspx

Eligibility Center

NCAA Customer Service: *1-877-262-1492*

Please be advised that it is the family's responsibility to check the NCAA Eligibility Center using the NCAA High School Portal page:

https://web3.ncaa.org/hsportal/exec/hsAction?hsActionSubmit=searchHighS.

This portal will allow you to verify if your child's courses meet NCAA eligibility requirements. While the Williamsville Central School District is committed to providing a comprehensive and rigorous curriculum, we do not govern the decisions or requirements set by the NCAA and are subject to their determinations. We encourage you to regularly review the portal and reach out to the NCAA directly with any specific questions or concerns regarding eligibility. In addition to checking the NCAA portal, we strongly recommend reaching out directly to the colleges and universities your child is interested in attending to ensure they meet all specific requirements for athletic eligibility.

Other Helpful Links:

NCAA Homepage:
www.ncaa.org

Eligibility Center:
https://web3.ncaa.org/ecwr3/

Educational Resources:
https://www.ncaa.org/sports/2015/2/11/student-athletes-future-educational-resources.aspx

Frequently Asked Questions (FAQ):
https://www.ncaa.org/sports/2014/1/8/frequently-asked-questions-about-the-ncaa.aspx

STUDENT COURSE REQUESTS AND SCHEDULES

COURSE DROP/ADD PROCEDURES

The goal of each student's schedule is to provide the best opportunity for academic success. Each student's schedule represents many hours of work by administrators, teachers and the guidance/counseling department. Student course requests based upon graduation requirements, sequences and interest in electives, have been carefully reviewed by counselors, teachers and parents. Many opportunities are provided for reflection, decision-making, and consultation with school personnel throughout the school year and beyond. Changes in a student's schedule for the following year will not be made except for compelling educational reasons. Any such requests for schedule changes must be presented to your School Counselor in writing for consideration.

COURSE CHANGES

Because we schedule our classes based on the course request numbers, Course and/or Level change requests received after the June Error and/or Omission Deadline will only be considered if they meet the following criteria:

- Request is received prior by the end of the first week of school
- Course requested has space availability
- Requested change does not adversely change class size/dynamics of either the class being dropped or the class being added
- Requested change does not affect the other classes on student's schedule
- Requested change does not close out the availability for other students to register for the course

Due to loss of instructional continuity and class time, student/parent requested schedule changes/corrections will NOT be allowed after the first week of school

LEVEL CHANGES

- Deadline to change course levels is the 12th week of the school year
- Grades may follow based on teacher discretion and acting in the best interest of the student's final grade
- Student may be required to make up work missed in the new course.

TEACHER REQUESTS/CHANGES

Some adjustments in a student's schedule may be necessary due to input error or other circumstances. However, **changes for convenience or teacher preference will not be honored.** It is our belief that students need to learn to work with a variety of individuals. Our entire faculty is professionally certified in their teaching area. *Students who do not pass a required course should be rescheduled for that course unless it is successfully completed in Williamsville Summer School.*

DEVELOPING COLLEGE READINESS

Students are encouraged to take advantage of the many opportunities to engage in college-level course work while in Williamsville High Schools. Students can choose from a wide variety of courses that provide a pathway to earn college credit. While individual cases may vary, students can often utilize the credits to reduce tuition costs, upon enrolling in a college.

NOTE - Individual colleges have their own policies regarding the transfer of credit from other colleges. Students should communicate directly with the admissions office of the college to determine eligibility.

DUAL ENROLLMENT We offer dual enrollment courses through four colleges and universities: University at Buffalo, Syracuse University, Erie Community College and Niagara University.

The **University at Buffalo's Gifted Math Program (GMP)** offers advanced mathematics courses twice a week during the academic year, which replace mathematics classes in the students' home school and are designed to challenge exceptional math students (i.e., upper 1% in their national peer group). Each year, the GMP admits a class of 60 students from across Western New York nominated for entry by parents or teachers. Applicants undergo interviews and a battery of tests, which includes the math section of the Preliminary Scholastic Aptitude Test. Those in grades 7 through 10 study an accelerated curriculum, while 11th and 12th graders take university-level courses in calculus and linear algebra. Students have the opportunity to earn up to 22 college credit hours through the GMP.

GMP I: GSE 120 – INTRODUCTION TO LOGIC

GMP II: GSE 121 – LOGIC and SETS

GMP III: GSE 122 – INTRODUCTION TO FIELDS

GMP IV: GSE 123 – RELATIONS and FUNCTIONS

GMP V: MTH-141 – COLLEGE CALCULUS I (Fall)

GMP V: MTH-142 – COLLEGE CALCULUS II (Spring)

GMP VI: MTH-241 – COLLEGE CALCULUS III (Fall)

GMP VI: MTH-309 – INTRODUCTION TO LINEAR ALGEBRA (Spring)

Project Lead the Way (PLTW) is a national pre-engineering program that is conducted in partnership with Williamsville High Schools and the Rochester Institute of Technology that enables qualified students to enroll in courses and earn college credits while remaining at their high school.

PLTW - Principles of Engineering (POE)

PLTW - Civil Engineering & Architecture (CEA)

PLTW - Computer Integrated Manufacturing (CIM)

PLTW - Design Drawing for Production (DDP)

PLTW - Digital Electronics (DE)

The **Syracuse University Project Advanced (SUPA)** program is conducted in partnership with Williamsville Central School and Syracuse University that enables qualified students to enroll in SU courses, earning college credits while remaining at their high school.

WRT 105 Practices of Academic Writing

WRT 114 Intro to Creative Nonfiction

ETS 181 Class and Literacy Texts

CRS 325 Presentational Speaking

SUPA: ACC 151 Introduction to Financial Accounting

SUPA: ECN 203 Economic Ideas and Issues

SUPA: ANG 101 Introduction to the Art and Craft of Animation

The **Advanced Studies Program** is conducted in partnership with Williamsville Central School District and Erie Community College Office of Advanced Studies. As a full year course, students who successfully complete the course can earn one unit of high school credit. Students who successfully complete the class and pay the SUNY Erie State University of New York tuition can earn three college credits for each course. Students who wish to participate in this program should obtain the required paperwork from their classroom teacher at the start of the class. The student is responsible for registering prior to the deadlines as stated by SUNY Erie State University of New York. Fees for dual-credit are set by SUNY Erie State University of New York and students will be billed directly by the college. The following courses offer dual credit:

Advanced Studio in Drawing & Painting

Graphic Design

Studio Sculpture & Ceramics

Personal Financial Literacy

Principles of Marketing

Accounting 1

Business & Personal Law

College and Career Readiness

Computer Applications & Digital Literacy

Advanced Computer Applications & Digital Literacy

Niagara University Senior Term Enrichment Program (NUSTEP) is a cooperative program between Niagara University and Williamsville High Schools that enables qualified students to enroll in NU courses, earning college credits while remaining at their high school. Students must be in 11th or 12th grade to receive NUSTEP credit.

Forensic Science

Exploring Computer Science

Calculus 5R

Statistics

Computer Programming

Advanced Placement Computer Science Principles

Advanced Placement Computer Science A

4A French and 4A Spanish

5A French and 5A Spanish

The **College Access Program** is conducted in partnership with Williamsville Central School and SUNY Buffalo State University. As a full year course, students who successfully complete the course can earn one unit of high school credit. Students who successfully complete the class and pay the SUNY Buffalo State University tuition can earn three college credits. Students who wish to participate in this program should obtain the required paperwork from their classroom teacher at the start of the class. The student is responsible for registering prior to the deadlines as state by SUNY Buffalo State University and students will be billed directly by the college. The following courses offer dual credit:

Music Theory

SUPPORTING STUDENT SUCCESS

English as a New Language (ENL)

The Williamsville Central School District is committed to educating all students. Our school community is representative of students and families from diverse cultural backgrounds speaking a variety of languages other than English. As we support our English language learners with acquisition of language and content, we also work to ensure that the cultures of our students are positioned as strengths and as the foundations of empowering, rigorous, and innovative learning.

English as a New Language (ENL) consists of instruction designed specifically for students acquiring English. Students are identified as English language learners (ELLs) through a New York State screening and identification process that begins at registration. Students are placed in classes designed to meet their instructional needs based on their English proficiency level. Instructional programs required by New York State include Integrated ENL and/or Stand-Alone ENL.

Integrated ENL is required for ELLs of all proficiency levels. In Integrated ENL, students receive instruction in a core content area (i.e., English Language Arts, Math, Science, or Social Studies) and English language development, including home language supports and appropriate scaffolds. This instruction is delivered together by English to Speakers of Other Languages (ESOL) and content certified teachers.

In addition to Integrated ENL, all English Language Learners at Entering and Emerging proficiency levels receive Stand-Alone ENL instruction. In Stand-Alone ENL students receive instruction on English language development, taught by a New York State certified ESOL. teacher, as a pathway to acquire academic language needed for success in core content areas.

Each spring, all students identified as English Language Learners take the New York State Second Language Achievement Test (NYSESLAT). This test is designed to annually assess English language proficiency of ELLs in grades K–12. The NYSESLAT is a component of New York State's compliance with federal laws that mandate annually assessing and monitoring the English Language proficiency progress of ELLs.

The NYSESLAT provides information about English language development of ELLs, which drives instruction aligned to the NYS Learning Standards, the Blueprint for English Language Learner/Multilingual Learner Success, and NYSED's Science of Reading for Multilingual Learners Toolkit. An ELL's performance on the NYSESLAT indicates their level of English language proficiency relative to the linguistic demands of the grade-level classroom. Proficiency levels indicate the type of English language support each ELL needs to participate productively in the classroom. A student who scores at the highest proficiency level (Commanding) has met the linguistic demands necessary to meet the discipline-specific standards, and exits their status as an ELL. After exiting ELL status, a student is considered to be a Former ELL and is entitled to continued service for two years. This service consists of monitoring, or other approved services, by the ESOL teacher to ensure the continued acquisition of the English language, as well as testing accommodations.

ALTERNATIVE INSTRUCTIONAL MODEL (AIM)

In addition to the three high schools, Williamsville offers an Alternative Instructional Model (AIM) Program for students enrolled in grades 10-12. AIM provides students with a learning environment designed to facilitate the development of positive attitudes toward self, school and community.

Students from each of the District's three high schools (North, South and East) attend AIM; however since the AIM Building is located on the North High campus, students attending AIM are involved in the daily activities of the North High School community making use of the North cafeteria, school library, and physical education facilities. Also, many AIM students take elective courses at North.

The AIM culture is one that emphasizes active participation, respect, caring and trust. Supports include increased student-teacher and student-counselor contact; flexibility in scheduling, pacing and instructional methodology; as well as opportunities for service learning projects and community experiences. The students, in turn, must be able to work independently and demonstrate a solid commitment to completing the coursework leading to attainment of their high school diploma. Students at the AIM program have the option of returning to their home school or continuing at AIM to complete their high school education.

Students apply to AIM when the home school counselor and administration, parents, and student, agree that a more individualized program of study would benefit the student. Most students who apply to AIM are lacking one or more credits for their grade level and/or are currently failing some classes. When students make the decision to attend AIM, they know that their parents, home school and the AIM staff support the decision. Since AIM is a program, not a school, students remain members of their home school where they are eligible to participate in interscholastic athletics and extracurricular activities.

HOME INSTRUCTION

Home instruction is a temporary measure for students as they recover from illness or injury. Resident children unable to attend school due to physical, mental or emotional illness or injury, as substantiated by a licensed physician and/or private licensed mental health practitioner, meet with a certified teacher provided by the School District. Secondary students requiring home instruction are typically provided with 15 hours of instruction per week (5 subjects, 3 hours per subject). Physical education requirements are met through the completion of written assignments.

SPECIAL EDUCATION

The Williamsville Central School District is committed to providing all students with a free and appropriate public education (FAPE). To meet the needs of students each High School offers special education programs and supports, access to supplementary aids and services, and alternative instructional strategies.

Special Education consists of specially designed instruction for students who have been identified by the Committee on Special Education (CSE) as having a disability that interferes with learning and/or educational progress. A multidisciplinary team of professionals along with parents/persons in parental relation are responsible for determining eligibility, coordinating evaluations, and recommending programs or services within the least restrictive environment (LRE). At least once annually, the CSE meets to recommend the continuation, modification, or termination of the provision of special education programs and supports. Parents/persons in parental relation are strongly encouraged to attend these meetings, typically held at the child's school of attendance.

The Individualized Education Plan (IEP), as recommended by the CSE, identifies the specific goals and objectives to be addressed. While not exhaustive, the purpose of special education is to provide:

- Instructional strategies and adaptations geared to a student's learning style;
- Targeted intervention through the provision of accommodations modifications and/ or scaffolding;
- Remediation of skill deficits and/or opportunities to acquire compensatory strategies;
- Opportunities to identify personal strengths and weaknesses, develop skills necessary for daily living, and acquire a sense of self-efficacy, competence, and independence.

A continuum of services is available to meet the needs of our students. The list below reflects the types of services which are typically provided in the High School setting, though these may vary from year-to-year depending upon the needs of the student population:

- Consultant Teacher Services (Direct and/or Indirect)
- Resource Room Services
- Special Class Instruction (self-contained and/or integrated co-teaching)
- Related Services (e.g., speech-language therapy, occupational therapy, physical therapy, vision services, hearing itinerant services)

In addition, transition planning services are also available to support students with post-secondary planning, vocational skill development and readiness for work and/or higher education.

WHAT IS THE AP CAPSTONE PROGRAM?

AP Capstone is an innovative diploma program that helps you stand out in the college admission process by developing the critical skills needed to succeed in college and in life.

Two new courses – AP Seminar and AP Research – allow you to immerse yourself in topics that matter to you while developing the analytic, research, problem-solving, and communication skills that colleges seek in their applicants.
This challenging program helps you deepen your passion for learning, gives you greater confidence in your academic skills, and provides a broader perspective on your world. More information can be found at: **https://lp.collegeboard.org/ap-capstone**

HOW AP CAPSTONE WORKS
Students typically take AP Seminar in the 10th or 11th grade, followed by AP Research. Students who earn scores of 3 or higher on the AP Seminar and AP Research Exams and on four additional AP Exams of their choosing will receive the AP Capstone Diploma. This signifies outstanding academic achievement and attainment of college-level academic and research skills. Alternatively, the AP Seminar and Research Certificate, signifying attainment of college-level academic and research skills, is awarded for scores of 3 or higher on the AP Seminar and AP Research Exams only.

HERE'S WHAT YOU CAN EXPECT:

YEAR ONE/AP SEMINAR



GRADE: *10, 11*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *8995*

In the first year, you'll develop and strengthen your analytic and inquiry skills, exploring deeply topics and issues chosen by you and/or your teacher. You'll learn to consider an issue from multiple perspectives, evaluate the strength of an argument, and make logical, fact-based decisions. For example, you might explore the question of whether national security is more important than a citizen's right to privacy, or whether genetic engineering is beneficial to society. During the course, you'll complete a team project, an individual paper and presentation, and take a written end-of-course exam. Your AP Seminar Exam score will be based on all three assessments using the usual 1-5 AP scoring scale.

YEAR TWO/AP RESEARCH



GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *AP Seminar—Score of 3+ on AP Exam*
CREDIT: *1.0*
CODE #: *8995A*

In this course, you'll complete an independent research project on a topic of interest to you.
For example, you can:

- Dig deeper into a topic you studied in an AP course
- Work across academic areas on an interdisciplinary topic
- Study a new area of interest, perhaps one you'd like to study in college

At the end of the research project, you'll submit an academic thesis paper of about 5,000 words, present your findings, and orally defend your work. Your AP Research score will be based on your paper, the presentation, and the oral defense, using the 1-5 AP scoring scale.

ADVANCED PLACEMENT COURSES

These courses prepare students for the College Board's "AP" examinations. All students who enroll in AP courses are expected to take the AP examinations for those courses, and the cost of every examination is paid for by the student. Cost is determined by College Board and varies year to year. Students who take these examinations can have the results forwarded to the college(s) of their choice for evaluation. Some colleges will grant advanced credit, but the taking of AP examinations does not guarantee such credit.

NEW YORK STATE
SEAL OF BILITERACY
PROGRAM

What is the New York State Seal of Biliteracy??

The NYSSB recognizes high school graduates who have attained a high level of proficiency in English and one or more world languages. The intent of the NYSSB is to encourage the study of languages, to identify high school graduates with language and biliteracy skills for employers, to provide universities with additional information about applicants seeking admission and placement, to prepare students with twenty-first century skills, to recognize the value of language instruction, and to affirm the value of diversity in a multilingual society. Successful candidates will earn three points in English and three points in each world language from a points matrix, which includes course grades, national and state exams, transcripts, and culminating projects. The NYSSB takes the form of a Seal on the student's diploma.

Criteria (English)	Pts.	Criteria (World Language)	Pts.
80 or higher on the NYS Regents Examination in English Language Arts	1	Complete a Checkpoint C level World Language course, with a grade of 85 or higher	1
English Language Learners (ELLs) score 75 or above on two Regents exams other than English,, without translation	1	Provide transcripts from a school in a country outside of the U.S. • three years of language other than English • grade 8 or beyond • average of B or higher	1
ELLs earn an overall score of 290 or better on the New York State English as a Second Language Achievement Test (NYSESLAT) (grades 9-12)	1	Score at a proficient level on an accredited Checkpoint C World Language assessment **Please see guidance in WCSD NYSSB Handbook.**	1
Complete all 11th- and 12th-grade ELA courses with an average of 85 or higher	1	Present a Culminating Project that meets the criteria for speaking, listening, reading, and writing established by the district's NYS Seal of Biliteracy Committee and that is aligned to the NYS Checkpoint C Learning Standards to a panel of reviewers with proficiency in the target language. **Please see guidance in WCSD NYSSB Handbook.**	2
Score at a proficient level on an approved English assessment ***(Includes Stamp4S, AAPPL, and English AP Examinations)***	1		
Present a Culminating Project that meets the criteria for speaking, listening, reading, and writing established by the district's NYS Seal of Biliteracy Committee to a panel of reviewers with proficiency in English. **Please see guidance in WCSD NYSSB Handbook.**	2		



WILLIAMSVILLE
CENTRAL SCHOOL DISTRICT
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COURSE DESCRIPTIONS SECTION

ART COURSES

The mission of the art program within the Williamsville Central School District, a community characterized by diversity, high expectations and support for learning, is to ensure that through the study of art all students will:

- ***Build and create a vital relationship with the arts that assists them in developing independent, critical thought.***
- ***Have lives rich in meaning and expression.***
- ***Learn to visually communicate in their own unique way, through creating works of art.***
- ***Learn to critically analyze, interpret, and judge visual imagery in a rapidly changing world.***
- ***Discover the opportunities and roles they can play in the arts, including the wide range of vocations, and as participant and/or supporter of the arts.***
- ***Understand that art reflects time periods, cultures and societies.***

Through the cultivation of artistic behaviors and strategies, students expand visual perception and intellectual skills that are essential for academic life and aid in understanding the world in which they live.

***Note:** All art courses satisfy the NYS one-unit arts graduation requirement for all students. The New York State Education Department also offers an approved graduation pathway through the Arts.*

STUDIO IN ART

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *6116*

Studio in Art is designed to provide a foundation for advanced courses. Emphasis is placed on understanding the Elements of Art and Principles of Design as a basis for composition. Students will explore a variety of artists, art processes and materials such as drawing, painting, printmaking, two & three-dimensional design, and digital art. Student artwork will reflect aesthetics & cultural and historical contexts. Willingness to get involved in the creative process is a more important requirement than the student's talent or previous experience.

STUDIO IN PHOTOGRAPHY & MEDIA ARTS

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *6126*

In this art course, students will learn how to use a 35mm film camera, digital camera, as well as the basics of Adobe Photoshop. Students have the opportunity to develop their own black and white film, and enlarge their own photographs. Topics include: basic and experimental darkroom techniques, digital manipulation using Photoshop, and how to incorporate traditional art materials into their photos. All of the camera techniques learned in this course can be applied to the most advanced digital cameras. Cameras are available for student use.

STUDIO IN PHOTOGRAPHY II

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Studio in Photography & Media Arts*
CREDIT: *1.0*
CODE #: *6226*

In this course, you will continue to build on the skills you have already mastered in Photography, while exploring more advanced methods and refining your own personal style. Get ready to dive deeper into darkroom and digital techniques, experimenting with your own creative process, and designing personalized photo shoots while building your portfolio. Students will also have the opportunity to submit work to competitions throughout the year.

STUDIO IN DRAWING AND PAINTING

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Studio in Art*

CREDIT: *1.0*
CODE #: *6236*

A second-year course that provides an opportunity for students to expand on the drawing and painting concepts introduced in Studio in Art. Emphasis is placed on experiences with design principles, drawing techniques and painting skills leading to the development of abilities that are necessary for advanced art courses. Students are given more in-depth problems to solve creatively while becoming more adept through a broad exposure to various media.

ADVANCED STUDIO IN DRAWING & PAINTING



GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Studio in Art, Studio in Drawing and Painting*

CREDIT: *1.0*
CODE #: *6316*

An upper level course designed for the student who wishes to further develop skills and techniques that were introduced in previous drawing and painting courses. This is a desirable course for any student wishing to develop a portfolio for college. It is expected for any student intending to enroll in Advanced Placement Art to successfully complete this course. Students will be continually encouraged to expand their creative ideas as well as their technical potential. The course will approach drawing and painting utilizing various techniques and materials. *Advanced Studies Course - SUNY College Credit available through SUNY Erie State University of New York.*

STUDIO IN SCULPTURE & CERAMICS



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Studio in Art*

CREDIT: *1.0*
CODE #: *6216*

This upper-level art course offers an opportunity for students who wish to explore and create three-dimensional art. This hands-on course will provide exploration of a variety of materials such as plaster, wire, and metals. Students will also work with clay and learn how to coil, slab build, glaze and throw on the potter's wheel. Students are encouraged to explore individual artistic styles while creating their own original and imaginative 3D works of art. *Advanced Studies Course - SUNY College Credit available through SUNY Erie State University of New York.*

GRAPHIC DESIGN



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
NOT OFFERED 2026-2027
PREREQUISITE: *Studio in Art or Studio in Photography & Media Arts*

CREDIT: *1.0*
CODE #: *6136*

This course introduces students to the principles of graphic design and visual communication. Emphasis will be placed on the design-process using methods, strategies, and techniques to create original student artwork. Students will apply their knowledge of the elements and principles of design in order to strengthen their ability to visually communicate ideas. We will explore a range of design techniques using various art materials and software programs such as Adobe Photoshop and Illustrator. Students will analyze, critique artworks and learn about the origins of graphic design in the history of art. Students will be exposed to a variety of disciplines within the Graphic Design field, which include but are not limited to logo design, poster design, typography, packaging design, and illustration. Advanced Studies Course - SUNY College Credit available through SUNY Erie State University of New York.

EXPLORING ART: CREATION & CURATION

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*

CREDIT: *1.0*
CODE #: *6266*

This unique visual arts course offers students a creative space to explore art creation in multiple mediums and eras. Students will participate in collaborative interdisciplinary art experiences, including hands-on art making, media arts investigations, exploration of contemporary artists, engaging in the creation of public art installations, and the chance to design and install art gallery shows. Students will make connections to other disciplines and current events, while gaining experience with visual problem solving and project-based inquiry. *This course is open to all students, no prerequisite required.*

SUPA: ANG 101 INTRODUCTION TO THE ART AND CRAFT OF ANIMATION



GRADE: *10, 11, 12*
CREDIT: *1.0*
LENGTH: *40 Weeks*
CODE #: *6476*
OFFERED 2026-2027
PREREQUISITE: *None, but prior experience in drawing and/or film & video production is beneficial.*

Introduction to the Art and Craft of Animation is an introductory course for students interested in exploring animation history and practice, with a strong emphasis on practice. Animation, as a discipline, has historically had a vast number of modalities, techniques and styles. The purpose of this course is to introduce students to some important animation techniques and modalities and to build a foundation for further coursework or personal exploration of this diverse and dynamic artistic medium.

Students will explore and practice modalities of animation traditionally practiced by independent filmmakers like drawn, cut paper, stop motion, pixilation, as well as modalities practiced in the animation production industry like character design, concept art, and animatics production. Students will also learn the basics of animation post-production, including editing, sound, color correction, and preparing short animated films for delivery via YouTube, Vimeo, and other streaming services where their work can be viewed by the public.
College credit offered through Syracuse University.

VISUAL PRESENTATION & PORTFOLIO

GRADE: *11, 12*
CREDIT: *1.0*
LENGTH: *40 Weeks*
CODE #: *6416*
OFFERED 2026-2027
PREREQUISITE: *Junior/Senior level course - consultation with and permission of instructor, based on coursework student has completed and future plans.*

The purpose of this course is to create a visual presentation/portfolio which consists of a body of high-quality work showcasing a variety of skills, concepts and media. Through personal investigation, students will develop a cohesive visual series connecting work created in prior classes and new work. This class will focus on visual presentation skills, organization, time management and individualized project outcomes that will culminate in deliverables suitable for college applications, internships, and future employment.

ADVANCED PLACEMENT (AP) ART AND DESIGN (2-D, 3-D, DRAWING)



GRADE: *12*
CREDIT: *1.0*
LENGTH: *40 Weeks*
CODE #: *6515*
OFFERED 2026-2027
PREREQUISITE: *Studio in Art, Studio in Drawing & Painting and one other basic or advanced art course relating to the student's interests and talents.*

This course is offered to the advanced art student in the senior year. It is the equivalent to a one-semester college course in art, and culminates in the Advanced Placement Examination. Depending on student's performance on this exam and on college's policies, advance placement college credit may be received. An additional College Board processing fee is required from applicants. A well-presented portfolio and slides of student work are required for submission.

* ***Advanced Placement (AP) courses prepare students for the College Board's "AP" examinations. All students who enroll in AP courses are expected to take the AP examinations for those courses, and the cost of every examination is paid for by the student. Cost is determined by the College Board and varies year to year. Students who take these examinations can have the results forwarded to the college(s) of their choice for evaluation. Some colleges will grant advanced credit, but the taking of AP examinations does not guarantee such credit.***

BUSINESS & MARKETING

The mission of the Williamsville Business Academy is to provide a rigorous and innovative business education program that will equip students with the knowledge and experiences necessary for success in their life after high school. Emphasis will be placed on computer and personal financial literacy, global citizenship, community service, and personal growth to promote lifelong learning and leadership. In the Business Academy, students have the opportunity to earn their "Master of Business Achievement (MBA)" or "Personal Higher Degree (PhD)" by successfully completing a combination of experiential learning components and high-level business courses. These honors serve as a formal recognition of academic achievement, personal growth, and mastery of key competencies within the program.

ACCOUNTING I



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7136*

Accounting I provides students with the basic knowledge of accounting procedures, including analyzing and journalizing business transactions; constructing worksheets; calculating and recording adjusting entries; preparing financial statements; and finalizing the accounting cycle through closing entries. Special journals, subsidiary accounts and payroll reports and taxes will also be introduced. Emphasis is placed on service and merchandising businesses in a sole proprietorship or corporate setting. All students, regardless of the career they choose, can benefit from accounting instruction in their own personal business affairs. This course is highly recommended for students in grades 10 through 12, who are considering any advanced business course in high school or at the collegiate level. *Advanced Studies Course - SUNY College Credit available through SUNY Erie State University of New York.*

SUPA: ACC 151 INTRODUCTION TO FINANCIAL ACCOUNTING



GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None, but Accounting I is recommended.*
CREDIT: *1.0*
CODE #: *7155*

An accelerated introduction to accounting, SUPA Accounting is a college-level accounting course offered as a partnership between Williamsville and Syracuse University. Students paying the (discounted) fee for SU credit will receive a Syracuse University transcript. Students who pass the course earn 4 credits from Syracuse University.

ACC 151 is an introductory course offered through the Syracuse University Martin J. Whitman School of Management. Students taking this course should have an average grade of "B" or better in high school math courses and be recommended by their high school math or business instructor. This course introduces the student to financial accounting concepts that aid entrepreneurs, managers, investors, and creditors in planning, operating, and analyzing a business. Emphasis in this course is on the interpretation of financial statements.

By the end of the course, students will understand the basic accounting information system, how to read and understand a set of basic financial statements, current issues in financial accounting and its impact on organizational stakeholders, as well as career opportunities available in the field.

ACCOUNTING II

GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Successful completion of Accounting I.*
CREDIT: *1.0*
CODE #: *7146*

Accounting II is based on the fundamentals of Accounting I - the procedures and systems necessary to record transactions and to prepare reports such as the balance sheet and income statement. This course will give students a strong foundation in advanced accounting theory and procedures. An in-depth approach to inventory and asset valuation will be explored as well as the recording of complex business transactions relating to publicly held corporations. Students will be introduced to computer software applications that can be used to expedite the accounting process. This course is highly recommended for students who are considering any business or accounting major at the collegiate level, and concludes with a final project analyzing financial statements of publicly traded companies.

ADVERTISING AND MEDIA RELATIONS

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7266*

Advertising and Media Relations is a hands-on computer course that will expand students' computer and advertising knowledge. Students will develop their creative writing and graphic design skills, ad industry knowledge, in addition to working on multi-media presentations. This course will also focus on creating ad campaigns for school, local businesses and other situations. Students completing this course successfully integrate digital media into a larger media strategy. Students will be well versed in creating new types of media plans that incorporate digital media into the traditional media mix.

Students will analyze current advertising trends, create original advertisements and other advertising topics, including the creative process, careers, sports marketing, trade show advertising, web page design and creating ads for various media such as TV, radio, newspaper, magazines, and more. Students will build an advertising and public relations portfolio throughout the year. The course will cover the role of advertising in a free economy and its place in the media of mass communications. It will provide an introduction to visual communication theory and methodology, along with topics such as design principles, illustration types, visual perception, conceptualization, layout stages, and print production. Students will create vector and raster graphics, as well as produce video commercials and web animations infused with advertising appeals and motivations. Students will use digital and video cameras, sound equipment and design software programs.

BUSINESS AND PERSONAL LAW

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7156*

COLLEGE CREDIT

This full-year course is filled with practical content that can be applied in the daily life of a student. It will provide students with a comprehensive understanding of business and personal law. Topics include constitutional, statutory, case and administrative laws, laws for minors, civil and criminal law, court jurisdictions, and trial procedures. Contract, consumer, employment, family, property, and cyber laws are also covered. Legal knowledge is applied in a fun and meaningful way through debate, guest speakers, internet research and the mock trial process. Controversial issues and current legal events are highlighted within each unit. Students also have an opportunity to participate in a field trip to the holding center and/or courts. This course provides useful information for every person, regardless of their career aspirations. *Advanced Studies Course - SUNY College Credit available through SUNY Erie State University of New York.*

COLLEGE AND CAREER READINESS

GRADE: *11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *0.5*
CODE #: *7236*

COLLEGE CREDIT

This dynamic half-year course will provide students with strategies for completing your college application, exploring potential career paths, and successfully navigating your first year *after* high school. Topics will include writing your college essay, managing your time, academic and campus life, and financial planning for your future. *Advanced Studies Course - SUNY College Credit available through SUNY Erie State University of New York. Recommended for Juniors - Spring Semester / Recommended for Seniors - Fall Semester*

ENTREPRENEURSHIP

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7256*

COLLEGE CREDIT

The Entrepreneurship course is designed to introduce students to the world of small business ownership and management. This course builds students' skills in the knowledge of types of business ownership, legal issues, business finance/start-up costs, business trends, site selection, marketing, pricing strategies and the development of a business plan on the students' product/service of choice. The Entrepreneurship class will develop and/or operate a class business in which they will realistically perform duties in areas such as product planning, financing, human resources, marketing/advertising, selling, and management of product(s). This hands-on course involves students in a variety of activities that will provide them with the skills necessary to be successful in a constantly changing workplace. *Advanced Studies Course - SUNY College Credit available through SUNY Erie State University of New York.*

INTERNATIONAL BUSINESS

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Introduction to Business*
CREDIT: *0.5*
CODE #: *N7176*

International Business is what's happening now. Not only are businesses going international, but countries are linked through economic and political world events. This course will provide students with the foundation necessary to understand International Business and the various aspects of conducting business in a global economy. Students will learn the foundational concepts of international business and finance while developing practical personal skills. Emphasis is on the effect of socio-cultural, demographic, economic, technological, and political-legal factors in the foreign trade environment. Cross-cultural approach to international business will be emphasized. Students will study the technological advances of the Internet and e-commerce to provide goods and services worldwide. In addition to exploring international careers and opportunities. This course gives students the knowledge to conduct business in a global environment.

INTRODUCTION TO BUSINESS

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7066*

This full-year course introduces students to the world of business and sets a solid foundation for high school, college, and career. The study skills aspect of the course covers organization, time management, improving reading for comprehension, note-taking skills, and more. The business units help students acquire sound values and acceptable attitudes regarding their personal lives and on-the-job success. Students will be engaged in teamwork, presentations, computer-related activities, and current events while learning the following topics: today's economy, business ownership, career exploration, getting and keeping a job, how to be a wise consumer, managing money, understanding banking and credit, and types of insurance. The knowledge obtained in this class is practiced and reinforced throughout the course and is transferable to other courses as well as everyday life. *This is a required course for students seeking to earn graduation honors through the Williamsville Business Academy.*

ADVANCED PLACEMENT (AP) BUSINESS WITH PERSONAL FINANCE

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None, but Accounting 1, Principles of Marketing, or Entrepreneurship is recommended*
CREDIT: *1.0*
CODE #: *7065*

This course is an introductory, college-level business and personal finance course. Students will explore the business disciplines of entrepreneurship, marketing, finance, accounting, and management through real-world business application, case studies, and project-based learning. In addition, students will learn and apply all the National Standards for Personal Financial Education created by the Council for Economic Education and the Jump$tart Coalition for Personal Financial Literacy. Students should be able to read a college-level textbook and to express themselves clearly in writing. AP Business with Personal Finance is designed to serve as a foundational course that aligns with multiple Programs of Study.

COMPUTER APPLICATIONS & DIGITAL LITERACY



GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *0.5*
CODE #: *7276*

This course is designed to provide students with essential computer literacy and proficiency in the Microsoft Office suite and Microsoft 365. Students will have ample opportunities to apply their skills and knowledge in real-world scenarios, including preparing professional documents, spreadsheets, slideshows and multimedia presentations. They will also develop skills in file *management (creating new folders, saving, deleting*, storage, etc.), Internet research strategies, safety and the many uses of WITS. By the end of the course, students will have gained valuable computer literacy skills and be fully prepared to utilize Microsoft Office for academic, personal, and professional purposes. *Advanced Studies Course - SUNY College Credit available through SUNY Erie State University of New York. This is a required course for students seeking to earn graduation honors through the Williamsville Business Academy.*

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ADVANCED COMPUTER APPLICATIONS & DIGITAL LITERACY



GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *7286*
PREREQUISITE: *Computer Applications & Digital Literacy*

This advanced course will expand upon skills learned in Microsoft Computer Applications. Students will increase their working knowledge of Microsoft Office suite and Microsoft 365 to become industry-proficient. Specialized applications include the Internet, desktop publishing, multimedia presentation software, video/sound editing, and online collaboration *(e.g. Google tools).* Students will use digital cameras along with graphic, video, and audio files. *Advanced Studies Course - SUNY College Credit available through SUNY Erie State University of New York.*

PERSONAL FINANCIAL LITERACY



GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *7126*
PREREQUISITE: *None*

Financial literacy is critical for students as they progress through their lives. The importance of being financially literate is crucial to success and stability. In this course students will learn to manage money to build wealth, in order to financially attain the lifestyle they desire. Students will attain the knowledge and skills necessary to navigate the financial services industry and begin the financial planning process. Topics include: earning and managing money, completing tax returns, budgeting, strategies of saving and investing, online banking, how to use credit, major purchasing decisions, and ways to protect against risk and financial loss. Advanced Studies Course - SUNY College Credit available through SUNY Erie State University of New York. *This is a required course for students seeking to earn graduation honors through the Williamsville Business Academy.*

PRINCIPLES OF MARKETING



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *7246*
PREREQUISITE: *None*

Ever wonder how the products and services you use every day are developed and promoted? Marketing uncovers the activities and choices of businesses and consumers. Firms are identifying wants and needs, then researching, developing, and promoting products and services in-store and online that create satisfied customers. Students will engage in activities that will challenge them to think from both business and consumer perspectives to help become informed consumers after high school. Major topics include market segmentation, target marketing, market research, promotion, pricing, product/service management, distribution, and selling. Students will engage in case study analysis, research, discussion, guided notes, projects, and guest presentations by professionals in the field. *Advanced Studies Course - SUNY College Credit available through SUNY Erie State University of New York.*

SPORTS AND ENTERTAINMENT MARKETING

GRADE: *11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *N7226*
PREREQUISITE: *None, but Principles of Marketing, Advertising & Media Relations, or Entrepreneurship is recommended.*

Sports and Entertainment Marketing (SEM) will serve as an extension of the Principles of Marketing course of study. SEM focuses on marketing and management functions/tasks that can be applied to all levels of sports and entertainment industries, as well as its impact on the economy, tourism, local business, national brands, and consumer behavior. Emphasis will be placed on marketing management, brand development, promotions, ticket sales, fan engagement, merchandising, events planning and community involvement. Throughout the course, students will gain an understanding of how sports and entertainment events and professionals are used to develop and sell merchandise and other services.

YOUTH LEADERSHIP

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *7306*
PREREQUISITE: *None*

This course is designed to promote civic and personal responsibility, as well as assertive leadership, through activities that give the students the opportunity to apply and refine those skills. Practical experiences are offered in public speaking, communication skills, group dynamics, organizational skills, time management, social/community involvement, leadership styles decision-making, and committee management. Activities include professional meetings, service to social/civic groups, and school projects that require responsible planning, organization and management. Students will develop leadership skills that will last a lifetime and prepare them for college and careers.

INTERNSHIP (CAREER EXPLORATION INTERNSHIP PROGRAM—CEIP)

GRADE: *11, 12* **CREDIT:** *0.5*
LENGTH: *20 Weeks (school year) or 6 weeks (summer)* **CODE #:** *7916*
OFFERED 2026-2027
PREREQUISITE: *None*

The Internship program is a New York State registered program that gives students the opportunity to explore a career they may be interested in pursuing in the future, while still in high school. Any career is acceptable to pursue. Students gain valuable experience working alongside a career professional, which can help in college acceptance as well as gaining meaningful employment skills.

This is a one-semester program, offered in the summer, fall, and spring. Students must be 16 years old, a junior or senior, and be able to provide their own transportation. Application packets are available in the Guidance Office, in the Business Department, and on WITS. Interviewing takes place in December/January in preparation for placement for the following Summer, Fall and Spring semesters. If accepted, Internship is scheduled as a 9th period class for Fall/Spring semesters on the student's schedule and they attend class once per week during 9th period. The Summer program is scheduled over 6 weeks and students attend class once per week for 3 hours. Students must apply to the program, be interviewed by the internship coordinator, and obtain two teacher recommendations. Consideration for acceptance is based on student availability, responsibility, sincere desire, dependability, and attendance/tardiness records.

If accepted, the internship coordinator works with parents and the student to find an appropriate placement in the community. Students must intern 54 hours during the semester, and attend class once a week. Students make their own schedule with the mentor to meet the 54 hour requirement. The schedule is based on student/mentor availability. 54 hours at the internship site and fulfilling the classroom component will result in a "Satisfactory" grade in the course and students receive 1/2 unit of credit.

WORK EXPERIENCE (GENERAL EDUCATION WORK EXPERIENCE PROGRAM—GEWEP)

GRADE: *11, 12* **CREDIT:** *0.5 or 1.0 (depending on hours worked)*
LENGTH: **CODE #:** *7906*
OFFERED 2026-2027
PREREQUISITE: *None*

Work Experience is a New York State registered program that provides students the opportunity to earn credit for employment outside of school. Using skills learned in the classroom, student have the opportunity to gainfully use those skills in the workplace. On-the-job training and general work experience is coordinated with the school schedule. The program is supervised by a work experience coordinator. It is designed not only to supplement student income, but to provide students with an opportunity to learn the skills necessary to seek, obtain, maintain, and be successful on the job. A student must be enrolled in a business course during the year in which a credit is being received. *150 hours of work equals 1/2 unit of credit and 300+ hours of work equals 1 unit credit.*

DECA (NORTH AND SOUTH HIGH SCHOOLS) - STUDENT LEADERSHIP ORGANIZATION

GRADE: *9, 10, 11, 12* **CREDIT:**
LENGTH: **CODE #:**
OFFERED 2026-2027
PREREQUISITE: *Students must be enrolled in a business class to join DECA.*

DECA, an Association of Marketing, Management and Entrepreneurship Students, is probably the most visible aspect of business education. DECA's role as a professional student organization is to provide students with opportunities to apply the skills and knowledge they learn in the classroom in a practical manner. DECA enables students to find themselves, to express a positive self-image, and to be self-reliant. It puts them on a path of opportunity that is clear and meaningful to them. Students learn how the business world functions.

Students will be involved in a variety of activities which include community projects as well as conferences and competitions. DECA is an effective way to develop leadership skills such as working together, establishing goals, team building, decision making, and knowing when to lead and when to follow. These skills will last a lifetime; they are useful in many situations, and are in great demand in the business world.

FBLA (EAST HIGH SCHOOL) - STUDENT LEADERSHIP ORGANIZATION

GRADE: *9, 10, 11, 12* **CREDIT:**
LENGTH: **CODE #:**
NOT OFFERED AT SOUTH HS AND NORTH HS
PREREQUISITE: *Students must be enrolled in or have taken a business class to join FBLA.*

FBLA is a co-curricular organization that takes what is learned in the classroom and applies it to real world business situations. Through monthly chapter meetings, community service projects and local, state, and national level conferences and competitions, students are able to increase their business knowledge, and "soft" skills that are required by today's employers.

WILLIAMSVILLE BUSINESS Academy

MISSION

The mission of the Williamsville Business Academy is to provide a rigorous and innovative business education program that will equip students with the knowledge and experiences necessary for success in their life after high school. Emphasis will be placed on computer and personal financial literacy, global citizenship, community service, and personal growth to promote lifelong learning and leadership.

START HERE:

Students must take:

- Introduction to Business
- Computer Applications*
- Personal Finance*

WILLIAMSVILLE CENTRAL SCHOOL DISTRICT
Est. 1893



CONTINUE YOUR JOURNEY:

Students can choose from the following course selections for all remaining credits:

- Accounting I*
- SUPA Accounting*
- Accounting II
- Advanced Computer Applications*
- Advertising & Media Relations
- Business and Personal Law*
- College & Career Readiness*
- Entrepreneurship*
- International Business
- Principles of Marketing*
- Sports & Entertainment Marketing
- Youth Leadership
- Internship (CEIP)
- AP Business Principles

** Denotes college credit available*

STUDENTS CAN EARN THE FOLLOWING:

MBA

"Mastery of Business Achievement"

4 Business credits with 85 or higher average

1 year participation in DECA/FBLA

PhD

"Personal Higher Degree"

5 Business credits with 90 or higher average

½ credit CEIP or GEWEP

2 years participation in DECA/FBLA

Recognition ceremony to be held upon completion





COMPUTER SCIENCE



Whether it's 3-D animation, engineering, music, app development, medicine, visual design, robotics, or political analysis, computer science is the engine that powers the technology, productivity, and innovation that drives the world. Computer education has become an imperative for today's students and the workforce of tomorrow. According to the United States Department of Labor Bureau of Labor Statistics, "Employment of computer and information technology occupations is projected to grow 13 percent from 2016 to 2026, faster than the average for all occupations. These occupations are projected to add about 557,100 new jobs." And these hundreds of thousands of new jobs offer significantly higher-than average pay (https://www.bls.gov/ooh/computer-and-information-technology/home.htm).

EXPLORING COMPUTER SCIENCE

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Grade 8 Math*

CREDIT: *1.0*
CODE #: *3626*

COLLEGE CREDIT

Robotics, web programming, and computer applications are all part of this exciting student-centered course that explores everything to do with computer science – one of the fastest growing fields in our modern world. Students will be introduced to topics such as algorithm development, problem solving, and programming while exploring the current and evolving world of computer science. Programming languages such as Snap!, Scratch, and/or Python will be used to create interfaces and applications and Lego® robotics technology will offer hands-on delivery of science, technology, engineering and math concepts. Students will be encouraged to show creativity, to work collaboratively, and to investigate the interdisciplinary nature of today's computer science.

This course is a concurrent enrollment course offered through Niagara University (https://www.niagara.edu/nustep/), but is taught at your high school by a certified teacher. As a full year course, students who successfully complete this course will earn one unit of high school credit. However, prior to the course's completion, juniors and seniors can opt to enroll this course through Niagara University, pay a highly reduced tuition, and to earn 3 college credits. The classroom teacher will provide each student with the necessary paperwork should a student wish to participate in this concurrent enrollment opportunity. Students are responsible for registering themselves prior to the deadlines as stated by Niagara University.

COMPUTER PROGRAMMING

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Algebra 1R or permission of the teacher.*

CREDIT: *1.0*
CODE #: *3606*

COLLEGE CREDIT

This course is designed for college-bound students with an interest in Math, Engineering, or Computer Science. Students will be introduced to fundamental programming concepts and core programming structures including variables, data types, arithmetic operators, decisions, loops, functions, arrays and objects. Students will obtain basic knowledge of standard programming practices utilizing the languages Python and C++. With an emphasis on problem-solving and algorithm development, this rigorous course will prepare students for AP Computer Science Principles, as well as AP Computer Science A, which will be taught in JAVA.

This course is a concurrent enrollment course offered through Niagara University (https://www.niagara.edu/nustep/), but is taught at your high school by a certified teacher. As a full year course, students who successfully complete this course will earn one unit of high school credit. However, prior to the course's completion, juniors and seniors can opt to enroll this course through Niagara University, pay a highly reduced tuition, and to earn 3 college credits. The classroom teacher will provide each student with the necessary paperwork should a student wish to participate in this concurrent enrollment opportunity. Students are responsible for registering themselves prior to the deadlines as stated by Niagara University.

ADVANCED PLACEMENT (AP) COMPUTER SCIENCE PRINCIPLES

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Algebra 1R or permission of the teacher.*
CREDIT: *1.0*
CODE #: *3665*
EXAMINATION: *AP Computer Science Principles Examination*

AP Computer Science Principles introduces students to the central ideas of computer science, while fostering students to be creative. Students are encouraged to apply creative processes when developing computational artifacts and to think creatively while using simulations to explore questions that interest them. Rather than teaching a particular programming language or tool, this course focuses on using technology and programming as a means to solve computational problems and create exciting and personally relevant artifacts. This course highlights the relevance of computer science by emphasizing the vital impact advances in computing have on people and society. By focusing the course beyond the study of machines and systems, students also have the opportunity to investigate the innovations in other fields that computing has made possible and examine the ethical implications of new computing technology. Students who take AP Computer Science Principles will develop a range of skills vital to success in subsequent college courses, such as using computational tools to analyze and study data and working with large data sets to analyze, visualize, and draw conclusions from trends.

In addition to taking the required AP Computer Science Principles Exam, juniors and seniors can opt to enroll this course through Niagara University's concurrent enrollment program (https://www.niagara.edu/nustep/) and pay a highly reduced tuition. The classroom teacher will provide each student with the necessary paperwork should a student wish to participate in this concurrent enrollment opportunity. Students are responsible for registering themselves prior to the deadlines as stated by Niagara University.

ADVANCED PLACEMENT (AP) COMPUTER SCIENCE A

GRADE: *9, 10, 11, 12*
LENGTH: 40 *Weeks*
OFFERED 2026-2027
PREREQUISITE: *Algebra 1R or permission of the teacher.*
CREDIT: *1.0*
CODE #: *3645*
EXAMINATION: *AP Computer Science A Examination*

This course is equivalent to a two-semester college course in computer science; thus, its goals are comparable to those of a first-year course offered in college and university computer science departments. It includes an introduction to JAVA, object-oriented programming, logical concepts in developing a program, details of JAVA (string operations, looping, logical operators, methods, classes, file processing, etc.), elegance and style of programming, debugging techniques, and introduces the concepts of inheritance and polymorphism. This course culminates in the CEEB (College Entrance Examination Board) examination in Computer Science. Depending on the student's performance on this exam and on their college's policies, they may receive college credit, advanced placement, or both. This course is recommended for the student who has competence in written communication, familiarity with mathematical notation (2nd year algebra level), experience in problem solving, and an appreciation of the need to structure and develop a given topic in a logical manner.

In addition to taking the required AP Computer Science A Exam, juniors and seniors can opt to enroll this course through Niagara University's concurrent enrollment program (https://www.niagara.edu/nustep/) and pay a highly reduced tuition. The classroom teacher will provide each student with the necessary paperwork should a student wish to participate in this concurrent enrollment opportunity. Students are responsible for registering themselves prior to the deadlines as stated by Niagara University.

* ***Advanced Placement (AP) courses prepare students for the College Board's "AP" examinations. All students who enroll in AP courses are expected to take the AP examinations for those courses, and the cost of every examination is paid for by the student. Cost is determined by the College Board and varies year to year. Students who take these examinations can have the results forwarded to the college(s) of their choice for evaluation. Some colleges will grant advanced credit, but the taking of AP examinations does not guarantee such credit.***

ENGINEERING & TECHNOLOGY EDUCATION (ETE)

Engineering and Technology are an important and integral part of a quality STEM (Science, Technology, Engineering, Mathematics) education. The Engineering and Technology Education (ETE) department offers a wide variety of courses that have been designed to meet the needs of students of all academic levels. The courses are recommended for all students, either college bound or those wishing to pursue technical interests and/or careers. From the traditional to the pre-engineering classes, there is a course to fit every student's interests and abilities. The Engineering and Technology Education courses are designed to be taught through highly motivational, hands-on, investigative problem solving activities and experiences, in a laboratory equipped with modern technological tools, equipment, and devices. In the introductory courses, the students learn basic and intermediate skills as they relate to the content area. Continuing and advanced courses allow students to further develop their skill level and problem solving abilities to better prepare them for continuing their education and/or career. Project Lead the Way® (PLTW) is a national pre-engineering program designed for students who are interested in an engineering, architecture, manufacturing technology, or other STEM related career. PLTW courses are offered through Rochester Institute of Technology and are taught by certified high school teachers. Students have the opportunity to receive college credit for most PLTW courses by successfully completing the course and passing the PLTW end of course assessment. All the ETE courses may be taken as part of a five-course sequence or may be taken as individual electives. The five-course sequence may be used to fulfill certain graduation requirements. There are many possible combinations and sequences of ETE courses that can be taken. A few samples are below. Students are encouraged to discuss courses with their ETE teachers and guidance counselors.

COURSE PATHWAY SAMPLES(* - indicates a PLTW course)

- **Architecture**
  - Design and Drawing for Production*
  - Architectural Design and Drawing
  - Civil Engineering and Architecture*
  - Principles of Engineering*
  - (Any combination of one or more courses)
    - o Introduction to Wood Working
    - o Advanced Wood Working

- **Engineering**
  - Design and Drawing for Production*
  - (Any combination of three or more courses)
    - o Biotechnical Engineering
    - o Civil Engineering and Architecture*
    - o Computer Integrated Manaufacturing*
    - o Digital Electronics*
    - o Principles of Engineering*

- **Digital Media/Graphic Design/Communication**
  - Multimedia 1
  - Multimedia 2
  - (Any combination of one or more courses)
    - o Communications Media
    - o Design & Drawing for Production*
    - o Photography
    - o Video Game Design
    - o Electronics & Robotics
    - o Energy & Aerospace

Trades (auto mechanic, carpentry, CNC operator, construction, electrician, plumber, etc.)
- Design & Drawing for Production*
- (Any combination of two or more courses)
  - o Intro to Woodworking
  - o Advanced Woodworking
  - o Architectural Design & Drawing
  - o Auto Technology
  - o Computer Integrated Manufacturing*
  - o Construction Systems
  - o Digital Electronics*
  - o Electronics and Robotics
  - o Energy and Aerospace

ADVANCED WOODWORKING

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *7646*
EXAMINATION: *Local Assessment*
PREREQUISITE: *Introduction to Woodworking or teacher approval*

This is an advanced course that further develops students' woodworking skills. Advanced woodworking is an in-depth and hands-on course dealing with the methods, tools, safety, materials, and careers associated with custom carpentry. Students will utilize advanced methods of processing and forming, and incorporate them into the projects they design. Students will also explore the diverse physical properties of different types of woods and be exposed to their unique and diverse applications. Students will receive training on and experience operating high quality wood working tools and equipment, such as planers, lathes, CNC router, and a laser engraver.

ARCHITECTURAL DESIGN AND DRAWING

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *7426*
EXAMINATION: *Local Assessment*
PREREQUISITE: *Design and Drawing for Production is Recommended*

Students interested in pursuing the field of Architectural Design/Civil Engineering will find this full year course to be a very beneficial tool in the development of necessary STEM skills. Many Schools of Architecture, at the college/university level, indicate this type of course as an entrance requirement. The topics include culture and history, drafting tools and techniques, preparation of the site, floor, elevation, section drawings, and landscape. Students will present drawings in perspective, pictorial, and illustration using techniques in sketching and rendering in black and white and in color. Students will also create architectural models to help present and visualize structural and aesthetic details. Students will use a CNC router and a laser engraver to create parts of their models.

AUTOMOTIVE TECHNOLOGY

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7536*
EXAMINATION: *Local Assessment*

This course is designed for students who wish to learn proper automobile maintenance as well as repair. Students will gain valuable knowledge about transportation through a variety of hands-on experiences focused around the operating systems of the automobile. Students will be introduced to the tools and equipment most commonly used in diagnostics, maintenance, and repair on modern cars, trucks, and motorcycles. Students are encouraged to work on their own and/or family vehicles developing a driver knowledgeable in preventative maintenance, automobile terminology, and good consumerism.

BIOTECHNICAL ENGINEERING

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Completed or concurrently enrolled in Life Science: Biology*
CREDIT: *1.0*
CODE #: *7476*
EXAMINATION: *Local Assessment*

The major focus of the Biotechnical Engineering (BE) course is to expose students to the diverse fields of biotechnology including biomedical engineering, bio-molecular genetics, bioprocess engineering, and agricultural and environmental engineering. Lessons engage students in engineering design problems that are related to biomechanics, cardiovascular engineering, genetic engineering, agricultural biotechnology, tissue engineering, biomedical devices, human interface, bioprocesses, and bio-ethics. Students should have experience in biology, chemistry, mathematics, and technology education (STEM). Students in this course will apply biological and engineering concepts to design materials and processes that directly measure, repair, improve, and extend living systems. The course of study includes: Safety and Documentation Review; Introduction to Biotechnical Engineering; Biochemical Engineering; Environmental and Agricultural Engineering; and Biomedical. The concepts and skills learned are easily transferrable to science, engineering, and medical related STEM fields and careers.

COMMUNICATIONS AND MEDIA PRODUCTION

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
NOT OFFERED AT EAST HS AND NORTH HS
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7526*
EXAMINATION: *Local Assessment*

If you have a desire to be on camera, or behind the scenes in a production studio, this course is for you. This course is designed to show the importance of how people communicate by the use of radio/television/motion and still pictures. Some activities involved in this program are: animation; slide presentations; script writing; directing; video production; audio and video mixing; TV and radio station operation; motion picture production; and careers in media fields.

CONSTRUCTION/PRODUCTION

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
NOT OFFERED 2026-2027
PREREQUISITE: *Introduction to Woodworking or teacher approval*
CREDIT: *1.0*
CODE #: *7636*
EXAMINATION: *Local Assessment*

This is an advanced course that builds upon student skills developed in the Introduction to Woodworking course. This is an in-depth, STEM-focused course, that utilizes a hands-on approach, dealing with the methods, tools, safety, materials, and careers associated with construction and production. A variety of activities, such as the basics of framing and house wiring, will allow students to explore the world of construction. In addition, the course offers product development by individual student project selection. The student will plan, problem solve, incorporate simple engineering concepts, materials processing, and tool usage to manufacture their project.

ELECTRONICS AND ROBOTICS

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7556*
EXAMINATION: *Local Assessment*

This STEM focused course will involve students in hands-on, project-based activities, which emphasize problem solving skills and team work. It is designed to help students understand the basics of digital/DC electronics, which are at the heart of most electronic devices, such as your cell phone, lap-top, video game player, and robots. Students design and fabricate electronic circuit kits and robots to understand how electronic components and systems function and communicate. In addition, students will be introduced to robotics. Students will design, build, and program robots to complete certain tasks and challenges using Arduinos, Raspberry Pi's, VEX IQ robotic kits, etc. This is a great exploratory course for any student interested in electronics and robotics!

ENERGY AND AEROSPACE

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7546*
EXAMINATION: *Local Assessment*

The availability and use of energy, and the sustainability of renewable energy, are critically important in our world today. In the Energy and Aerospace course, students will have the opportunity to perform a wide range of hands-on lab activities, experiments, and projects to enhance their understanding of energy sources and applications in our lives. Students will solve a variety of practical problems dealing with solar, wind, hydro, nuclear, potential, and kinetic energies. Class discussions will focus on the present and possible future means of producing and distributing consumable renewable energy. This is an excellent opportunity to experience science and technology at work. The Aerospace segment is designed to provide students with an opportunity to study the field of aviation through hands-on activities and projects. Students will apply the fundamentals of flight via the building of rockets, planes and other vehicles related to this area. The concepts and skills learned are very applicable to STEM fields and careers.

INTRODUCTION TO WOODWORKING

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7626*
EXAMINATION: *Local Assessment*

This is an introductory course that focuses on a hands-on approach, dealing with the methods, tools, safety, and careers associated with beginning woodworking. Many activities will be completed using a wide variety of woods, processes, tools, and equipment. Students will design and produce products of their choice. This course develops student skills that will be applicable in STEM careers and fields.

MULTIMEDIA 1

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
NOT OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7686*
EXAMINATION: *Local Assessment*

This course offers a variety of digital media projects incorporating the computer and various software programs as graphic design tools. Students will learn how to scan color prints and digitally manipulate and enhance images by; adjusting color, selecting and cropping items, repairing and restoring, applying special effects filters, and using multiple layers. The course also provides students with the hardware and software tools necessary to build multimedia productions. This introductory look at multimedia which uses storyboards, video, still images, sound, text, and animation will show students how to create a variety of multimedia presentations. Students will use a variety of computer software programs within the Adobe Creative Suite, including; After Effects, Audition, Encore, Flash Animation, Photoshop, and Premiere Pro.

MULTIMEDIA 2

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
NOT OFFERED 2026-2027
PREREQUISITE: *Multimedia 1*
CREDIT: *1.0*
CODE #: *7586*
EXAMINATION: *Local Assessment*

This course builds on the skills and concepts learned in Multimedia 1. This advanced course will offer students an extended, in-depth experience with multimedia software. Students will be given a diverse application-based opportunity in digital design through the application of digital animation, streaming video, special effects, web page design, etc. Students will learn advanced features in; Adobe After Effects, Photoshop, Premiere Pro, and will learn 2D animation. The skills learned will be easily transferrable to a wide variety of careers in many fields; such as, communications, computer animation, graphic design, etc.

PHOTOGRAPHY 1

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
NOT OFFERED AT EAST HS AND NORTH HS
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7576*
EXAMINATION: *Local Assessment*

This course is designed to give students first hand use of the materials, techniques and processes used in photography. Students will use a 35 mm SLR camera and a digital camera for the course. The following topics will be covered: Types of cameras and formats; Introduction of light sensitive materials; Exposure techniques; Chemistry for developing; Black and white, color pictures; Special effects; Composition; Multiple image techniques; Photography in advertising; Lighting techniques; Use of the flash; Digital Photography; Introduction to Photoshop
NOTE: This course meets the NYS one unit of art/music requirement for graduation for all students.

PLTW – CIVIL ENGINEERING AND ARCHITECTURE (CEA)



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
NOT OFFERED 2026-2027
PREREQUISITE: *PLTW-Design and Drawing for Production is Recommended*
CREDIT: *1.0*
CODE #: *7606*
EXAMINATION: *PLTW Assessment*

The major focus of the CEA course is a long-term project that involves the development of a local property site. As students learn about various aspects of civil engineering and architecture, they apply what they learn to the design and development of this property. The course provides freedom to the teacher and students to develop the property as a simulation or to students to model the real-world experiences that civil engineers and architects experience when developing property. In addition, students use Revit, which is a state of the art 3-D design software package from AutoDesk, to help them design solutions to solve their major course project. Students learn about documenting their project, solving problems, and communicating their solutions to their peers and members of the professional community of civil engineering and architecture. The course of study includes: the roles of civil engineers and architects; project planning; site planning; building design; project documentation and presentation. NOTE: College credit may be earned for students who successfully complete this course.

PLTW – COMPUTER INTEGRATED MANUFACTURING (CIM)



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *PLTW-Design and Drawing for Production is Recommended*
CREDIT: *1.0*
CODE #: *7696*
EXAMINATION: *PLTW Assessment*

The purpose of the Computer Integrated Manufacturing course is to expose students to the fundamentals of computerized manufacturing technology; including prototyping, robotics, and automation. The course is built around several key concepts: Computer Modeling – using a three-dimensional, solid modeling software package with mass property analysis; CNC Equipment – understanding the machine tools and its operating and programming aspects; CAM Software – converting computer generated geometry into a program to drive CNC machine tools; Robotics – using a robot for materials handling and assembly operations; Flexible Manufacturing Systems – students working in teams to design manufacturing work cells and tabletop factory simulations. NOTE: College credit may be earned for students who successfully complete this course.

PLTW – DESIGN AND DRAWING FOR PRODUCTION (DDP)



GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7596*
EXAMINATION: *PLTW Assessment*

The DDP course emphasizes the engineering design process, the approach used in industry to develop new products. Students will apply creative thinking, decision making, and problem solving skills to develop solutions to design problems/challenges. Students will apply their skills through various hands-on activities and projects. In addition to traditional technical drawing, students will use Autodesk Inventor, a state of the art 3D design/modeling software program (No prior drawing experience is necessary.). Students will be able to produce scaled models and prototypes of their design solutions using a 3D printer. Students will work individually, and at times with teams, to problem solve, design solutions, and communicate/present solutions to others.

NOTE:
+ This course satisfies the NYS one unit of art/music graduation requirement for all students.
+ College credit may be earned for students who successfully complete this course.
+ Design and Drawing for Production is intended to serve as a foundation course within the Project Lead The Way® course sequence. All of the topics learned in this course will be used in future PLTW courses.

PLTW – DIGITAL ELECTRONICS (DE)



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *7566*
EXAMINATION: *PLTW Assessment*

Digital Electronics (DE) is a course of study in applied digital logic. Digital electronics is the foundation of all modern electronic devices, such as; cellular phones, MP3 players, laptop computers, digital cameras, high definition televisions, etc. The use of digital circuitry is present in virtually all aspects of our lives and its use is increasing rapidly. The major focus of the DE course is to expose students to the design process of combinational and sequential digital logic design, technical documentation, and engineering design. Utilizing the activity-project-problem-based (APPB) teaching and learning pedagogy, students will analyze, design and build digital electronic circuits, and will study how digital electronic devices are used to control automated equipment. NOTE: College credit may be earned for students who successfully complete this course.

PLTW – CAPSTONE

GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *A minimum of two PLTW courses or teacher approval*
CREDIT: *1.0*
CODE #: *7466*
EXAMINATION: *Local Assessment*

Students engage in an open-ended research experience in the PLTW Capstone course, a culminating program for those completing PLTW's high school offerings. They collaborate in teams, designing and developing original solutions to well-defined and justified real-world problems.

PLTW – PRINCIPLES OF ENGINEERING (POE)

COLLEGE CREDIT

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
NOT OFFERED 2026-2027
PREREQUISITE: *PTLW-Design and Drawing for Production is Recommended*
CREDIT: *1.0*
CODE #: *7676*
EXAMINATION: *PLTW Assessment*

The purpose of this course is to expose students to the correlation between math, science, and technology, through the use of a broad survey of the technology process employed in the field of engineering and engineering technology. The course is an interactive, hands-on, laboratory-based set of case studies that will convey the concepts, principles, skills, techniques, and attitudes relative to the professional and social obligations of an engineer. Computers, robots, digital electronics, and structures will be utilized in order to understand the theory presented. The classroom situation will be enhanced by visits from professionals in related engineering fields as well as field trips to local industrial and educational institutions. NOTE: College credit may be earned for students who successfully complete this course.

VIDEO GAME DESIGN AND DEVELOPMENT

GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *0.5*
CODE #: *7667*
EXAMINATION: *Local Assessment*

Do you enjoy playing video games? Do you want to learn how video games are made? The Video Game Design and Development course is intended to serve as an introduction to the video game design and development process. Students will learn to write a story line, develop a storyboard, work with 2D and 3D graphic design animation, as well as aspects of modeling, texturing, lighting, sound, and managing assets in a video game. Critical thinking and problem solving will be essential skills as students work on projects individually and collaboratively. As the culminating project, students will make a video game. In this course, students will learn all the essential skills needed to create a video game using Unity software ("The world's leading creation engine for gaming.").

ENGLISH LANGUAGE ARTS

ENGLISH 9R

GRADE: *9*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *1113*

English 9 is aligned to the New York State learning standards for reading, writing, listening, and speaking. Students become more proficient readers, writers, and critical thinkers. They strengthen analytic reading strategies of literature and literary nonfiction and write argumentative, informative/explanatory, and narrative texts. They practice research skills to build and present knowledge and are introduced to MLA documentation. Students communicate effectively using logical structure and language that is grammatically correct. The course prepares students for the NYS English Regents Examination graduation requirement, which they will take at the end of their third year of high school English.

ENGLISH 10R

GRADE: *9, 10*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *English 9R*
CREDIT: *1.0*
CODE #: *1223*

English 10 is aligned to the New York State learning standards for reading, writing, listening, and speaking. This course continues to prepare students for the NYS English Regents Examination by building upon the foundation developed in English 9. Students improve the depth of their understanding as they analyze increasingly complex literature, including stories, drama, and poetry, as well as literary nonfiction. Writing and research skills are further developed and refined as students compose increasingly sophisticated argumentative, informative/explanatory, and narrative texts. Students' writing demonstrates their command of the conventions of standard English grammar and usage. The course prepares students for the NYS English Regents Examination graduation requirement, which they will take at the end of their third year of high school English.

ENGLISH 10A

GRADE: *9, 10*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *English 9R*
CREDIT: *1.0*
CODE #: *1224*

English 10A is an honors course for students who are self-directed learners and have both the aptitude and interest to challenge themselves specifically in English language arts with more demanding reading and writing expectations. Students are expected to possess strong analytic reading and writing skills in order to approach texts and tasks confidently and independently. Active participation in daily classroom activities is expected. This honors course continues students' preparation for the NYS English Regents Examination, which they will take at the end of their third year of high school English. It also serves as a strong foundation for the AP Language and Composition and AP Literature and Composition courses, which students may choose to take. *Due to the higher level of expectations of an A-level class, teacher recommendation is strongly advised.*

ENGLISH 11R

GRADE: *10, 11*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *2 years of high school English*
CREDIT: *1.0*
CODE #: *1333*

English 11 is aligned to the New York State learning standards for reading, writing, listening, and speaking. This course continues to prepare students for the NYS English Regents Examination by building upon the foundation developed in English 10. Students improve the depth of their understanding as they analyze increasingly complex literature, as well as literary nonfiction and foundational documents. Writing and research skills are further honed as students compose increasingly sophisticated texts with appropriate usage of MLA documentation. Students' writing demonstrates their command of the conventions of standard English grammar and usage. They will take the NYS English Regents Examination, a graduation requirement, at the end of this third year of high school English.

ENGLISH 11A

GRADE: *10, 11*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *2 years of high school English*
CREDIT: *1.0*
CODE #: *1334*

English 11A is an honors course for students who are independent, reflective learners with the aptitude for and commitment to English language arts at a more rigorous level. Students improve the depth of their understanding as they analyze complex literature, as well as literary nonfiction and foundational documents. Writing and research skills are further honed as students compose sophisticated texts with appropriate usage of MLA documentation. Active participation in daily classroom activities is expected. This honors course continues students' preparation for the NYS English Regents Examination, which they will take at the end of their third year of high school English. It also serves as a strong foundation for AP English courses that students may choose to take. *Due to the higher level of expectations of an A-level class, teacher recommendation is strongly advised.*

ENGLISH 12R

GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *3 years of high school English*
CREDIT: *1.0*
CODE #: *1446*

English 12 is aligned to the New York State learning standards for reading, writing, listening, and speaking. This course provides college and career commencement level preparation by building upon the foundation developed in English 11 in the areas of reading, writing, listening, and speaking. Students improve the depth of their understanding as they analyze increasingly complex literature, as well as literary nonfiction and foundational documents. Writing and research skills are further honed as students compose increasingly sophisticated texts and an inquiry-based assignment with appropriate usage of MLA documentation. Students' writing demonstrates command of the conventions of standard English grammar and usage. Students must have achieved a passing grade on the NYS English Regents Examination in order to graduate.

ADVANCED PLACEMENT (AP) ENGLISH LANGUAGE AND COMPOSITION *



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *2 years of high school English*
CREDIT: *1.0*
CODE #: *1335*

The AP English Language and Composition course focuses on the development and revision of evidence-based analytic and argumentative writing, the rhetorical analysis of nonfiction texts, and the decisions writers make as they compose and revise. Students evaluate, synthesize, and cite research to support their arguments. Additionally, they read and analyze rhetorical elements and their effects in nonfiction texts—including images as forms of text—from a range of disciplines and historical periods. Students should be able to read and comprehend college-level texts and write grammatically correct, complete sentences. © 2021 College Board
Students take the AP English Language and Composition Exam. The course is open to third- and fourth-year English students.

ADVANCED PLACEMENT ENGLISH LITERATURE AND COMPOSITION*



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *2 years of high school English*
CREDIT: *1.0*
CODE #: *1445*

The AP English Literature and Composition course focuses on reading, analyzing, and writing about imaginative literature (fiction, poetry, drama) from various periods. Students engage in close reading and critical analysis of imaginative literature to deepen their understanding of the ways writers use language to provide both meaning and pleasure. As they read, students consider a work's structure, style, and themes, as well as its use of figurative language, imagery, and symbolism. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. Students should be able to read and comprehend college-level texts and write grammatically correct, complete sentences. © 2021 College Board
Students take the AP English Literature and Composition Exam. The course is open to third- and fourth-year English students.

SUPA: WRT 105 PRACTICES OF ACADEMIC WRITING



GRADE: *12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Open to Seniors*
CREDIT: *0.5*
CODE #: *1716*

Practices of Academic Writing is a 20-week elective that teaches students strategies of critical academic writing including analysis, argument, and researched writing. The course challenges students to understand that effective communication requires people to be aware of the complex factors that shape every rhetorical context, including issues of power, history, difference, and community; and that writing as a process involves reflection and revision. This writing course is a site of active learning where students have responsibility for their own progress and for that of their peers. Students write formal papers for each major unit, in addition to various informal writing assignments and a culminating portfolio. Students are co-enrolled at Syracuse University and WCSD. Upon passing the course and paying the discounted tuition fee, students earn 3 credits from Syracuse University.

SUPA: WRT 114 INTRODUCTION TO CREATIVE NONFICTION



GRADE: *11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Open to Juniors and Seniors*
CREDIT: *0.5*
CODE #: *1656*

Writing Culture: Introduction to Creative Nonfiction is a 20-week elective that focuses on the genre of creative nonfiction, such as memoir, biography; the personal essay; travel, science, and food writing; and "new journalism." Creative nonfiction borrows elements from fiction and poetry yet still aims to tell the truth. Students experiment with style, genre, and subject in writing studio environment and to read varied examples of contemporary creative nonfiction. Students will craft and workshop their own creative nonfiction compositions. Students will be expected to read and critically reflect upon complex nonfiction texts from different genres such as science writing or new journalism, to write frequently, and to engage in researched writing projects of their own. Students are co-enrolled at Syracuse University and WCSD. Upon passing the course and paying the discounted tuition fee, students earn 3 credits from Syracuse University.

SUPA: CRS 325 PRESENTATIONAL SPEAKING



GRADE: *11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Open to Juniors and Seniors*
CREDIT: *0.5*
CODE #: *1726*

Presentational Speaking is a 20-week elective that presents conceptual and practical dimensions of formal presentations in organizational settings. Students examine analysis, adaptation, strategic arrangement, development of ideas, and verbal and nonverbal presentation skills. This course is designed to build a solid understanding of the fundamentals of public presentations, as well as the ability to employ those skills flexibly so that a speaker can adjust selected topics and tactics to specific audiences. Students are co-enrolled at Syracuse University and WCSD. Upon passing the course and paying the discounted tuition fee, students earn 3 credits from Syracuse University.

SUPA: ETS 181 CLASS AND LITERARY TEXTS



GRADE: *12*
LENGTH: *20 Weeks*
NOT OFFERED 2026-2027
PREREQUISITE: *Open to Seniors*
CREDIT: *0.5*
CODE #: *1736*

Class and Literary Texts is a 20-week elective that explores the construction and representation of social class, especially as it affects the production and reception of literary and other cultural texts. Concepts such as social stratification, inequality, and the relationship between wealth, privilege, and power provide critical lenses through which to read texts. Through interpretive reading, evidence-based analysis and argumentation, and independent-inquiry, students develop a basic understanding of core concepts of social class, including stratification, inequality, privilege, capitalism, and labor. Students are co-enrolled at Syracuse University and WCSD. Upon passing the course and paying the discounted tuition fee, students earn 3 credits from Syracuse University.

SUPA: ETS 192 GENDER AND LITERARY TEXTS

GRADE: *11, 12*
LENGTH: *20 Weeks*
NOT OFFERED 2026-2027
PREREQUISITE: *Open to Seniors*
CREDIT: *0.5*
CODE #: *1766*

Gender and Literary Texts is a 20-week elective that explores the construction and representation of 'gender,' especially as it affects the production and reception of literary and other cultural texts. Students examine the ways in which literature participates in the social reproduction of gender, as well as the difference that gender makes in the production and reception of literary texts. Students will learn to analyze the ways texts construct categories of difference, including differences of gender, race, and social class. Students are co-enrolled at Syracuse University and WCSD. Upon passing the course and paying the discounted tuition fee, students earn 3 credits from Syracuse University.

CREATIVE WRITING

GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *0.5*
CODE #: *1616*

Creative Writing is a 20-week elective that provides students the opportunity to become better writers through creative self-expression, reflection, and peer feedback. Students produce a journal of first draft writing, responses to writers studied, patterned writing exercises to develop the writing craft, and a manuscript of unstructured writing. Students participate in weekly class workshops designed to generate honest responses and helpful criticism. They learn how to package and submit their work for publication outside of school.

FILM STUDY

GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *0.5*
CODE #: *1666*

Film Study is a 20-week elective in which students learn and apply critical strategies for the appreciation and interpretation of the art of film. They recognize and interpret what they subconsciously see and hear while viewing films as they investigate how and why filmmakers do what they do. Students learn how to recognize and appreciate successful cinematic choices and explain poor cinematic choices. They use film language as they explore the discourse of film discussing the business and the art of film. Film Study enables students to be more literate in an image and sound driven society.

JOURNALISM

GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *0.5*
CODE #: *1626*

In a world of 24-hour news networks and instant cyber-news, it is more important than ever for each citizen to be able to discern real news from entertainment, gossip, or biased journalism. Newspapers, news television, radio, and the Internet inform opinions, prejudices, and choices. Journalism is a 20-week elective that strives to prepare students to be a discerning audience and responsible reporter of news. Students read news materials and analyze style, language, diction, and ethics. Students keep a reporter's notebook in which they document story ideas, favorite articles, and new vocabulary. They research background for story ideas, learn strategies for preparing a thoughtful interview, and write pieces for publication.

MEDIA LITERACY

GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
NOT OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *0.5*
CODE #: *1676*

Media Literacy is a 20-week elective that is structured around the central question: How does the media shape your world and the way you live in it? Students explore various forms of media such as photographic images, advertising, television, radio, Internet broadcasting, newspapers, magazines, virtual reality, gaming, and the performing arts. Students read, respond, analyze, produce, and evaluate these media texts as they discuss the different perspectives with regard to media's influence on social values, political beliefs, identities, and behaviors. They apply their knowledge in a culminating experience, which demonstrates their skills by using the media techniques and terminology to create, present, and analyze a media message from a distinct point of view with a clear purpose.

SPEECH AND COMMUNICATION

GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *0.5*
CODE #: *1636*

Speech and Communication is a 20-week elective in which students develop awareness and expertise in all components of the complex communication process—sender, receiver, message, and medium—that are essential to becoming an effective communicator. Students gain practical experience in speaking and listening. They learn the value of careful preparation and organization of ideas, the importance of good listening skills, the intentional use of nonverbal communication, and the importance of all types of communication in human relationships.

THEATRE

GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
NOT OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *0.5*
CODE #: *1646*

Theatre is a 20-week elective in which students explore theatre arts from a historical point of view as well as the presentation of a theatre piece. Students participate in dramatic activities, which range from appreciation of the art form to acting techniques and from examination of allied forms of motion pictures and television to mechanics of play production. Activities range from reading, writing, and library use to character interpretation, pantomime, improvisation, and directing. Students experience a broad range of theatre activities including audition techniques and written performance critiques.

* ***Advanced Placement (AP) courses prepare students for the College Board's "AP" examinations. All students who enroll in AP courses are expected to take the AP examinations for those courses, and the cost of every examination is paid for by the student. Cost is determined by the College Board and varies year to year. Students who take these examinations can have the results forwarded to the college(s) of their choice for evaluation. Some colleges will grant advanced credit, but the taking of AP examinations does not guarantee such credit.***

WORLD LANGUAGES PHILOSOPHY

The Williamsville School District's World Language program is built on the NYS Learning Standards for World Languages. Our program aims to provide students with learner-centered classrooms that emphasize an authentic communicative approach that incorporates cultural exploration.

The purpose of our World Languages Program is to:

- Cultivate an awareness and sensitivity to other languages and cultures in order to broaden an individual's world and promote personal growth.
- Give students language skills so that they are able to communicate in an interdependent world.

World Languages

The Williamsville Central School District offers high school language study in four languages: French, German, Latin, and Spanish. A Regents sequence is available in each language. Students are encouraged to continue their language of study through Grade 12. The World Languages curriculum represents a focus on language proficiency at various checkpoints, Checkpoint A, B and C, as defined by the New York State syllabi: "Modern Languages for Communication" and "Latin for Communication." As the District continues to phase in the revised NYS Learning Standards for World Languages for both Classical and Modern Languages, student language proficiency will be measured in accordance with these standards. Curriculum reflecting the revised NYS Standards for World Languages will be implemented for all grade 9-10 World Languages courses beginning in the 2025-2026 school year.

New York State (NYSED) World Languages Graduation Requirement

Students must complete two units of study in a World Language by the end of grade nine AND have a passing grade on a locally developed Regents assessment OR successfully complete a high-school level World Language course in order to receive a Regents diploma.

- Regents Diploma: One high school World Languages credit is required
- Regents Diploma with Advanced Designation: Students successfully complete study of a World Language through the Checkpoint B level AND pass a locally developed Regents assessment ***in the same language***
- All students must meet the minimum World Languages requirement except those who have an IEP that specifically identifies a disability that adversely affects the child's ability to learn a World Language

There are two pathways for students who have completed Checkpoint A upon entrance to high school. These options include R courses and A courses. Parents and students are strongly advised to follow the recommendation of middle school teachers when selecting among these options.

Regents level courses (R courses) include regular classroom practice of the four basic skills of listening, reading, writing, and speaking. Difficult concepts are reinforced through repetition and reinforcement. Students in these courses work well with clear guidelines and supervision and are interested in all aspects of language study including communication and culture. R courses include an additional year of study of the target language. The pathway is Checkpoint A, 2R, 3R, and Comprehensive, after which students take the locally developed Checkpoint B Regents. The overall advantage of this option is additional exposure to the four language skills which increases the probability a student will have a significantly higher degree of communicative competency and Regents level preparedness.

Accelerated courses (A courses) are for students who have a strong desire to excel in communication in a World Language. Curriculum for A courses includes various content areas that are above and beyond the Regents standards. The pathway is Checkpoint A, 2A, and 3A, after which students take a locally developed Checkpoint B Regents. These courses are designed for students who have demonstrated superior performance in a World Language. It is imperative that students are able to quickly grasp difficult concepts and exhibit strong motivation in this area of study. The accelerated level of study facilitates the natural progression into post-Regents levels 4A, 5A, and AP.

Checkpoint A Courses

These introductory courses focus on the following:

LISTENING: To comprehend simple statements and questions and primarily the main idea of longer but simple messages and conversations.

SPEAKING: To initiate and respond to simple statements and manage simple face-to-face conversation within the vocabulary, structure, and phono-logy appropriate to the communicative situations and functions at this level.

READING: To understand simple connected material for informative or social purposes. To understand the essential context of short, general, public statements, and standardized messages. To comprehend the main ideas of materials containing simple structure and syntax when relying on visual cues and prior familiarity with the topic.

WRITING: To express basic personal needs and compose phrases and simple messages on very familiar topics based on personal experience. Writing consists mostly of a recombination of learned vocabulary and structures into simple sentences.

CULTURE: To have knowledge of some aspects of the target language culture and to be aware of the existence of cultures other than our own.

CHECKPOINT A: FRENCH

GRADE: *9, 10, 11, 12*
CODE #: *5113*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Locally developed Regents Checkpoint A examination*

CHECKPOINT A: GERMAN

GRADE: *9, 10, 11, 12*
CODE #: *5213*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Locally developed Regents Checkpoint A examination*

CHECKPOINT A: LATIN

GRADE: *9, 10, 11, 12*
CODE #: *5413*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Locally developed Regents Checkpoint A examination*

CHECKPOINT A: SPANISH

GRADE: *9, 10, 11, 12*
CODE #: *5513*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Locally developed Regents Checkpoint A examination*

Checkpoint B Courses

These intermediate courses focus on the following:

LISTENING: To comprehend multiple statements and short dialogs. To begin to differentiate between tense forms.

SPEAKING: To initiate and respond to more complex statements and questions. To make more precise differentiations in terms of tense and word order.

READING: To understand more involved materials with less reliance on previous familiarity and visual cues.

WRITING: To write short, connected paragraphs on a variety of topics. To make basic distinctions in usage of present, past, and future verb forms.

CULTURE: To distinguish patterns of cultural behavior. To make fewer cultural errors that impede communication in the target language.

LEVEL 2R

Students who have passed Checkpoint A French or Spanish at the end of grade 8 and have successfully passed a locally prepared Regents Checkpoint A examination in the same language will continue their sequence towards completion of Checkpoint B by taking these courses.

FRENCH 2R

GRADE: *9, 10, 11, 12*
CODE #: *5123*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Distinct Exam*

SPANISH 2R

GRADE: *9, 10, 11, 12*
CODE #: *5523*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Distinct Exam*

LEVEL 2A

PREREQUISITE: *Students must have passed the Checkpoint A course in the same language or enroll with teacher and principal permission. Students are recommended to the 2A level of study by their World Languages teachers. Students are strongly advised to follow these recommendations.*

Students who have passed Checkpoint A will continue their sequence towards completion of Checkpoint B by taking these courses. Students are recommended to the 2A level of study by their World Languages teachers. Students are strongly advised to follow these recommendations.

The 2A course presupposes a firm grasp of basic language structures, vocabulary, and usage. It is a faster paced and more intensive course of study than the "R" course. This level of study requires significant independent, student-generated work both inside and outside of the classroom. Students will be exposed to challenging materials of a literary and cultural nature.

FRENCH 2A

GRADE: *9, 10, 11, 12*
CODE #: *5134*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *District Exam*

GERMAN 2A

GRADE: *9, 10, 11, 12*
CODE #: *5234*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *District Exam*

LATIN 2A

GRADE: *9, 10, 11, 12*
CODE #: *5434*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *District Exam*

SPANISH 2A

GRADE: *9, 10, 11, 12*
CODE #: *5534*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *District Exam*

LEVEL 3R

PREREQUISITE: *Students must have passed the 2R course in the same language*

LISTENING: To comprehend conversations on topics in everyday situations. To understand the frequently used tense forms and word order patterns in simple sentences.

SPEAKING: To initiate and sustain a conversation, to use the more common verb tense forms, and to use word order accurately in simple sentences.

READING: To understand simple narrative and descriptive authentic materials and edited texts within a familiar context.

WRITING: To write simple notes, letters, and short reports using elementary vocabulary and commonly encountered structures. To accurately distinguish among present, past, and future tenses.

CULTURE: To show how cultural values are associated with behavior patterns in one's own culture as well as the target language culture.

FRENCH 3R

GRADE: *10, 11, 12*
CODE #: *5143*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *District Exam*

SPANISH 3R

GRADE: *10, 11, 12*
CODE #: *5543*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *District Exam*

LEVEL 3A

PREREQUISITE: *Students must have passed the 2A course in the same language or receive a teacher recommendation supported by evidence of proficiency in the same language. All recommendations require review and approval by school and District administration. The expected WCSD process must be followed within established deadlines in order for the recommendation to be considered. Recommending staff must use required forms provided by the District.*

These are the next course options for students who have successfully completed a 2A level of study. Emphasis continues towards proficiency in listening, reading and speaking and places a stronger emphasis on writing in the target language. Successful completion of the A level course and passing a locally prepared Regents Checkpoint B examination satisfies the World Languages sequence and exam requirement for a Regents Diploma with Advanced Designation.

FRENCH 3A

GRADE: *10, 11, 12*
CODE #: *5154*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Locally developed Regents Checkpoint B examination*

LATIN 3A

GRADE: *10, 11, 12*
CODE #: *5454*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Locally developed Regents Checkpoint B examination*

GERMAN 3A

GRADE: *10, 11, 12*
CODE #: *5254*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Locally developed Regents Checkpoint B examination*

SPANISH 3A

GRADE: *10, 11, 12*
CODE #: *5554*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Locally developed Regents Checkpoint B examination*

COMPREHENSIVE FRENCH/COMPREHENSIVE SPANISH

PREREQUISITE: *Students must have passed the 3R course in the same language*

These are the next course options for students who have successfully completed French 3R or Spanish 3R. Emphasis continues on improving proficiencies in listening, speaking, reading, writing, and culture. This course culminates in the District Checkpoint B Assessment. Successful completion of this course and passing a locally prepared Regents Checkpoint B examination satisfies the World Languages sequence and exam requirement for a Regents Diploma with Advanced Designation.

COMPREHENSIVE FRENCH

GRADE: *10, 11, 12*
CODE #: *5163*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Locally developed Regents Checkpoint B examination*

COMPREHENSIVE SPANISH

GRADE: *10, 11, 12*
CODE #: *5563*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Locally developed Regents Checkpoint B examination*

Checkpoint C Courses

Communicative goals for these Checkpoint C courses demonstrate interpretive, interpersonal, and presentational skills. These goals include listening, speaking, reading, writing, and culture.

Goals for these courses include:

LISTENING: To comprehend standard speech delivered with some repetition and restatement by a native speaker not used to dealing with foreigners.

SPEAKING: To handle communicative situations with confidence.

READING: To understand most factual information in non-technical prose as well as some expository texts on topics related to areas of special interest. To read excerpts from literature for pleasure.

WRITING: To compose unified and organized texts on everyday topics with sufficient vocabulary to express oneself simply with some circumlocution.

CULTURE: To analyze and evaluate cultural nuances in various situations.

LEVEL 4A

PREREQUISITE: *Students must have passed the 3A or Comprehensive course in the same or receive a teacher recommendation supported by evidence of proficiency in the same language. All recommendations require review and approval by school and District administration. The expected WCSD process must be followed within established deadlines in order for the recommendation to be considered. Recommending staff must use required forms provided by the District.*

These language courses are designed to meet the needs of students who want to continue their language studies and have passed a locally prepared Regents Checkpoint B examination. The purpose of these courses is three-fold:

To meet the needs of students who have a genuine interest in languages.
To begin preparing interested students for level 5A, AP and/or other advanced exams.
To prepare students for college-level World Languages courses.

These courses are designed to enhance previously mastered materials from the 3A and Comprehensive courses while teaching students how to communicate in a more sophisticated fashion.

FRENCH 4A



GRADE: *11, 12*
CODE #: *5164*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Teacher developed examination*

French 4A is a concurrent enrollment course offered through Niagara University (https://www.niagara.edu/nustep/), but is taught at your high school by a certified World Languages teacher. As a full year course, students who successfully complete the course will earn one unit of high school credit. However, prior to the course's completion, students can opt to enroll in this course through Niagara University, pay a highly reduced tuition rate, earn 3 college credits, and the potential to earn a scholarship to Niagara University. The classroom teacher will provide each student with the necessary paperwork should a student wish to participate in this concurrent enrollment opportunity. Students are responsible for registering themselves prior to the deadlines as determined by Niagara University.

LATIN 4A

GRADE: *11, 12*
CODE #: *5464*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Teacher developed examination*

GERMAN 4A

GRADE: *11, 12*
CODE #: *5264*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Teacher developed examination*

SPANISH 4A



GRADE: *11, 12*
CODE #: *5564*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Teacher developed examination*

Spanish 4A is a concurrent enrollment course offered through Niagara University (https://www.niagara.edu/nustep/), but is taught at your high school by a certified World Languages teacher. As a full year course, students who successfully complete the course will earn one unit of high school credit. However, prior to the course's completion, students can opt to enroll in this course through Niagara University, pay a highly reduced tuition rate, earn 3 college credits, and the potential to earn a scholarship to Niagara University. The classroom teacher will provide each student with the necessary paperwork should a student wish to participate in this concurrent enrollment opportunity. Students are responsible for registering themselves prior to the deadlines as determined by Niagara University.

LEVEL 5A

PREREQUISITE: *Students must have passed the 4A course in the same language or receive a teacher recommendation supported by evidence of proficiency in the same language. All recommendations require review and approval by school and District administration. The expected WCSD process must be followed within established deadlines in order for the recommendation to be considered. Recommending staff must use required forms provided by the District.*

This course is the second year of advanced language study after successful completion of Checkpoint B (courses and assessment). Students wanting to avoid a gap in their study who are not pursuing an AP course of study should enroll in a 5A course.

FRENCH 5A



GRADE: *11, 12*
CODE #: *5174*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Teacher developed examination*

French 5A is a concurrent enrollment course offered through Niagara University (https://www.niagara.edu/nustep/), but is taught at your high school by a certified World Languages teacher. As a full year course, students who successfully complete the course will earn one unit of high school credit. However, prior to the course's completion, students can opt to enroll in this course through Niagara University, pay a highly reduced tuition rate, earn 3 college credits, and the potential to earn a scholarship to Niagara University. The classroom teacher will provide each student with the necessary paperwork should a student wish to participate in this concurrent enrollment opportunity. Students are responsible for registering themselves prior to the deadlines as determined by Niagara University.

SPANISH 5A



GRADE: *11, 12*
CODE #: *5574*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *Teacher developed examination*

Spanish 5A is a concurrent enrollment course offered through Niagara University (https://www.niagara.edu/nustep/), but is taught at your high school by a certified World Languages teacher. As a full year course, students who successfully complete the course will earn one unit of high school credit. However, prior to the course's completion, students can opt to enroll in this course through Niagara University, pay a highly reduced tuition rate, earn 3 college credits, and the potential to earn a scholarship to Niagara University. The classroom teacher will provide each student with the necessary paperwork should a student wish to participate in this concurrent enrollment opportunity. Students are responsible for registering themselves prior to the deadlines as determined by Niagara University.

ADVANCED PLACEMENT

PREREQUISITE: *Students must have passed the 4A level course in the same language or enroll with teacher permission*

Advanced Placement courses are designed to promote proficiency in the target language and enable students to explore culture in contemporary and historical contexts. The course helps you develop language skills that can be applied beyond the French / Spanish course in further language study and everyday life.

The objectives of these courses are:

- **Focus on communication:** You will demonstrate your skills and abilities in the Interpersonal, Interpretive and Presentational modes of communication. You will: engage in conversations, exchange opinions, understand and interpret a variety of topics, present information and ideas all using written and spoken French / Spanish.
- **Encourages cultural awareness:** You will develop an understanding and appreciation of various aspects of the cultures of the French / Spanish -speaking world including cultural products, customs and perspectives.
- **Incorporates themes:** You will study a variety of topics in interesting, meaningful and engaging contexts.
    - Global Challenges
    - Science and Technology
    - Contemporary Life
    - Personal and Public Identities
    - Families and Communities
    - Beauty and Aesthetics

Instructional content will reflect interests shared by you and your teacher (the arts, current events, literature, sports, and so forth). In addition to textbooks, materials might include websites, podcasts, films, newspapers, magazines, and literature. In this course, special emphasis is placed on the use of authentic source materials and the integration of language skills.

ADVANCED PLACEMENT (AP) FRENCH



GRADE: *11, 12*
CODE #: *5175*
CREDIT: *1*
OFFERED 2026-2027
EXAMINATION: *AP Examination*

AP French Language and Culture is equivalent to an intermediate level college course in French. Students cultivate their understanding of French language and culture by applying interpersonal, interpretive, and presentational modes of communication in real-life situations as they explore concepts related to family and community, personal and public identity, beauty and aesthetics, science and technology, contemporary life, and global challenges.

ADVANCED PLACEMENT (AP) SPANISH



GRADE: *11, 12*
CODE #: *5575*
CREDIT: *1*
OFFERED 2026-2027

AP Spanish Language and Culture is equivalent to an intermediate level college course in Spanish. Students cultivate their understanding of Spanish language and culture by applying interpersonal, interpretive, and presentational modes of communication in real-life situations as they explore concepts related to family and communities, personal and public identities, beauty and aesthetics, science and technology, contemporary life, and global challenges.

ADVANCED PLACEMENT (AP) LATIN

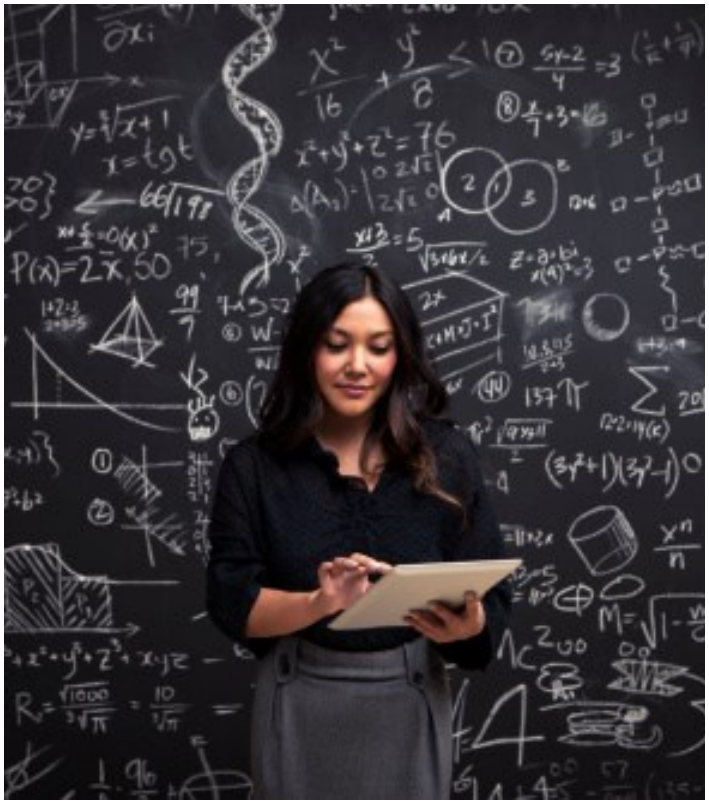


GRADE: *11, 12*
CODE #: *5475*
CREDIT: *1*
OFFERED 2026-2027
PREREQUISITE: *Students must have passed Latin 4A or enroll with teacher permission*

AP Latin is equivalent to an upper-intermediate level college course in Latin focusing on the in-depth study of selections from two of the greatest works in Latin literature: Vergil's *Aeneid* and Caesar's *Gallic War*. Students cultivate their understanding of classics through preparing and translating readings and considering themes in the context of ancient literature as they explore concepts like literary techniques, Roman values, war and empire, leadership, views of non-Romans, history and memory, and human beings and the gods.

* ***Advanced Placement (AP) courses prepare students for the College Board's "AP" examinations. All students who enroll in AP courses are expected to take the AP examinations for those courses, and the cost of every examination is paid for by the student. Cost is determined by the College Board and varies year to year. Students who take these examinations can have the results forwarded to the college(s) of their choice for evaluation. Some colleges will grant advanced credit, but the taking of AP examinations does not guarantee such credit.***

MATHEMATICS



Welcome to the Mathematics Department!

"A regional leader in math." - Business First

We offer a wide variety of courses to develop your mathematical reasoning, communication, and problem-solving skills. Many of the courses are leveled (e.g., honors). Assignment to levels is made on the basis of performance in previous courses, student ability, and teacher recommendations. District created final examinations are administered in all mathematics courses that do not culminate in a New York State Regents Examination.

Students are required to pass a minimum of three mathematics courses and at least one Regents Exam (or Regents Exam Equivalent) in mathematics to meet the State's graduation requirements.

Calculators

*A graphing calculator is **required** for all high school math courses. The Mathematics Department recommends the TI-84 Plus or TI-84 Plus CE graphing calculator because it is acceptable on all Regents math exams, as well as the ACT and SAT tests.*

MATHEMATICS REQUIREMENTS FOR GRADUATION

A student may satisfy the mathematics requirement for graduation by completing any one of the paths indicated below. Students planning to further their formal education beyond high school should plan to take four years of mathematics.

1. **Regents Diploma*:** Successfully complete three units of math credit and one commencement level Regents Examination in mathematics designated by the commissioner or an approved alternative (e.g., Advanced Placement) pursuant to section 100.2(f) (Part 100.5.b.6.Types of Diplomas.iv.c).

2. **Regents Diploma with an Advanced Designation*:** In addition to the requirements for a Regents diploma, students must successfully complete and pass three commencement level Regents Examinations (i.e., Algebra 1, Geometry, and Algebra 2) (Part 100.5.b.6.Types of Diplomas.v).

3. **Regents Diploma with an Advanced Designation, with an annotation in mathematics*:** Successfully fulfill all of the requirements for a Regents Diploma with an Advanced Designation and earn at least an 85% or better on each of the three Regents Exams in mathematics (Part 100.5.b.6.Types of Diplomas.x).

**A student will be awarded a Regents Diploma with Honors or a Regents Diploma with Advanced Designation with Honors if the student achieves an average of 90 percent in all Regents Examinations required for the diploma* (Part 100.5.b.6.Types of Diplomas.ii.a).

Please be advised that it is the family's responsibility to check the NCAA Eligibility Center using the NCAA High School Portal page:

https://web3.ncaa.org/hsportal/exec/hsAction?hsActionSubmit=searchHighS.

This portal will allow you to verify if your child's courses meet NCAA eligibility requirements. While the Williamsville Central School District is committed to providing a comprehensive and rigorous curriculum, we do not govern the decisions or requirements set by the NCAA and are subject to their determinations. We encourage you to regularly review the portal and reach out to the NCAA directly with any specific questions or concerns regarding eligibility. In addition to checking the NCAA portal, we strongly recommend reaching out directly to the colleges and universities your child is interested in attending to ensure they meet all specific requirements for athletic eligibility.

FUNDAMENTALS OF ALGEBRA

GRADE: *9*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Grade 8 Math*
CREDIT: *1.0*
CODE #: *3112*
EXAMINATION: *Local Final Exam*

This is a one-year credit-bearing course that meets New York State's mathematics requirements towards earning a Regents Diploma. This course is aligned to the New York State Learning Standards for Algebra 1, but is intended for students who need additional math preparation by extending Algebra 1 over two years. This course must be followed by Algebra 1R where students will take the Algebra 1 Regents Exam at the end of this second year. This course emphasizes developing skills and processes to successfully solve problems and become more mathematically confident through an in-depth study of algebra. The Mathematical Practice Standards apply throughout each course and, together with the content standards, prescribe for students to experience mathematics as a coherent, useful, and logical subject that makes use of their ability to make sense of problem situations.

ALGEBRA 1R

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Successful completion of Grade 8 Math*
CREDIT: *1.0*
CODE #: *3113*
EXAMINATION: *Regents Algebra 1*

This is a one-year credit-bearing course that counts towards a student's mathematical commencement requirements and meets New York State's mathematics requirements towards earning a Regents Diploma or Regents Diploma with Advanced Designation. This course is aligned to the New York State Learning Standards and is intended to be the first of a four-year sequence. Students will study linear equations and inequalities, linear regression models, quadratic and exponential expressions (including rational exponents), quadratic functions, and formalize and extend the concept of functions (including function notation, domain and range, and exploration of many types of functions). This course is typically followed by Geometry R.

GEOMETRY

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Successful completion of Algebra 1R.*
CREDIT: *1.0*
CODE #: *3222*
EXAMINATION: *Local Final Exam*

This is a one-year credit-bearing course that meets New York State's mathematics requirements towards earning a Regents Diploma. It is aligned to the New York State Learning Standards and is intended to be the second year of a four-year college preparatory sequence. This course employs an integrated approach to the study of connecting algebra to geometric relationships and proofs. Properties of triangles, quadrilaterals, and circles will receive particular attention. Congruence and similarity of triangles will be established using appropriate theorems; transformations including rotations, reflections, translations, and glide reflections and coordinate geometry will be used to establish and verify geometric relationships; and topics in trigonometry extending to three-dimensional geometry will be explored. This course is typically followed by Algebra 2.

GEOMETRY R

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Successful completion of Algebra 1R.*
CREDIT: *1.0*
CODE #: *3223*
EXAMINATION: *Regents Geometry*

This is a one-year credit-bearing course that counts towards a student's mathematical commencement requirements and meets New York State's mathematics requirements towards earning a Regents Diploma or a Regents Diploma with Advanced Designation. It is aligned to the New York State Learning Standards and is intended to be the second year of a four-year college preparatory sequence. This course employs an integrated approach to the study of: connecting algebra to geometric relationships and proofs; properties of triangles, quadrilaterals, and circles; congruence and similarity of triangles; transformations including rotations, reflections, translations, and glide reflections; coordinate geometry; and topics in trigonometry extending to three-dimensional geometry will be explored. This course is typically followed by Algebra 2R.

GEOMETRY R LAB

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Concurrent enrollment in Geometry R.*
CREDIT: *0*
CODE #: *3221*
EXAMINATION: *Regents Geometry*

Geometry R LAB is a non-credit bearing support class that is designed to be taken concurrently with Geometry R. This class provides additional, scheduled assistance to students to gain confidence and develop the necessary skills to be successful on the Geometry Regents Exam and in future math courses. Students will have the opportunity to review concepts learned in Geometry R, explore activities to acquire a deeper learning of Geometry R concepts, preview content to be covered in Geometry R, and provide reinforcement of underlying mathematical skills.

GEOMETRY A

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *3224*
EXAMINATION: *Regents Geometry*
PREREQUISITE: *Successful completion of Algebra 1R with notable achievement is recommended; however, successful completion of Algebra 1A is strongly encouraged.*

This is a one-year credit-bearing course that counts towards a student's mathematical commencement requirements and meets New York State's mathematics requirements towards earning a Regents Diploma or a Regents Diploma with Advanced Designation. It is aligned to the New York State Learning Standards and is intended to be the second year of a four-year college preparatory sequence. This is an advanced course that includes all the topics from Geometry R and explores more complex geometric relationships. Students enrolled in Geometry A move at a faster pace than those in Geometry R and work well beyond the Geometry R curriculum. This course employs an integrated approach to the study of connecting algebra to geometric relationships and proofs; properties of triangles, quadrilaterals, and circles; congruence and similarity of triangles; transformations including rotations, reflections, translations, and glide reflections; coordinate geometry; and topics in trigonometry extending to three-dimensional geometry will be explored. This course is typically followed by Algebra 2A.

ALGEBRA 2

GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *3332*
EXAMINATION: *Local Final Exam*
PREREQUISITE: *Successful completion of Algebra 1R and Geometry or Geometry R.*

This is a one-year credit-bearing course that meets New York State's mathematics requirements towards earning a Regents Diploma. It is aligned to the New York State Learning Standards for Mathematics and is intended to be the third year of a four-year college preparatory sequence. In Algebra 2, students will further develop the concepts learned in Algebra 1 and Geometry and extend those into advanced algebraic applications that require more complex and technical calculations and transformations, but sense-making is still paramount. Topics of study include: the Real and Complex Number systems; seeing structure in expressions; arithmetic with polynomials and rational expressions; creating equations; reasoning with equations and inequalities; building and interpreting functions; linear, quadratic, logarithmic, and exponential models; trigonometric functions; expressing geometric properties with equations; interpreting categorical and quantitative data; making inferences and justifying conclusions; and conditional probability and the rules of probability. While this course concludes with a local final exam, students who take Pre-Calculus the following year will be eligible to take the Algebra 2 Regents Exam.

ALGEBRA 2R

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *3333*
EXAMINATION: *Regents Algebra 2*
PREREQUISITE: *Successful completion of Algebra 1R and Geometry R or Geometry A.*

This is a one-year credit-bearing course that counts towards a student's mathematical commencement requirements and meets New York State's mathematics requirements towards earning a Regents Diploma or a Regents Diploma with Advanced Designation. It is aligned to the New York State Learning Standards and is intended to be the third year of a four-year college preparatory sequence. In Algebra 2R, students will further develop the concepts learned in Algebra 1 and Geometry R and extend those into advanced algebraic applications that require more complex and technical calculations and transformations, but sense-making is still paramount. Topics of study include: the Real and Complex Number systems; seeing structure in expressions; arithmetic with polynomials and rational expressions; creating equations; reasoning with equations and inequalities; building and interpreting functions; linear, quadratic, logarithmic, and exponential models; trigonometric functions; expressing geometric properties with equations; interpreting categorical and quantitative data; making inferences and justifying conclusions; and conditional probability and the rules of probability. This course is typically followed by Pre-Calculus R.

ALGEBRA 2R LAB

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *0*
CODE #: *3331*
EXAMINATION: *Regents Algebra 2*
PREREQUISITE: *Concurrent enrollment in Algebra 2R.*

Algebra 2R LAB is a non-credit bearing support class that is designed to be taken concurrently with Algebra 2R. This class provides additional, scheduled assistance to students to gain confidence and develop the necessary skills to be successful on the Algebra 2 Regents Exam and in future math courses. Students will have the opportunity to review concepts learned in Algebra 2R, explore activities to acquire a deeper learning of Algebra 2R concepts, preview content to be covered in Algebra 2R, and provide reinforcement of underlying mathematical skills.

ALGEBRA 2A

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *3334*
EXAMINATION: *Regents Algebra 2*
PREREQUISITE: *Successful completion of Geometry A.*

This is a one-year credit-bearing course that counts towards a student's mathematical commencement requirements and meets New York State's mathematics requirements towards earning a Regents Diploma or a Regents Diploma with Advanced Designation. It is aligned to the New York State Learning Standards and is intended to be the third year of a four-year college preparatory sequence. This is an advanced course that includes all the topics from Algebra 2R and explores more complex algebraic relationships. Students enrolled in Algebra 2A move at a faster pace than those in Algebra 2R and work well beyond the Algebra 2R curriculum. In Algebra 2A, students will further develop the concepts learned in Algebra 1A and Geometry A and extend those into advanced algebraic applications that require more complex and technical calculations and transformations, but sense-making is still paramount. Topics of study include: the Real and Complex Number systems; seeing structure in expressions; arithmetic with polynomials and rational expressions; creating equations; reasoning with equations and inequalities; building and interpreting functions; linear, quadratic, logarithmic, and exponential models; trigonometric functions; expressing geometric properties with equations; interpreting categorical and quantitative data; making inferences and justifying conclusions; and conditional probability and the rules of probability. This course is typically followed by AP Pre-Calculus.

MATHEMATICAL CONNECTIONS

GRADE: *11, 12*
LENGTH: *40 Weeks*:
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *3452*
EXAMINATION: *Local Final Exam*
PREREQUISITE: *This elective math course is recommended as a third- or fourth-year of math.*

This is a one-year credit-bearing elective math course that meets New York State's mathematics requirements towards earning a Regents Diploma. It is aligned to the New York State Learning Standards and is intended to be an alternative third- or fourth-year college preparatory math course. Mathematical Connections applies, connects, and extends the math skills learned in Algebra 1 and Geometry to real-world applications through the use of technology and hands-on activities. The major area of concentration will be, but not limited to: optimization of time, money, area and volume and analysis of current data (regression) and polls as reported in the news. Topics may also include determination of mortgage and/or car payments and investment returns.

PRE-CALCULUS

GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *3442*
EXAMINATION: *Local Final Exam*
PREREQUISITE: *Successful completion of Algebra 2 or Algebra 2R.*

This is a one-year credit-bearing math course that meets New York State's mathematics requirements towards earning a Regents Diploma. Pre-Calculus is highly recommended for students whose plans include the possibility of formal education beyond high school. The main goal of this course is for students to extend their formal study of Algebra 2 in preparation for undertaking the study of calculus. Students will investigate and explore mathematical ideas, develop multiple strategies for analyzing complex situations, and use graphing calculators and mathematical software to build understanding and make connections among representations. Topics of study include: sequences and series; vectors and matrices; conic sections; solving equations and inequalities; functions and graphs, including exponential, logarithmic, trigonometric, polynomial, and rational functions. All students who enter this course form Algebra 2, 2R, or 2A are eligible to take or retake the Algebra 2 Regents Exam.

PRE-CALCULUS R

GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *3443*
EXAMINATION: *Local Final Exam*
PREREQUISITE: *Successful completion of Algebra 2R or Algebra 2A.*

This is a one-year credit-bearing math course that combines trigonometry and advanced algebra to prepare students to undertake the study of calculus. Since functions are the foundations of calculus, this course has been specifically developed to give the student a detailed understanding of elementary functions. The use of a graphing utility and the inclusion of realistic applications from the physical world, school environment, and from the quantitative world of mathematics, is an integral part of the fourth year mathematics course. Topics of study include: sequences and series, vectors and matrices, conic sections, solving equations and inequalities, functions and graphs including exponential, logarithmic, and trig functions, as well as other functions such as polynomial, rational, and polar functions, and limits and derivatives. Pre-Calculus R is highly recommended preparation for the motivated, average-to-very good student whose plans include formal education beyond high school.

ADVANCED PLACEMENT (AP) PRE-CALCULUS*



GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *3445*
EXAMINATION: *AP Pre-Calculus Exam*
PREREQUISITE: *Successful completion of Algebra 2A.*

This is a one-year credit-bearing math course combines trigonometry and advanced algebra to prepare students to undertake the study of calculus. Since functions are the foundations of calculus, this course has been specifically developed to give the student a detailed understanding of elementary functions. The use of a graphing utility and the inclusion of realistic applications from the physical world, school environment, and from the quantitative world of mathematics, is an integral part of the fourth-year mathematics course. AP Pre-Calculus focuses on the derivation, application, and extension of content found in Pre-Calculus R and includes additional topics of study. This course is highly recommended preparation for the highly motivated, above-average student whose plans include formal education beyond high school. The course culminates in the Advanced Placement examination in Pre-Calculus.

CALCULUS 5R



GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *3553*
EXAMINATION: *Local Final Exam*
PREREQUISITE: *Successful completion of Pre-Calculus R or AP Pre-Calculus.*

It is strongly recommended that college-bound students study mathematics every year that they are in high school. This course is designed for students who have successfully completed Pre-Calculus R or AP Pre-Calculus and do not wish to take AP Calculus. Calculus 5R is essentially a first semester college calculus course, stretched over the entire school year, with topics that include: an introduction to calculus and its practical uses, limits, derivatives, rates of change, derivative rules, application of derivatives, curve sketching, asymptotes and symmetry, series and sequences, integration, definite integral, applications of definite integral, transcendental functions, inverse functions, and log and exponential functions.

Calculus 5R is a concurrent enrollment course offered through Niagara University (https://www.niagara.edu/nustep/), but is taught at your high school by a certified teacher. As a full year course, students who successfully complete the course will earn one unit of high school credit. However, prior to the course's completion, juniors and seniors can opt to enroll this course through Niagara University, pay a highly reduced tuition, and earn 4 college credits. The classroom teacher will provide each student with the necessary paperwork should a student wish to participate in this concurrent enrollment opportunity. Students are responsible for registering themselves prior to the deadlines as stated by Niagara University.

ADVANCED PLACEMENT (AP) CALCULUS AB*



GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *3545*
EXAMINATION: *AP Exam*
PREREQUISITE: *Successful completion of AP Pre-Calculus or Pre-Calculus R with notable achievement.*

This one-year course is equivalent to a one-semester college course in calculus. It includes the fundamentals and development of limits, differential calculus and integral calculus of algebraic, and transcendental functions. Strong emphasis is placed on applications and problem solving. The course culminates in the Advanced Placement examination in Calculus AB.

ADVANCED PLACEMENT (AP) CALCULUS BC*



GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *3555*
EXAMINATION: *AP Exam*
PREREQUISITE: *Successful completion of AP Pre-Calculus with notable achievement.*

This course is a one-year course in the calculus of functions of a single variable. It includes all the topics in Calculus AB plus additional topics that are typically studied in a second-semester college calculus class. The content of Calculus BC is designed to qualify the student for placement and credit in a course that is one course beyond that granted for Calculus AB. A Calculus AB sub score is reported based on performance on the portion of the Advanced Placement Calculus BC exam devoted to Calculus AB topics.

ADVANCED PLACEMENT (AP) STATISTICS*



GRADE: *10, 11, 12*
CREDIT: *1.0*
LENGTH: *40 Weeks*
CODE #: *3455*
OFFERED 2026-2027
EXAMINATION: *AP Exam*
PREREQUISITE: *Successful completion of Algebra 2A with a grade of 85 or better and passing the Algebra 2 Regents Exam is strongly encouraged.*

This course is equivalent to an introductory statistics course typically required for majors such a social science, health science, and business. The course will introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to these conceptual themes: exploring data, sampling, experimentation, anticipating patterns, probability, simulation, and statistical inference. Graphing calculators are required.

STATISTICS



GRADE: *10, 11, 12*
CREDIT: *1.0*
LENGTH: *40 Weeks*
CODE #: *3453*
OFFERED 2026-2027
EXAMINATION: *Local Final Exam*
PREREQUISITE: *Successful completion of Algebra 2R or higher-level math course with a grade of 85 or better; passing the Algebra 2 Regents Exam is strongly encouraged.*

The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students will be exposed to four broad conceptual themes: (1) Exploring Data: Observing patterns and departures from patterns; (2) Planning a Study: Deciding what and how to measure; (3) Anticipating Patterns: Producing models using probability and simulations; and (4) Statistical Inference: Confirming models. With significant emphasis placed upon the proper use of technology, students will utilize both statistical software on computers and graphing calculators to collect, manipulate, and synthesize data. The application of theoretical statistical models to this data (and resulting implications) will be the primary focus of the course. The completion of a significant research project, under the guidance of a mentoring faculty member, is required.

This course is a concurrent enrollment course offered through Niagara University (https://www.niagara.edu/nustep/), but is taught at your high school by a certified teacher. As a full year course, students who successfully complete this course will earn one unit of high school credit. However, prior to the course's completion, juniors and seniors can opt to enroll this course through Niagara University, pay a highly reduced tuition, and to earn 3 college credits. The classroom teacher will provide each student with the necessary paperwork should a student wish to participate in this concurrent enrollment opportunity. Students are responsible for registering themselves prior to the deadlines as stated by Niagara University.

* ***Advanced Placement (AP) courses prepare students for the College Board's "AP" examinations. All students who enroll in AP courses are expected to take the AP examinations for those courses, and the cost of every examination is paid for by the student. Cost is determined by the College Board and varies year to year. Students who take these examinations can have the results forwarded to the college(s) of their choice for evaluation. Some colleges will grant advanced credit, but the taking of AP examinations does not guarantee such credit.***

COURSE DESCRIPTIONS FOR UB's GIFTED MATH PROGRAM

To be taken at the University of Buffalo

The University at Buffalo's Gifted Math Program (GMP) offers advanced mathematics courses on UB's campus twice a week – after the regular school day – throughout the academic year. This program is designed to challenge exceptional math students (i.e., upper 1% in their national peer group) and provide students with the opportunity to earn up to 22 college credit hours. Each year, the GMP admits a class of 60 students who are nominated for entry by parents or teachers from across Western New York. Applicants undergo interviews and a battery of tests, which includes the math section of the Preliminary Scholastic Aptitude Test. Those in grades 7 through 10 study an accelerated curriculum, while 11th and 12th graders take university-level courses in calculus and linear algebra.

While the GMP courses are designed to *replace* the mathematics courses in the students' home school, students may elect to take a district math course, *in addition to* an "aligned" GMP course. The grades for both courses will be factored into a student's grade point average (GPA), appear on one's transcript, and each class (beginning in the 2020-21 school year) may earn a NYS seat credit. For example, the GMP program has designated that GMP III is aligned to Geometry. So, if a student takes GMP III and elects to take Geometry in the district, both the GMP course and district's Geometry course may each receive one NYS seat credit, and both courses will be factored into one's GPA and appear on one's transcript.

F.A.Q:

What GMP courses are considered "aligned" to Williamsville's math courses?

UB has identified the following Gifted Math courses as "aligned" to Williamsville's leveled courses:

- UB GMP 1 = (no high school association)
- UB GMP 2 = Algebra 1
- UB GMP 3 = Geometry
- UB GMP 4 = Algebra 2
- UB GMP 5 = Calc. 1 and Calc. 2
- UB GMP 6 = Calc. 3 and Linear Algebra

If a student is enrolled in UB GMP *and* enrolled in an "aligned" math course, which course counts?

Districts who partner with UB GMP are required to "accept the University coursework in place of the home school mathematics curricula." In other words, UB's math courses are designed to supplant the district's math courses; nevertheless, Williamsville does permit UB GMP students the opportunity to simultaneously enroll in a district math course that is considered to be aligned to UB's courses. The district, however, does not permit any form of course auditing (see the "Grade Point Average" section in the course catalog); thus, the student will receive grades for both the aligned GMP course(s) and grades from any Williamsville course(s), and all course grades will be averaged into the student's GPA and appear on one's transcript. Students will also receive one NYS seat credit for each of the two aligned courses.

GMP I: GSE 120 – INTRODUCTION TO LOGIC



GRADE: *7*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Entrance Exam Required*
CREDIT: *1 college credit (optional)*
CODE #: *3690*

A development of the formal language of logic, demonstrations including use of the deduction theorem and indirect inference, the propositional calculus, and quantifiers.

GMP II: GSE 121 – LOGIC and SETS



GRADE: *8*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *GMP I*
CREDIT: *1 high school seat credit / 2 college credits (optional)*
CODE #: *3944 (Middle School: 3790)*
EXAMINATION: *Regents Algebra 1*

Formal set theory developed from primitive notions and a logic for set theory including general rules of inference, demonstrations, the comprehension principle, and rules of inference for quantifiers. Presenting proofs in full and abbreviated form. This course is equivalent to Integrated Algebra 1A.

GMP III: GSE 122 – ANALYTIC GEOMETRY



GRADE: *9*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *GMP II*
CREDIT: *1 high school seat credit / 1 college credit (optional)*
CODE #: *3954*
EXAMINATION: *Regents Geometry*

Elementary field properties. Equations in a field. Multiples and powers in a field. Polynomials and polynomial functions over a field. Ordered fields including maxima, minima, and absolute value. Applications. This course is equivalent to Geometry A.

GMP IV: GSE 123 – RELATIONS and FUNCTIONS



GRADE: *10*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1 high school seat credit / 2 college credits (optional)*
CODE #: *3964*
EXAMINATION: *Regents Algebra 2*

Inequalities, sequences, and limits. Exponential and logarithmic functions. Circular functions and trigonometry. Groups, complex numbers, and vectors. Polynomials. This course is equivalent to Algebra

GMP V: MTH-141 – COLLEGE CALCULUS I (Fall)



GRADE: *11*
LENGTH: *Fall Only* (20 weeks)
OFFERED 2026-2027
PREREQUISITE: *GMP IV*
CREDIT: *0.5 high school seat credit / 4 college credits (optional)*
CODE #: *3974*

Differentiation and integration with applications. GMP V (MTH-141) is equivalent to AP Calculus AB.

GMP V: MTH-142 – COLLEGE CALCULUS II (Spring)



GRADE: *11*
LENGTH: *40 weeks*
OFFERED 2026-2027
PREREQUISITE: *GMP V (MTH-141)*
CREDIT: *0.5 high school seat credit / 4 college credits (optional)*
CODE #: *3974*

Differentiation and integration of transcendental functions; infinite sequences; series and power series; methods of integration; additional topics in analytic geometry. GMP V (MTH-142) is equivalent to AP Calculus BC.

GMP VI: MTH-241 – COLLEGE CALCULUS III (Fall)



GRADE: *12*
LENGTH: *Fall Only* (20 weeks)
OFFERED 2026-2027
PREREQUISITE: *Must pass College Calculus II*
CREDIT: *0.5 high school seat credits / 4 college credits (optional)*
CODE #: *3985*

Geometry and vectors of *n*-dimensional space; Green's Theorem, Stokes' Theorem, multidimensional differentiation and integration; application to two and three-dimensional space.

GMP VI: MTH-309 – INTRODUCTION TO LINEAR ALGEBRA (Spring)



GRADE: *12*
LENGTH: *Spring Only* (20 weeks)
OFFERED 2026-2027
PREREQUISITE: *Must pass College Calculus II*
CREDIT: *0.5 high school seat credits / 4 college credits (optional)*
CODE #: *3985*

Linear equations, linear transformations, matrices, determinants, vector spaces, eigenvalues and eigenvectors, inner products, orthogonality, quadratic forms.

For more information about the University at Buffalo's Gifted Math Program, please visit:
http://giftedmath.buffalo.edu/

MUSIC

The mission of the Williamsville Central School District Music Department is to teach all students human connection, creativity, and expression and to inspire a legacy of learning and life-long appreciation for the Arts through our own love of music.

Student performance in any performing ensemble at the high school level is dependent upon individual proficiency on the instrument of choice. Instrumental proficiency will be assessed by the music directors of the respective ensembles.

Students who wish to begin taking instrumental music lessons at the high school level as part of the district rotating lesson program will be directed to meet with the appropriate instrumental music teacher.

***Note:** The New York State Education Department offers an approved graduation pathway through the Arts.*

MUSIC IN OUR LIVES

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *6706*

This course is designed to meet the New York State Regents Requirement for one unit of art/music credit for those students who do not participate in a major performing ensemble. A rich history of rock music is a primary focus, along with discussion and analysis of current pop music and industry trends. Students will develop skills in critical listening and elements of music theory via electronic keyboards. No prior experience in music is necessary for enrollment in this course.

MUSIC IN OUR LIVES II

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Music In Our Lives*
CREDIT: *1.0*
CODE #: *6726*

Using foundations covered in Music in Our Lives, this course will focus on listening to and evaluating music from popular culture. An in depth study of popular music releases, favorite artists, and music industry developments are the primary facets of this course. In addition, rock history is explored from the 1960s – onward.

MUSIC THEORY

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Although there is no prerequisite, it is suggested that a student have some musical knowledge and/or participate in an ensemble.*
CREDIT: *1.0*
CODE #: *6716*

The Music Theory course is designed to enhance music skills and basic music fundamentals. The essential aspects of melody, harmony, rhythm, and form are studied. Throughout the course of the year students will study basic notation, scales, key signatures, intervals, triads, cadences, non-chord tones, form, part-writing and analysis of a score. Aural dictation and ear training are also an integral part of the course and will be taught throughout the year. Individual creativity is nurtured through both rhythmic and melodic composition. This course is highly recommended for students in a musical ensemble, and is a prerequisite for AP Music Theory. *College credit offered through Buffalo State University – per Buffalo State policies, college credit is available to students in grades 10-12 only.*

ADVANCED PLACEMENT (AP) MUSIC THEORY



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Music Theory*
CREDIT: *1.0*
CODE #: *6725*

The goal of this course is to develop a student's ability to recognize, understand and describe the basic materials and processes of music that is heard or presented in a score. Students will be required to read, notate, perform and compose music. Musical skills will be developed through listening exercises, sight-singing examples, written exercises, analysis, and an exposure to a variety of musical styles. Students will take the Advanced Placement examination in May.

CONCERT BAND

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Ability and desire to develop musicianship, read music and perform at an appropriate level on a wind, brass, or percussion instrument.*
CREDIT: *1.0*
CODE #: *6696*

The instructional program focuses on improving musicianship through developing students' senses of tonality, meter, and technique, and through the analysis of musical structure and style. Students will perform in five to six concerts per years and will also take part in seminars with critiques by performers, composers, arrangers, and teachers. Emphasis will be placed on individual growth, broad in scope and content that meets the diversified needs of today's instrumental music student. Diligent practice is expected and private lessons are encouraged. Group lessons are a part of the curriculum for this class. Each student will be eligible for and have the opportunity to audition and perform in festivals sponsored by Erie County Music Educators Association, the New York State School Music Association, and the National Association for Music Education. This includes opportunities for scholarships where applicable.

WIND ENSEMBLE

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Open to students who play a wind, brass, or percussion instrument. Audition is required.*
CREDIT: *1.0*
CODE #: *6676*

This is an advanced level ensemble that starts the year with challenging music and continues throughout the year striving for musical excellence. The instructional program focuses on improving musicianship through developing students' senses of tonality, meter, and technique, and through the analysis of musical structure and style. Students will perform in five to six concerts per years and will also take part in seminars with critiques by performers, composers, arrangers, and teachers . Emphasis will be placed on individual growth, broad in scope and content that meets the diversified needs of today's instrumental music student. Members are strongly advised to study privately. Those who do are considered first for this ensemble. Group lessons are a part of the curriculum for this class. Each student will be eligible for and have the opportunity to audition and perform in festivals sponsored by Erie County Music Educators Association, the New York State School Music Association, and the National Association for Music Education. This includes opportunities for scholarships where applicable.

MIXED CHORUS

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *6626*

This is a non-auditioned ensemble which meets daily. It is designed to encourage all students who have an interest in developing their skills in group singing. It will help develop the student's knowledge of choral literature, music theory concepts, sight singing, and to enrich their love of music. Weekly group lessons are a part of the curriculum for this class. Repertoire is selected to provide sequential, systematic concepts and performance skills associated with varying musical content and style. Each student who participates in this organization will be eligible for and have the opportunity to audition and perform in festivals sponsored by Erie County Music Educators Association, the New York State School Music Association, and the National Association for Music Education.

* ***Advanced Placement (AP) courses prepare students for the College Board's "AP" examinations. All students who enroll in AP courses are expected to take the AP examinations for those courses, and the cost of every examination is paid for by the student. Cost is determined by the College Board and varies year to year. Students who take these examinations can have the results forwarded to the college(s) of their choice for evaluation. Some colleges will grant advanced credit, but the taking of AP examinations does not guarantee such credit.***

CONCERT CHOIR

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *6646*
PREREQUISITE: *Audition is required*

This is an auditioned ensemble which meets daily and offers students a variety of enriched musical opportunities. Students will enhance their knowledge of choral literature, music theory concepts, and will achieve a higher degree of perfection in the performance and understanding of the choral repertoire. Weekly group lessons are a part of the curriculum for this class. Repertoire is selected to provide sequential, systematic concepts and performance skills associated with varying musical content and style. Each student in this ensemble will have the opportunity to audition for and participate in festivals sponsored by the Erie County Music Educators Association, the New York State School Music Association, and the National Association for Music Education. This includes opportunities for scholarships where applicable.

DYNAMICS

GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *6636*
PREREQUISITE: *Audition is required*

This is a non-auditioned ensemble that meets every day for 20 weeks in both the Fall and Spring semesters. This course offers students a variety of enriched musical opportunities, which include weekly group lessons as part of the curriculum for this class. Students will enhance their knowledge of choral literature, music theory concepts, and will achieve a higher degree of perfection in the performance and understanding of choral repertoire. Repertoire is selected to provide sequential, systematic concepts and performance skills associated with varying musical content and style. Students will have the opportunity to audition for and participate in festivals sponsored by local, state, and national music organizations.

CHORALEERS

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *6656*
PREREQUISITE: *Audition is required*

This is an auditioned ensemble which meets daily and offers students a variety of enriched musical opportunities. Students will enhance their knowledge of choral literature, music theory concepts, and will achieve a higher degree of perfection in the performance and understanding of the choral repertoire. Weekly group lessons are a part of the curriculum for this class. Repertoire is selected to provide sequential, systematic concepts and performance skills associated with varying musical content and style. Each student in this ensemble will have the opportunity to audition for and participate in festivals sponsored by the Erie County Music Educators Association, the New York State School Music Association, and the National Association for Music Education. This includes opportunities for scholarships where applicable.

CONCERT ORCHESTRA

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *6686*
PREREQUISITE: *The ability to read music and perform satisfactorily on a string instrument.*

The non-auditioned orchestra is comprised of violin, viola, cello, string bass, wind, brass, and percussion players grades 9-12. The instructional program includes the development of skills in the following areas: tone production, phrasing, bow control, rhythmic and aural acuity, and the advancement of technical skills such as shifting, vibrato, and correct posture. The orchestra also offers the student the opportunity to gain better understanding and appreciation for orchestral literature, the self-discipline to practice at home and the ability to be creative through music. The program will culminate in public performances. Students will also have the opportunity to compose, arrange, conduct and take part in seminars by performers, composers, arrangers and teachers. Emphasis will be placed on individual growth that meets the needs of today's instrumental music student. Weekly group lessons are a part of the curriculum for this class, and there are opportunities to play in small chamber groups. Each student who participates in this organization will be eligible for and have the opportunity to audition and perform in festivals sponsored by the Erie County Music Educators Association, the New York State School Music Association, and the National Association for Music Education. This includes opportunities for scholarships where available.

SYMPHONY ORCHESTRA

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *6697*
PREREQUISITE: *Ability to read music and perform at an advanced level. Open to students who play a string, wind, brass or percussion instrument. Audition is required.*

The auditioned orchestra is comprised of violin, viola, cello, string bass, wind, brass and percussion players grades 9-12 by audition. The instructional program will culminate in the public performances of literature demonstrating skill development at an advanced level. Students will have the opportunities to compose, arrange, conduct and take part in seminars with critiques by performers, composers, arrangers and teachers. Emphasis will be placed on individual growth, broad in scope and content that meets the diversified needs of today's instrumental music student. Weekly group lessons are a part of the curriculum for this class, and there are opportunities to play in small chamber groups. Each student who participates in this organization will be eligible for and have the opportunity to audition and perform in festivals sponsored by the Erie County Music Educators Association, the New York State School Music Association, and the National Association for Music Education. This includes opportunities for scholarships where available.

INTRODUCTORY JAZZ IMPROVISATION

GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *6736*
PREREQUISITE: *None*

In this course, students will be introduced to the fundamentals of jazz improvisation. Students will explore jazz artistry through ear training, transcription, historical study, jazz theory, development of executive skills (technical facility), and self-analysis. By the end of this course, students will develop a repertoire of jazz tunes. This performance-based course meets every other day.

INTERMEDIATE/ADVANCED JAZZ IMPROVISATION

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
NOT OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *6746*

In this course, students will develop advanced skills in jazz improvisation through higher level ear training, transcription, historical study, jazz theory, development of executive skills (technical facility), and self-analysis. This performance-based course meets every other day.

JAZZ BAND & JAZZ ENSEMBLE

GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0*
CODE #: *N/A*
PREREQUISITE: *None*

These groups meet twice per week before the school day begins. Students enrolled in the band program audition in the fall for membership into either Jazz Band or Jazz Ensemble. These bands perform at the annual Spartan Spectrum Concert, the side-by-Side Concert with Casey and Heim Middle Schools, and at the annual Spring Jazz Festival with a guest artist.

PHYSICAL EDUCATION/HEALTH

PHYSICAL EDUCATION 9-12

In compliance with Title IX, physical education classes will be conducted in a mixed gender setting for all students. Gender separation during contact sports is not mandatory and will only be considered when basic safety measures preclude safe participation. Teachers will provide every opportunity for students to fully participate in a mixed gender setting.

Students receive a physical education grade each quarter. **If a student fails physical education, he/she must attend summer school. No exceptions will be made to take two physical education classes within the same school year if the student has failed for academic reasons.**

Our teaching curriculum is currently structured to comply with New York State Standards for Physical Education, which is based on compiling individual fitness projects and personal assessments of each student within the program. Physical Education is a required mandate of the New York State Education Department, therefore, all students must meet this requirement. Students who have physical limitations or who experience a long term injury or illness can meet their physical education requirement through an adapted physical education program.

During a typical 4 year high school career, students can expect to experience activities listed below. Many instructional units are co-educational and are offered when possible, within the corresponding athletic season. These activities are presented in such a way as to encourage lifetime participation:

Aerobics
Basketball
Personal Wellness
Touch Football
Softball
Tennis
Weight Training
Racket Activities
Instructional Swim (9/10)
Recreational Swim (11/12)
Cardiovascular Fitness
Badminton
Various forms of dance
Table Tennis
Field Hockey
Golf
Soccer
Team Handball
Volleyball

ABSENCES/GRADING

Each day, the student receives credit for being present, prepared and participating. When the student is not in class, it is not possible to receive credit. However, in most cases, they are given the opportunity to make-up the class for full points. Students will be evaluated in five different categories for each activity. Each category is worth 5 points. Application of skills, application of strategy, application of rules and etiquette, personal/social responsibility and safety and readiness for class participation will be assessed. Each unit assessment has been designed to equal 100 points.

1. Excused absences – When the student is absent for any legal reason, they may come into another class during a free period or after school in the fitness room for a make-up or open gym format.

2. A student will not receive full credit if he/she is unprepared for the class. If there is a safety issue, he/she will be unable to participate, and lose credit. If students can safely participate, they will receive partial credit. Unprepared classes cannot be made up. One unprepared = highest grade you can earn is a 90%. Two unprepared = highest grade is a 75%. Three unprepared = highest grade is a 60%.

3. Absences due to field trips and music lessons do not need to be made up.

4. Long Term Medical Excuses – For any note from a doctor for over two weeks, the student must make arrangements with his teacher in order to receive credit for the time missed. Depending on the length of time, nature of injury and current activity, make-up assignments will vary. This may include a written project or assistance with the current activity. Students must communicate with their physical education teacher to initiate the make-up.

5. Temporary excuses (up to two weeks) – The student will be given the opportunity to make up classes as in excused absences.

6. In the case where a student intentionally misses class while in attendance in school, the student will lose full credit and not be given the opportunity to make up the class. After 24 hours, student must make arrangements with P.E. teacher. Additional discipline will also be rendered by the school administration.

Students will receive four Physical Education grades throughout the year. The average of those four grades will be the final average.

HIGH SCHOOL HEALTH

GRADE: *9, 10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE:

CREDIT: *0.5*
CODE #: *8616*

This course focuses on personal health and is designed to allow students to meet their graduation requirement in health education. As defined by the New York State Education Department, students need to learn, practice and apply skills successfully to maintain personal health and safety. The seven personal and social skills that students need to know to be healthy are self-management, relationship management, stress management, communication, planning and goal setting, decision making and advocacy.

In addition, students will gain functional knowledge in human growth and development, mental health, nutrition, sexual health education, diseases and disorders, substance abuse, and healthful lifestyles, There will be a district final exam.

NOTE: A challenge to the final exam in order to gain credit for this course is not permissible as a result of State Education Department ruling.

INTERSCHOLASTIC ATHLETICS

Williamsville believes that interscholastic athletics is an important part of education and supports the ideals and values embodied in good sportsmanship. Sportsmanlike behavior is essential if interscholastic competition is to contribute usefully and constructively to the broad goals of education and quality of life of those involved.

Respect for the cultural and ethnic diversity of one's opponents, their school and community, is a fundamental tenet of wholesome athletic competition. This standard suggests that planned activity is needed to demonstrate a warm and friendly welcome, mutual respect, and a genuine readiness to participate in a sportsmanlike manner.

Players should demonstrate both knowledge of the rules and respect for game officials and their decisions. Coaches and school officials have the responsibility to teach and encourage these attributes. All athletes must have an athletic physical before they can participate.

All of the equipment provided by the district, including practice and game uniforms, is to be used only for practice and competitions, and only as directed by the coach.

SCHEDULES ARE SUBJECT TO CHANGE DUE TO ADVERSE WEATHER CONDITIONS.

For more information, please call the Athletic Department at 626-8542.

FALL

BOYS
Cross Country (Var, Mod)
Football (Var, JV, & Mod)
Golf
Soccer (Var, JV, & Mod)
Volleyball (Var, JV & Mod)

GIRLS
Cross Country (Var, Mod)
Field Hockey (Var, JV) Mod
Golf
Soccer (Var & JV)
Volleyball (Var & JV)
Gymnastics
Swimming
Tennis
Cheerleading (Var & JV)

WINTER

BOYS
Basketball (Var, JR, & Mod)
Bowling
Swimming
Indoor Track
Wrestling (Var & JV)
Ice Hockey
Alpine Skiing (Var)
Unified Bowling

GIRLS
Basketball (var, JV, & Mod)
Bowling
Cheerleading (Var, JV)
Indoor Track
Ice Hockey
Alpine Skiing (Var)
Unified Bowling

SPRING

BOYS
Baseball (Var, JV, & Mod)
Tennis
Track & Field
Lacrosse (Var, JV, & Mod)
Unified Basketball

GIRLS
Softball (Var, JV, & Mod)
Track & Field
Lacrosse (Var & JV)
Unified Basketball
Lacrosse (Var, JV, & Mod)
Flag Football

WEIGHT TRAINING IS OFFERED FOR BOTH BOYS AND GIRLS
IN FALL, WINTER, AND SPRING

SCIENCE



Today more than ever, science literacy is essential for everyone, and a solid science education provides an excellent foundation for science literacy and is a critical ingredient in a quality STEM (Science, Technology, Engineering, Mathematics) education. The science department, made up of highly qualified teachers, offers a wide variety of science courses that have been designed to satisfy the interests and meet the needs of students of all academic levels. Through the science courses, students will have many opportunities to explore areas of interest in life sciences, physical sciences, and Earth and space sciences. Students will learn basic scientific principles and be challenged to apply these principles to everyday life, as well as to their future studies and careers. Exemplary science courses offer a rich context for developing students' science practices, communication, problem solving, critical thinking, and collaboration skills. The knowledge and skills gained will be readily transferable and extremely beneficial to students as they pursue their future goals and endeavors in college and/or careers.

Please note: The NYS Laboratory Requirement for all Regents Science courses (Earth and Space Sciences, Life Science: Biology, Physical Science: Chemistry, Physical Science: Physics) states that:
"In order to qualify to take a Regents examination in any of the sciences, a student must complete 1,200 minutes of laboratory experience which may be met through any combination of hands-on and simulated laboratory experience with satisfactory documented laboratory reports. The 1,200 minutes of laboratory experience must be in addition to the required classroom instruction associated with earning a unit of credit."

Specific laboratory requirements are determined by the teacher and are based on laboratory inquiry skills that are an integral part of each science. These include, but are not limited to, lab report formats, due dates, what constitutes a satisfactorily completed lab experience, time requirement above the SED mandate, and safety procedures and regulations.

Science Graduation Requirements
A student may satisfy the science graduation requirements completing any one of the paths indicated below. Students planning to further their formal education beyond high school should plan to take four years of science.

1. Regents Diploma*: Successfully complete three units of credit in science and one commencement level Regents Examination in science.

2. Regents Diploma with an Advanced Designation*: Successfully complete three units of credit in science and two commencement level Regents Examinations in science (one Regents exam in Life Science and one in Physical Science)

3. Regents Diploma with an Advanced Designation, with a Mastery Level Notation in Science*: Successfully fulfill all of the requirements for a Regents Diploma with an Advanced Designation and earn at least an 85% or better on each of the three Regents Exams in science.

*A student will be awarded a Regents Diploma with Honors or a Regents Diploma with Advanced Designation with Honors if the student achieves an average of 90 percent in all Regents Examinations required for the diploma.

Science Course Sequences
There are many science course sequences that may be appropriate for you. Two suggestions, with multiple options, are listed below. Please consult with your science teachers and guidance counselors.

R = Regents class
Non-R = Non-Regents class
H = Honors class

For more information, please see pages 67-68 for recommended science courses based on college and career fields.

Grade	Science Course(s)	Science Course(s)
8	Grade 8 Science	Earth and Space Sciences (R)
9	Earth and Space Sciences (R) or Life Science: Biology (R)	Life Science: Biology (R or H)
10	Earth and Space Sciences (R) or Life Science: Biology (R)	Physical Science Chemistry (R or H), and AP Biology, and/or choice of Electives
11	Physical Science: Chemistry (R or Non-R), or Environmental Science, and/or choice of Electives	Physical Science: Physics (R or H), and AP Chemistry, or AP Environmental Science, or Anatomy & Physiology, and/or choice of Electives
12	Physical Science: Chemistry (R or Non-R), or Physical Science: Physics (R or Non-R), or Environmental Science, and/or choice of Electives	AP Physics, and AP Chemistry, or AP Environmental Science, or Anatomy & Physiology, and/or choice of Electives

Core Science Courses: Earth and Space Sciences, Life Science: Biology, Physical Science: Chemistry, Physical Science: Physics

Electives: Anatomy & Physiology, Advanced Placement (AP) Biology, Advanced Placement (AP) Chemistry, Advanced Placement (AP) Environmental Science, Advanced Placement (AP) Physics, Astronomy, Environmental Science, Forensic Science, Great Lakes, Natural Disasters

Recommended Science Course Sequences Based on Areas of Interest

(Sources: Google "Fastest Growing Jobs", "Highest Paying Jobs", " Projected Future Job Growth")

R = Required; S = Suggested; O = Optional

College or Career Path	Biology	Earth Science	Chemistry	Physics	Environ Science	Additional Electives
Accounting	R	S	O	O	S	Electives
Architect	R	S	S	R	S	AP Physics Electives
Business/Sales Rep	R	S	O	O	S	Electives
Computer Science/ IT	R	S	S	R	O	Electives
Construction Manager	R	S	O	R	S	Electives
Dentist	R	O	R	R	S	A&P AP Bio Electives
Electrician	R	O	O	R	S	AP Physics Electives
Elementary Teacher	R	S	S	O	S	Electives
Engineering	R	S	R	R	S	AP Chem AP Physics Electives
Farmer/ Agricultural Manager	R	R	S	S	R	Great Lakes Electives
Finance	R	S	O	O	S	Electives
Forensic Investigator	R	O	R	R	S	Forensic Sci A&P AP Bio AP Chem AP Physics
Journalism/ Broadcaster/ Communications	R	S	O	O	S	Electives
Lab Technician	R	S	R	R	S	A&P AP Bio AP Chem Electives
Lawyer	R	S	O	O	S	Electives

Market Research Analyst	R	S	O	O	S	Electives
Medical Imaging Technician (X-Ray, MRI, etc.)	R	O	R	R	O	A&P AP Physics Electives
Military	R	S	O	S	S	Electives
Mortician	R	O	R	S	O	Forensic Sci A&P AP Chem Electives
Nuclear Engineer/ Technician	R	S	S	R	R	AP Environ Sci AP Physics Electives
Nurse/RN/PA/NP	R	O	R	R	S	A&P AP Bio Electives
Operations/Project Manager	R	O	S	O	R	Electives
Pharmacy	R	O	R	R	O	A&P AP Bio AP Chem Electives
Physical Therapist	R	O	R	R	O	A&P AP Bio Electives
Physician	R	O	R	R	O	A&P AP Physics AP Chem Electives
Speech Pathology	R	O	S	R	O	Electives AP Physics
Surgeon	R	O	R	R	O	A&P AP Bio Electives
Veterinarian	R	O	R	R	S	A&P AP Bio AP Chem Electives

ADVANCED PLACEMENT (AP) BIOLOGY



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *4245*
EXAMINATION: *AP Biology*
PREREQUISITE: *Completed Life Science: Biology Regents or Honors, and completed or concurrently enrolled in Chemistry Regents or Honors*

Advanced Placement Biology is a college-level course which provides students with the opportunity to receive college credit for work done in high school. The course is designed to "provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically with the rapidly changing science of biology". It is a challenging and demanding course that is presented through college style lectures, discussion seminars, labs, selected readings, research, and student projects. The three main areas of study are: Molecules and Cells; Heredity and Evolution; and Organisms and Populations. Within these areas, more specific topics of study include: cellular biology and genetics, cellular respiration and photosynthesis, genetics and reproduction, evolutionary patterns and mechanisms, communities and ecosystems. AP Biology is a lab course which provides opportunities for students to develop skills in: operation of technical equipment; experimental design; data collection, analysis, and interpretation; critical thinking; and problem solving. All students are expected to take the AP Biology exam at the conclusion of the course.

ADVANCED PLACEMENT (AP) CHEMISTRY



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *4345*
EXAMINATION: *AP Chemistry*
PREREQUISITE: *Completed Chemistry Regents or Chemistry Honors*

AP Chemistry is a college-level course which provides student with the opportunity to receive college credit. It is a rigorous college-level treatment of fundamental chemical concepts and principles both in the classroom and laboratory. The course is designed to "provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically" with a wide range of chemical concepts. It is a challenging and rigorous course that is presented through college style lectures, discussion seminars, labs, selected readings, research, and student projects. The broad concepts are the structure and states or matter and chemical reactions. Within these areas, more specific topics of study include: atomic theory, the Periodic Table, nuclear chemistry, gas laws, reactions, equilibrium, thermodynamics, and acids/bases/salts. AP Chemistry is a lab course which provides opportunities for students to develop skills in: operation of technical equipment; experimental design; data collection, analysis, and interpretation; critical thinking; and problem solving. All students are expected to take the AP Chemistry exam at the conclusion of the course.

ADVANCED PLACEMENT (AP) ENVIRONMENTAL SCIENCE



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *4515*
EXAMINATION: *AP Environmental Science*
PREREQUISITE: *Completed Life Science: Biology Regents and one other Regents science*

The AP Environmental Science course is a college-level course which provides students with the opportunity to receive college credit. The course is designed to "provide students with the scientific principles, concepts, and methodologies required to understand the inter-relationships of the natural world, to identify and analyze environmental problems both natural and human-made, to evaluate the relative risks associated with these problems, and to examine alternative solutions for resolving and preventing them". Environmental science is interdisciplinary; it embraces a wide variety of topics from different areas of study including Biology, Earth Science and Chemistry. It is a challenging and rigorous course that is presented through college style lectures, discussion seminars, labs, selected readings, research, and student projects. AP Environmental Science is a lab course which provides opportunities for students to develop skills in: operation of technical equipment; experimental design; data collection, analysis, and interpretation; critical thinking; and problem solving. All students are expected to take the AP Environmental Science exam at the conclusion of the course.

* ***Advanced Placement (AP) courses prepare students for the College Board's "AP" examinations. All students who enroll in AP courses are expected to take the AP examinations for those courses, and the cost of every examination is paid for by the student. Cost is determined by the College Board and varies year to year. Students who take these examinations can have the results forwarded to the college(s) of their choice for evaluation. Some colleges will grant advanced credit, but the taking of AP examinations does not guarantee such credit.***

ADVANCED PLACEMENT (AP) PHYSICS 2



GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Completed Physics Regents*
CREDIT: *1.0*
CODE #: *4445*
EXAMINATION: *AP Physics 2*

AP Physics 2 is an algebra-based, introductory college-level physics course. The course is designed to "provide students with the conceptual framework, factual knowledge, and analytical skills necessary to deal critically" with physical phenomena and problems. It is a challenging and rigorous course that is presented through college style lectures, discussion seminars, labs, selected readings, research, and student projects. Students will explore topics such as fluid statics and dynamics; thermodynamics with kinetic theory; PV diagrams and probability; electrostatics; electrical circuits with capacitors; magnetic fields; electromagnetism; physical and geometric optics; and quantum, atomic, and nuclear physics. Through inquiry-based learning, students will develop scientific critical thinking and reasoning skills. AP Physics 2 is a lab course which provides opportunities for students to conduct hands-on laboratory work with an emphasis on inquiry-based investigations. Students will develop skills in: operation of technical equipment; experimental design; data collection, analysis, and interpretation; critical thinking; and problem solving. All students are expected to take the AP Physics 2 exam at the conclusion of the course.

ADVANCED PLACEMENT (AP) PHYSICS C - MECHANICS



GRADE: *11, 12*
LENGTH: *40 Weeks*
NOT OFFERED 2026-2027
PREREQUISITE: *Completed Physics R or Physics A*
COREQUISITE: *Calculus*
CREDIT: *1.0*
CODE #: *4455*
NOT OFFERED AT NORTH
EXAMINATION: *AP Physics C - Mechanics*

Advanced Placement Physics – C, is a college level, calculus-based physics course. It is equivalent to the course that college students majoring in science and engineering take during their freshmen year. It is challenging in its rigor, but whereas college students take this course in one semester, we will be spending an entire school year, so the difficulty level will be manageable for the motivated high school student. This course does make significant use of calculus; however, it's limited to relatively simple applications, so the calculus is not too difficult. On the other hand, a high level of skill in algebra is essential. Topics of study include: kinematics, vectors, forces, dynamics, momentum, energy, gravitation, planetary motion, rotation, torque, and oscillations. AP Physics is a lab course which provides opportunities for students to develop skills in: operation of technical equipment; experimental design; data collection, analysis, and interpretation; critical thinking; and problem solving. All students are expected to take the AP Physics C exam at the conclusion of the course.

ANATOMY & PHYSIOLOGY A/H

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Completed Life Science: Biology, and completed or concurrently enrolled in Chemistry*
CREDIT: *1.0*
CODE #: *4614*
EXAMINATION: *Local Final Exam*

Human Anatomy and Physiology is designed to model an introductory college-level course. The course will begin with an introduction to the fundamental terminology of anatomy and physiology and proceed to review relevant concepts in chemistry, cell biology, histology and biochemistry. A comprehensive survey of each of the major systems will follow. These will include the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, immune, digestive, respiratory, urinary, and reproductive systems. The functioning of each system will be studied in health and various states of disease. When appropriate, physiological responses to exercise, environmental extremes and pharmacological treatments will be explored. The content of the course will be delivered through lectures, selected readings, exploration of case studies, and student-designed presentations. Assessment will involve frequent quizzes and several tests per marking period. Laboratory experiences will be diverse and include, but will not be limited to, dissections and the examination of both physical and computer models. This course is designed for students interested in health-related professions.

ASTRONOMY

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Completed Earth and Space Sciences*
CREDIT: *0.5*
CODE #: *4526*
EXAMINATION: *Local Final Exam*

For countless centuries, humans have looked to the night sky with wonder and amazement. The Sun, Moon and planets define the cycles of our lives and inspire our imaginations. In high school science courses, students are introduced to astronomy as part of Physical Setting: Earth Science. The Astronomy course is intended to provide an opportunity for deeper knowledge and understanding of astronomical topics for interested students. Students learn about the cosmos, its origins and evolution, our solar system neighborhood, and how to observe the night sky. They learn about the birth, inner workings, and death of stars. Students use our district planetarium at North High School to name the stars and constellations and understand the cycles of celestial motion.

CHEMISTRY

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *4332*
EXAMINATION: *Local Final Exam*

The Chemistry course surveys topics such as: matter and energy; bonding; acids and bases; and the periodic table. It also pursues the connections between theoretical issues in chemistry and practical applications in the community, such as; environmental pollution, chemical resources, water quality, and food chemistry. This course places less emphasis on the mathematical relationships in chemistry than the Regents level course. Although some labs may be done, this course does not provide the opportunity to meet the state lab requirement of 1200 minutes of labs in addition to class periods.

PHYSICAL SCIENCE: CHEMISTRY R

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *4333*
EXAMINATION: *NYS Chemistry Regents*

Physical Science: Chemistry is a laboratory science course aligned with the New York State Science Learning Standards (NYSSLS). The course provides students the opportunity to develop skills in the areas of scientific inquiry, problem solving, laboratory skills, and the application of chemistry to real-world issues. The course will focus on topics related to the Structures and Properties of Matter, Chemical Reactions, Energy, Waves and Electromagnetic Radiation, and Matter and Energy in Organisms and Ecosystems. Engineering practices, and the application of technology will be utilized throughout the course to solve problems. The course will include the NYS required 1200 minutes of lab experiences, which will include the three new NYSED Science Investigations. Physical Science: Chemistry is a full-year, one-credit course that culminates in students taking the new Physical Science: Chemistry Regents Exam. **Please note: The successful completion of the three NYSED required investigations is required to sit for the Regents Exam.**

PHYSICAL SCIENCE: CHEMISTRY A/H

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *4334*
EXAMINATION: *NYS Chemistry Regents*

Physical Science: Chemistry - A/H is a laboratory science course aligned with the New York State Science Learning Standards (NYSSLS). The course provides students the opportunity to develop skills in the areas of scientific inquiry, problem solving, laboratory skills, and the application of chemistry to real-world issues. The course will focus on topics related to the Structures and Properties of Matter, Chemical Reactions, Energy, Waves and Electromagnetic Radiation, and Matter and Energy in Organisms and Ecosystems. Engineering practices, and the application of technology will be utilized throughout the course to solve problems. All topics of study are expanded beyond the Regents curriculum, preparing students for success in the AP Chemistry course. Students taking the A/H course should be prepared for more rigorous curricular expectations. The course will include the NYS required 1200 minutes of lab experiences, which will include the three new NYSED Science Investigations. Physical Science: Chemistry - A/H is a full-year, one-credit course that culminates in students taking the new Physical Science: Chemistry Regents Exam. **Please note: The successful completion of the three NYSED required investigations is required to sit for the Regents Exam.**

EARTH AND SPACE SCIENCES

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *4113*
EXAMINATION: *NYS Earth Science Regents*

The Earth and Space Sciences course is based on the New York State Science Learning Standards, which in turn, are based on the national Next Generation Science Standards. The course will utilize the three-dimensional model of Core Ideas, Science and Engineering Practices, and Cross-Cutting Concepts. The course will use phenomena, story lines, and hands-on activities and labs to model science concepts and to problem solve. The course will focus on topics related to Space Systems, the History of Earth, Earth's Systems, Weather and Climate, and Human Sustainability. Students will also use the knowledge and skills of Engineering Design to problem solve. The course will have the required 1200 minutes of lab experiences, which will include the three new state Science Investigations. Earth and Space Sciences is a full year, one-credit course, that culminates in students taking the new Earth and Space Sciences Regents Exam. **Please note: The successful completion of the three NYSED required investigations is required to sit for the Regents Exam.**

ENVIRONMENTAL SCIENCE

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Completed two science courses, one being Life Science: Biology, and the other from the Physical Setting, and successfully completed one science regents examination.*
CREDIT: *1.0*
CODE #: *4513*
EXAMINATION: *Local Final Exam*

In the Environmental Science course, students study the relationships between living organisms and their environment. Some of the major concepts are: The origin and cycling of materials in the biosphere; the cooperative and competitive relationships among organisms; the effects of human lifestyles on the environment; the use of energy and resources; green technologies. Students will be involved in lab experiments, field studies, and individual and group projects.

FORENSIC SCIENCE



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *4532*
EXAMINATION: *Forensic Science Final Exam*
PREREQUISITE: *It is recommended that students have successfully completed two regents science courses and exams, one being Life Science: Biology.*

The Forensic Science course is a full year course. It is a college-level course which provides students with the opportunity to receive college credit for work done in high school. The course is designed to provide students with an educational experience equivalent to a first-year college level science class. The course allows students to investigate the science of evidence. It is a presentation of scientific and chemical principles in the context of forensic science. Students will learn to collect, test, interpret, and analyze data scientifically. Students will conduct lab experiences to examine and test; prints from fingers, lips, teeth, shoes, tires, and eyes; forensic toxicology of drugs, alcohol, poisons; and trace evidence, such as hair, fibers, and paint. Forensic serology collection and investigation techniques will be applied to testing of samples of simulated body fluids, such as blood, sweat, saliva, and tears. This course is offered through Niagara University, but is taught at your high school by your certified high school instructor. As a full year course, students who successfully complete the course can earn one unit of high school credit. Students who successfully complete the class and pay the NU tuition can earn three college credits.

GREAT LAKES

GRADE: *10 ,11, 12*
LENGTH: *20 weeks*
NOT OFFERED: 2026-2027
PREREQUISITE: *Completed Earth and Space Sciences*
CREDIT: 0.5
EXAMINATION: *Local Final Exam*
CODE: *4556*

The Great Lakes play a critical role in our region's weather, industry, economy, recreation, and history. Students will explore, in an interdisciplinary way, the biology, chemistry, and Earth science of the Great Lakes. A study of the Great Lakes ecosystem provides local, authentic, and real-world problems for students to solve; such as pollution, invasive species, algae blooms, and other human impacts. Great Lakes stewardship is essential to the long-term health of the ecosystem.

LIFE SCIENCE: BIOLOGY R

GRADE: *9, 10*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *4223*
EXAMINATION: *Life Science: Biology Regents*

The Life Science: Biology - R course is based on the New York State Science Learning Standards, which in turn, are based on the national Next Generation Science Standards. It is a comprehensive course that is designed to give students a broad, in-depth background in a diversity of Biology concepts. The course will utilize the three-dimensional model of Core Ideas, Science and Engineering Practices, and Cross-Cutting Concepts. The course will use phenomena, story lines, and hands-on activities and labs to model science concepts and to problem solve. The course will focus on topics related to Structure and Function, Matter and Energy in Organisms and Ecosystems, Interdependent Relationships in Ecosystems, Inheritance and Variation of Traits, and Natural Selection and Evolution. Students will also use the knowledge and skills of Engineering Design to problem solve. Students will also be encouraged to make connections between the Biology concepts they are learning and real world applications. The course will have the NYS required 1200 minutes of lab experiences, which will include the three new state Science Investigations. Life Science: Biology is a full year, one-credit course, that culminates in students taking the new Life Science: Biology Regents Exam. **Please note: The successful completion of the three NYSED required investigations is required to sit for the Regents Exam.**

LIFE SCIENCE: BIOLOGY A/H

GRADE: *9, 10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *4224*
EXAMINATION: *Life Science: Biology Regents*

The Life Science: Biology - A/H course is based on the New York State Science Learning Standards, which in turn, are based on the national Next Generation Science Standards. It is a comprehensive course presented at an advanced level that is designed to give students a broad, in-depth background in a diversity of Biology concepts. The course will utilize the three-dimensional model of Core Ideas, Science and Engineering Practices, and Cross-Cutting Concepts. The course will use phenomena, story lines, and hands-on activities and labs to model science concepts and to problem solve. The course will focus on topics related to Structure and Function, Matter and Energy in Organisms and Ecosystems, Interdependent Relationships in Ecosystems, Inheritance and Variation of Traits, and Natural Selection and Evolution. All topics of study are expanded beyond the Life Science: Biology Regents curriculum. Students will also use the knowledge and skills of Engineering Design to problem solve. Students will also be encouraged to make connections between the Biology concepts they are learning and real world applications. Students taking the A/H course should be relatively self-directed and capable of handling a more rigorous curriculum. The course will have the NYS required 1200 minutes of lab experiences, which will include the three new state Science Investigations. Life Science: Biology is a full year, one-credit course, that culminates in students taking the new Life Science: Biology Regents Exam. **Please note: The successful completion of the three NYSED required investigations is required to sit for the Regents Exam.**

NATURAL DISASTERS

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Completed Earth and Space Sciences*
CREDIT: *0.5*
CODE #: *4546*
EXAMINATION: *Local Final Exam*

Geology is the study of the origin, history and structure of the earth. This course examines Earth as a dynamic planet, changing catastrophically during earthquakes, tsunamis, volcanic eruptions, landslides, flooding, droughts, hurricanes, severe weather, and asteroid impacts. Students will explore the surficial and internal processes of the earth as well as those exterior forces which shape our planet and our lives. In addition to becoming familiar with these various processes and hazards, this course will examine the cycles which exist in geology and the frequency of natural hazards. Coursework will include lecture, hands on activities, written assignments and various media technology. One-half credit is awarded for successful completion of the course.

PHYSICS

GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *4442*
NOT OFFERED AT EAST HS
EXAMINATION: *Local Final Exam*

Physics – General is a concept focused course designed for students with a wide range of interests. Basic principles of physics will be studied, such as; motion, mechanics, light, electricity, magnetism, etc. This course places less emphasis on the mathematical relationships in physics than the Regents level course. Although some labs may be done, this course does not provide the opportunity to meet the state lab requirement of 1200 minutes of labs in addition to class periods.

PHYSICAL SCIENCE: PHYSICS R

GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *4443*
EXAMINATION: *NYS Physics Regents*

Physical Science: Physics is a laboratory science course aligned to the New York State Science Learning Standards (NYSSLS). The course develops a deep understanding of the fundamental principles governing the physical world, emphasizing scientific reasoning, quantitative problem solving, modeling, and real world application. The course will focus on topics related to the Structure and Properties of Matter, Force and Interactions, Energy, Waves and Electromagnetic Radiation, and Earth and Space Systems. Engineering practices, and the application of technology will be utilized throughout the course to solve problems. The course will include the NYS required 1200 minutes of lab experiences, which will include the three new NYSED Science Investigations. Physical Science: Physics is a full-year, one-credit course that culminates in students taking the new Physical Science: Physics Regents Exam. **Please note: The successful completion of the three NYSED required investigations is required to sit for the Regents Exam.**

PHYSICAL SCIENCE: PHYSICS A/H

GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Completed Algebra II/Trigonometry*
CREDIT: *1.0*
CODE #: *4444*
EXAMINATION: *NYS Physics Regents*

Physical Science: Physics - A/H is a laboratory course aligned to the New York State Science Learning Standards (NYSSLS). The course develops a deep understanding of the fundamental principles governing the physical world, emphasizing scientific reasoning, quantitative problem solving, modeling, and real world application. The course will focus on topics related to Structure and Properties of Matter, Force and Interactions, Energy, Waves and Electromagnetic Radiation, and Earth and Space Systems. Engineering practices, and the application of technology will be utilized throughout the course to solve problems. All topics of study are expanded beyond the Regents curriculum, preparing students for success in the AP Physics course. Students taking the A/H course should be prepared for more rigorous curricular expectations. The course will include the NYS required 1200 minutes of lab experiences, which will include the three new NYSED Science Investigations. Physical Science: Physics - A/H is a full-year, one-credit course that culminates in students taking the new Physical Science: Physics Regents Exam. **Please note: The successful completion of the three NYSED required investigations is required to sit for the Regents Exam.**

NEW YORK STATE SEAL OF CIVIC READINESS PROGRAM

What is the Seal of Civic Readiness?

The Seal of Civic Readiness is a formal recognition that a student has attained a high level of proficiency in terms of civic knowledge, civic skills, civic mindset, and civic experiences. The Seal of Civic Readiness distinction on a high school transcript and diploma:

- shows the student's understanding of a commitment to participatory government; civic responsibility and civic values;
- demonstrates to universities, colleges, and future employers that the student has engaged in meaningful civic experiential learning; and
- recognizes the value of civic engagement and scholarship.

Civic Knowledge	Pts.	Civic Participation	Pts.
4 Credits of social studies	1	High School Civics Project (limit two times during grades 9-12)	1.5
Mastery level on Social Studies Regents Exam	1.5*	Service-Learning Project (minimum 25 hours) and reflective civic learning essay/ presentation/product	1*
Proficiency level on Social Studies Regents Exam	1*	Proficiency level in an elective course that promotes civic engagement	.5*
Advanced social studies course(s)	.5*	Civic Capstone Project	4*
Research Project	1	Extra-curricular participation or work-based learning experience (minimum 40 hours) and an essay/ presentation/product	.5*

*Students may receive these points more than once.



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Williamsville Central School District is pleased to continue participation in awarding the New York State Seal of Civic Readiness. Students can earn NYSED's required 6 points for the Seal of Civic Readiness in a variety of ways. Students can earn points for passing and/or achieving mastery on Social Studies Regents exams, taking advanced level Social Studies courses, and completing *Seal of Civic Readiness* projects that are part of social studies classes. Students can also earn points by submitting a required reflection assignment after successful completion of certain approved elective courses, extracurricular activities, or work experiences that encourage civic mindsets and actions. Students can also earn points by completing civics projects on their own under faculty advisement. Students who earn the *Seal of Civic Readiness* will have a seal affixed to their diploma, which they will receive at graduation. In addition, students who complete the requirements for earning the NYSSCR will have the designation listed on their official high school transcript. The Seal of Civic Readiness can also be used as a 4+1 pathway to meet New York State diploma requirements.

SOCIAL STUDIES

Each high school student is required to successfully complete 4 units of social studies. These 4 units include 1 unit of Global History and Geography IR, 1 unit of Global History and Geography IIR (or AP equivalent), 1 unit of United States History and Government (or AP equivalent), ½ unit of Participation in Government (or AP equivalent), and ½ unit of Economics, (or AP equivalent) .

The Williamsville Central School District offers students the opportunity to earn the New York State Seal of Civic Readiness (NYSSCR). To earn the Seal, students must accumulate 6 points, which can be achieved in a variety of ways.

Students may earn points by:

- **Passing or achieving mastery on Social Studies Regents examinations.**
- **Completing advanced-level Social Studies courses.**
- **Participating in Seal of Civic Readiness projects embedded within their Social Studies classes.**
- **Successfully completing approved elective courses, extracurricular activities, or work experiences that promote civic mindsets and actions, and submitting the required reflection assignment.**
- **Completing independent civic projects under the guidance of a faculty advisor.**

Students who earn the Seal of Civic Readiness will have an official seal affixed to their diploma at graduation. In addition, the NYSSCR designation will appear on their official high school transcript. The Seal may also be used as a 4+1 pathway to meet New York State graduation requirements.

HISTORY AND GEOGRAPHY IR

GRADE: *9*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *None*
CREDIT: *1.0*
CODE #: *2113*
EXAMINATION: *Local examination*

The chronological, topical study of man begins with prehistoric man and continues to present day events. Ninth grade units begin with a general introduction to geography, economics, political science, culture and history as areas of study. The remainder of the course focuses on geographical and historical studies that include the above elements of Early Man, Early River Civilizations, Classic Civilizations (Greece, Rome, Indus, and Chinese); the great Religions; Gupta, Tang, and Byzantine Empires; Islamic Civilization, Medieval Europe, and the Impact of the Crusades; Early and Medieval Japan; Mongols and Their Influence, Global Trade and Interaction; Influence of the Plague, Resurgence of Europe; Rise and Fall of African Civilizations, Slave Trade and its effects and the Ming and Manchu Dynasties of China; Rise of Mesoamerican Empires; The Coming of Europeans and their impact on Latin America, Encounter among Europeans, Africans, Asians; Political Ideologies; Absolutism and its Response. The Global I course concludes with a teacher created final examination, which follows the format of the Global II Regents Exam.

GLOBAL HISTORY AND GEOGRAPHY IIR

GRADE: *10*
LENGTH: *40 Weeks*
OFFERED 2026-2027
PREREQUISITE: *Students must successfully complete Global History and Geography IR before taking Global History IIR or AP World History*.
CREDIT: *1.0*
CODE #: *2223*
EXAMINATION: *Global History and Geography Regents*

Global IIR continues the course of study with the following units: Age of Revolution; (Scientific, Political, Economic, Social and Industrial) and Global Responses; Imperialism; Japan and the Meiji Restoration; World War I, Russia; Between the Wars; and World War II. The final unit, 20th Century Since 1945, includes: The Cold War; Chinese Communist Revolution, Independence Movements, Middle East, Collapse of Communism and Latin America. The year concludes with the study of Current Conflicts and Global Connections. The Global History and Geography II course culminates with the Global History and Geography Regents Examination.

ADVANCED PLACEMENT (AP) WORLD HISTORY



GRADE: *10, 11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *2235*
EXAMINATION: *AP World History, Regents Global History and Geography II Examination*

PREREQUISITE: *Successful completion of Global IR; due to the higher level expectations of an AP course, it is strongly advised that a 90 average in prior social studies classes be achieved (if applicable: a summer reading assignment, including a written assignment due upon return in the fall, will be required and will be incorporated in the first marking period grade).*

AP World History is an introductory college-level modern world history course. Students cultivate their understanding of world history from c. 1200 CE to the present through analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like humans and the environment, cultural developments and interactions, governance, economic systems, social interactions and organization, and technology and innovation. This course may be taken in lieu of Global History and Geography II as fulfillment of the social studies requirement. The Global History and Geography Regents Exam is required to fulfill the graduation requirement.

AP World History is part of a national program administered by the College Board. This course offers the opportunity to earn up to six college credits, dependent upon student's performance on the Advanced Placement examination and policies for awarding credit at the college or university of choice. AP World History may be taken in lieu of Global History and Geography II as fulfillment of the social studies requirement, although the Global History and Geography Regents Exam may be required to fulfill a graduation requirement. This course may be taken as an elective in addition to Global History and Geography II.

UNITED STATES HISTORY AND GOVERNMENT

GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: 2333
EXAMINATION: *United States History and Government Regents*

PREREQUISITE: *Successful completion of Global History and Geography IR and IIR (or AP World History)*

Students chronologically explore the development of the United States from an historical, economic, political, sociological, and geographical perspective. The major emphasis of the course is placed on several concepts from the social sciences that have contributed to the industrial development of the United States. Constitutional and legal issues are explored as well as issues of international involvement. Awareness of the American heritage is stressed, as are those aspects of our contemporary society that seem most relevant to the future. The social science skills developed in the Global History and Geography courses are reinforced in this course. The Regents Examination in United States History and Government culminates this course of study.

ADVANCED PLACEMENT (AP) UNITED STATES HISTORY



GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027
CREDIT: *1.0*
CODE #: *2335*
EXAMINATION: *AP United States History, United States History and Government Regents*

PREREQUISITE: *Successful completion of Global IR and Global IIR (or AP World History); due to the higher level expectations of an AP course, it is strongly advised that a 90 average in prior social studies classes be achieved (if applicable: A summer reading assignment, including a written assignment due upon return in the fall, will be required and will be incorporated in the first marking period grade).*

AP U.S. History is an introductory college-level U.S. history course. Students cultivate their understanding of U.S. history from c. 1491 CE to the present through analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like American and national identity; work, exchange, and technology; geography and the environment; migration and settlement; politics and power; America in the world; American and regional culture; and social structures.

AP U.S. is part of a national program administered by the College Board. This course offers the opportunity to earn up to six college credits, dependent upon student's performance on the Advanced Placement examination and policies for awarding credit at the college or university of choice. AP US History may be taken in lieu of United States History and Government as fulfillment of the social studies requirement, although the US History and Government Regents Exam is required to fulfill the graduation requirement. This course may be taken as an elective in addition to United States History and Government R.

* ***Advanced Placement (AP) courses prepare students for the College Board's "AP" examinations. All students who enroll in AP courses are expected to take the AP examinations for those courses, and the cost of every examination is paid for by the student. Cost is determined by the College Board and varies year to year. Students who take these examinations can have the results forwarded to the college(s) of their choice for evaluation. Some colleges will grant advanced credit, but the taking of AP examinations does not guarantee such credit.***

ADVANCED PLACEMENT (AP) UNITED STATES GOVERNMENT AND POLITICS AND ECONOMICS

GRADE: *11, 12*
LENGTH: *40 Weeks*
OFFERED 2026-2027 NORTH & SOUTH ONLY
CREDIT: *1.0*
CODE #: *2555*
EXAMINATION: *AP US Government & Politics, District Performance Standard for Economics*

COLLEGE CREDIT

PREREQUISITE: *Successful completion of Global IR and Global IIR, US History and Government R; due to the higher level expectations of an AP course, it is strongly advised that a 90 average in prior social studies classes be achieved (if applicable: A summer reading assignment, including a written assignment due upon return in the fall, will be required and will be incorporated in the first marking period grade).*

This 1 credit course is offered to students who have demonstrated a superior interest and achievement in the social studies. The course is taught on the college level and includes investigations of pervasive governmental and legal issues as well as public policies that have impacted the historical development of the United States through lectures, reports, and discussion, and individual reading. If successful on the nationally administered AP examination for this course, the student may receive college credit.

Infused into this course is Economics, a required course for graduation. Economic understandings and economic decision-making are emphasized. Basic concepts and understandings are introduced and reinforced so that all persons need to function effectively and intelligently as citizens and participants in the economy of the United States and the world. An emphasis on improving a student's economic literacy is a strong focus as well.

This Advanced Placement course may be taken in lieu of the Participation in Government and Economics as required for graduation. As such, students will be required to meet the district performance standard for service hours required for Participation in Government.

ECONOMICS

GRADE: *11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *2446*
EXAMINATION: *District Performance Standard*

PREREQUISITE: *Successful completion of Global IR, Global IIR (or AP World History), US History and Government R (or AP US History)*

This one semester graduation requirement emphasizes economic understandings and economic decision-making. This course includes the basic concepts and understandings that all persons need to function effectively and intelligently as citizens and participants in the economy of the United States and the world. The social studies skills and concepts developed and reinforced throughout the student's high school experience are focused on in this course with an emphasis on improving a student's economic literacy.

SUPA ECONOMIC IDEAS AND ISSUES (ECN 203)

GRADE: *11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *N2535*
EXAMINATION: *Syracuse University*

COLLEGE CREDIT

PREREQUISITE: *Successful completion of Global IR and Global IIR (or AP World), US History and Government R (or AP US History); due to the higher-level expectations of a college course, it is strongly advised that a 90 average in prior social studies classes be achieved.*

This course may be taken in lieu of the ½ credit Regents Economics requirement.

Economic Ideas and Issues is an introduction to mainstream economic thought designed for students with a liberal arts interest. The goals of this course are to introduce students to the ideas that form the foundation of modern Western (neoclassical) economic thought, to examine the basic framework (the model) that economists have built on this foundation, and to show how this model is applied to current issues facing individuals and society.

The course begins with a presentation of the scientific method, which is then used to analyze the question: How do individuals and societies make choices when they are faced with scarcity? Beginning with the individual in the simplest of situations, a one-person society, the course moves step by step to develop a model of a complex society based on division of labor and exchange through markets. The process takes students from the microeconomic to the macroeconomic level, emphasizing the connection between these two perspectives. Students examine the benefits, as well as the problems, inherent in a market-oriented economy. The course prepares students to analyze and understand the ongoing economic policy debate between interventionists and non-interventionists.

The course is rigorous but not heavily mathematical. Students should understand basic algebra and geometry. More importantly, they should be able to follow carefully reasoned logical development of a theoretical model and to apply that model to their own experience. ECN 203 provides an excellent opportunity to nurture that skill.

The course helps students to understand and to recognize the elements of economic theory, to identify the peculiar roles of these elements, and to understand how they fit together. Although its goal is not to study complexities of theory in great detail, students can expect to develop a strong foundation in neoclassical analysis applicable to study in other fields and to everyday life, as readers of newspapers and other news media, and as citizen participants in a representative government.

ADVANCED PLACEMENT (AP) MACRO ECONOMICS



GRADE: *11, 12*
CREDIT: *0.5*
LENGTH: *20 Weeks*
CODE #: 2445
NOT OFFERED AT NORTH HS
EXAMINATION: *AP Macro Economics*
PREREQUISITE: *Successful completion of Global IR, Global IIR (or AP World), US History and Government R (or AP US History); due to the higher level expectations of an AP course, it is strongly advised that a 90 average in prior social studies classes be achieved (if applicable: A summer reading assignment, including a written assignment due upon return in the fall, will be required and will be incorporated in the first marking period grade).*

AP Macroeconomics is an introductory college-level macroeconomics course. Students cultivate their understanding of the principles that apply to an economic system by using principles and models to describe economic situations and predict and explain outcomes with graphs, charts, and data as they explore concepts like economic measurements, markets, macroeconomic models, and macroeconomic policies.

Economics is a study that develops higher-level thinking and decision-making skills. AP Macro Economics is a college-level course that prepares students for the AP Macro Economics exam. In a growing global marketplace, AP Macro Economics will provide students a fundamental understanding of a world-based economy. This course may be taken in lieu of the ½ credit Regents Economics requirement.

PARTICIPATION IN GOVERNMENT

GRADE: *11, 12*
CREDIT: *0.5*
LENGTH: *20 Weeks*
CODE #: *2546*
OFFERED 2026-2027
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Successful completion of Global IR, Global IIR (or AP World), US History and Government R (or AP US History)*

This one semester graduation requirement emphasizes the interaction between citizens and government at all levels: local, state, and federal. Public policy analysis is an integral aspect of the course with students using their social science skills and concepts to investigate social, political, and economics issues of their contemporary society. The development of active student participation in the processes of public policy analysis and gove4rnment is encouraged. Students may thus be involved in a variety of public policy oriented field trips and community experiences which are designed to provide them with the opportunity to practically use their social studies skills and concepts in the real world. Students will be required by WCSD BOE policy to engage in a minimum of 20 hours of field experiences to learn about community service, political action, and other ways of becoming involved in the community.

* ***Advanced Placement (AP) courses prepare students for the College Board's "AP" examinations. All students who enroll in AP courses are expected to take the AP examinations for those courses, and the cost of every examination is paid for by the student. Cost is determined by the College Board and varies year to year. Students who take these examinations can have the results forwarded to the college(s) of their choice for evaluation. Some colleges will grant advanced credit, but the taking of AP examinations does not guarantee such credit.***

ADVANCED PLACEMENT ELECTIVES

Williamsville Central School District provides opportunities for students to expand and extend their high school social studies experience by taking additional college level courses. These courses are part of a national program administered by the College Board and culminate in a national exam administered in the beginning of May. Students who register for these courses will be expected to complete college level work and will need to possess a strong worth ethic.

ADVANCED PLACEMENT (AP) AFRICAN AMERICAN STUDIES



GRADE: *10, 11, 12* **CREDIT:** *1.0*
LENGTH: *40 Weeks* **CODE #:** *2115*
NOT OFFERED 2026-2027 **EXAMINATION:** *AP African American Studies*
PREREQUISITE: *Successful completion of Global History and Geography IR and IIR (or AP World); due to the higher-level expectations of an AP course, it is strongly advised that a 90 average in prior social studies classes be achieved (if applicable: A summer reading assignment, including a written assignment due upon return in the fall, will be required and will be incorporated in the first marking period grade*).

AP African American Studies is an interdisciplinary course that examines the diversity of African American experiences through direct encounters with varied sources. Students explore key topics that extend from early African kingdoms to the ongoing challenges and achievements of the contemporary moment. Given the interdisciplinary character of African American Studies, students in the course will develop skills across multiple fields, with an emphasis on developing historical, literary, visual, and data analysis skills. This course foregrounds a study of the diversity of Black communities in the United States within the broader context of Africa and the African diaspora.

ADVANCED PLACEMENT EUROPEAN HISTORY



GRADE: *10, 11, 12* **CREDIT:** *1.0*
LENGTH: *40 Weeks* **CODE #:** *2245*
OFFERED 2026-2027 **EXAMINATION:** *AP European History*
PREREQUISITE: *Successful completion of Global History and Geography IR and IIR (or AP World); due to the higher-level expectations of an AP course, it is strongly advised that a 90 average in prior social studies classes be achieved (if applicable: A summer reading assignment, including a written assignment due upon return in the fall, will be required and will be incorporated in the first marking period grade).*

AP European History is an introductory college-level European history course. Students cultivate their understanding of European history through analyzing historical sources and learning to make connections and craft historical arguments as they explore concepts like interaction of Europe and the world; economic and commercial developments; cultural and intellectual developments; states and other institutions of power; social organization and development; national and European identity; and technological and scientific innovation.

ADVANCED PLACEMENT (AP) PSYCHOLOGY



GRADE: *10, 11, 12* **CREDIT:** *1.0*
LENGTH: *40 Weeks* **CODE #:** *2675*
OFFERED 2026-2027 **EXAMINATION:** *AP Psychology*
PREREQUISITE: *Successful completion of Global IR; recommend successful completion of Global IIR; due to the higher-level expectations of an AP course, it is strongly advised that a 90 average in prior social studies classes be achieved (if applicable: A summer reading assignment, including a written assignment due upon return in the fall, will be required and will be incorporated in the first marking period grade).*

AP Psychology introduces students to the systematic and scientific study of human behavior and mental processes. While considering the studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with major units of study, including biological bases of behavior, cognition, development, learning, social psychology, personality, and mental and physical health. Throughout the course, students apply psychological concepts and employ psychological research methods and data interpretation to evaluate claims, consider evidence, and effectively communicate ideas.

ADVANCED PLACEMENT (AP) COMPARATIVE GOVERNMENT AND POLITICS

GRADE: *11, 12* **CREDIT:** *0.5*
LENGTH: *20 Weeks* **CODE #:**
NOT OFFERED AT NORTH HS **EXAMINATION:** *AP Comparative Government and Politics*
PREREQUISITE: *Successful completion of Global IR and Global IIR (or AP World), US History and Government R (or AP US History); due to the higher level expectations of an AP course, it is strongly advised that a 90 average in prior social studies classes be achieved (if applicable: A summer reading assignment, including a written assignment due upon return in the fall, will be required and will be incorporated in the first marking period grade).*

Advanced Placement Comparative Government and Politics is a half year elective offered to students who have demonstrated superior interest and achievement in social studies. The course introduces students to fundamental concepts used by political scientists to study the processes and outcomes of politics in a variety of country settings. The course is designed to communicate to students the importance of global political and economic changes. In addition to studying major political concepts, the course will cover six core countries including China, Great Britain, Iran, Mexico, Nigeria, and Russia.

ELECTIVES

Williamsville Central School District provides opportunities for students to expand and extend their high school social studies experience.

ANTHROPOLOGY

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
NOT OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *2616*
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

The course will define anthropology by exploring the basic terminology and theories of anthropology, while building a basis for further exploration in the field. Emphasis will be placed on the diversity of man as the student focuses on three fields of anthropology: physical, cultural, and archaeological. The student will then be required to link prior course work to key topics within the field.

CANADIAN STUDIES

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
NOT OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *2746*
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

The Canadian Studies course introduces students to the diverse geography and People of Canada, the Canadian system of government, Canadian history, economy, and culture. Students will compare the development of Canada to the United States and analyze and evaluate the relationship between the two nations. Students will also study the factors that unify and divide the Canadian people as well as the elements of culture that make Canada unique. Students will also explore the innovations and achievements of Canada and its people in such areas as medicine, government, literature, music, sports, and business.

CURRENT EVENTS

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *2656*
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

The elective in Current Events is a course in global events and their effect on the international community. This course is a more in-depth exposure to current events, extending the knowledge the student gained from Global History and United States History and Government. Due to a more diverse and interdependent community, country, and world, it is important for students to grow in an understanding of events that shape the world today.

In an increasingly political, social and economically connected world, it is very important to examine how events from around the globe impact the nations and people of the world. This course offers a chance to study current events from a global perspective and discuss the ramifications of these events.

HUMAN RIGHTS AND GENOCIDE STUDIES

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *2756*
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

This course will examine the occurrence of genocide and the development of human rights throughout history. Students will study particular instances of genocide from slavery to the Holocaust to Darfur. A major purpose of the case study approach will be to explore the causes of genocide in the past as well as the actions that can be taken to prevent genocide in the future. The course will also examine the people, ideas, and events that furthered the expansion of human rights. As such, the Genocide and Human Rights elective is designed to not only understand humanity's greatest failures but to also celebrate its greatest successes.

HISTORY OF WOMEN IN THE UNITED STATES

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
NOT OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *2716*
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

This elective is an introduction to the role women have played in shaping our nation's identity. This course builds upon information gained in the United States History R course (or AP equivalent) by studying in depth the role that women have played in the founding and growth of our country. In an increasingly diverse society, it is important to recognize the contributions that all groups have in the creation of a national identity. In a world where intolerance is common, this course considers how all people have something to teach us about humanity and ourselves. This course will not advocate any one historical viewpoint, but an understanding of different viewpoints.

HUMANITIES

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
NOT OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *2646*
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

This course explores human activity and creativity. The design is interdisciplinary while focusing on the following three facets of human creation: historical cultural constructs, aesthetics, and philosophy. The goal is personal growth as well as an increased appreciation for the arts and modes of thought expression. Units include philosophy, values and society, ethics, visual arts, music, myth, and film.

PSYCHOLOGY

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *2676*
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

This course is designed to provide a foundation of understanding to the field of Psychology as well as a framework of the basic theories and terminology used in this field. It is also desired that the students will gain insight into themselves, their behavior, the behavior of others, in order to become successful, happier individuals.

SOCIOLOGY

GRADE: *10, 11, 12*
LENGTH: *20 Weeks*
OFFERED 2026-2027
CREDIT: *0.5*
CODE #: *2686*
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

The elective in Sociology is an introductory social science course that focuses on human interactions in the social environment. The sociological experience is characterized as “seeing the general in the particular.” That is, it is possible to identify general patterns in the behavior of particular people. Although every individual is unique, society acts differently on various categories of people. Therefore, to think sociologically is to realize that the general categories to which we belong shape our particular life experiences.

This course is intended to familiarize students with the aspects of social science research and to provide them with the opportunity to conduct their own sociological studies. In addition, students will be introduced to the vocabulary and major concepts of the field of sociology, and will be exposed to relevant issues investigated by sociologists. Finally, students will develop important skills, such as problem solving, critical thinking, and the collection and presentation of data.

MIND POWER: THINKING CRITICALLY IN THE AGE OF INFORMATION

GRADE: *10, 11, 12*
CREDIT: *0.5*
LENGTH: *20 Weeks*
CODE #: *2786*
NOT OFFERED 2026-2027
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

Mind Power: Thinking Critically in the Age of Information is an elective course will examine the many limitations in human thinking and how these shortcomings have led to poor decisions in history, politics, and economics. Content in this course will detail the psychology that underlies people's various cognitive biases and explore how such biases have contributed to mass delusions (witch hunts) and conspiracy theories (Holocaust denial, Kennedy assassination), endangered our political and legal processes, and derailed our economic decisions. This course will not only teach students how to recognize these cognitive shortcomings, however, it will also teach them how to think more critically. Armed with these skills, these students will not only be better thinkers but also better active citizens.

TURBULENT 60'S

GRADE: *10, 11, 12*
CREDIT: *0.5*
LENGTH: *20 Weeks*
CODE #: *2666*
OFFERED 2026-2027
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

Why has the 1960's left such an indelible mark on the American psyche? While the disagreements persist, there is agreement on at least one point: the 60's represent a watershed in modern American history.

This course is a more in-depth exposure to the decade than what students learn in the United States History course. Students will explore the political, social, cultural, and controversial history of America during this crucial time period. Students will debate the many diverse topics that polarized American society during this decade.

WAR IN THE 20TH AND 21ST CENTURIES

GRADE: *10, 11, 12*
CREDIT: *0.5*
LENGTH: *20 Weeks*
CODE #: *2706*
OFFERED 2026-2027
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

This half-year elective course dealing with military activities in the Twentieth Century, including: World War I, World War II, Korean Conflict, Vietnam Involvement, The Persian Gulf War, and current conflicts around the world.

WORLD RELIGIONS

GRADE: *10, 11, 12*
CREDIT: *0.5*
LENGTH: *20 Weeks*
CODE #: *2696*
NOT OFFERED 2026-2027
EXAMINATION: *District Performance Standard*
PREREQUISITE: *Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.*

The elective in World Religions is an introductory course in Eastern and Western religions and belief systems. This course is a more in-depth exposure to world religions, extending the knowledge the student gained from Global History and Geography. In an increasingly diverse and interdependent community, country, and world, it is important to grow in understanding of many religions and belief systems. Additionally, such an understanding will facilitate insight into many current events.

In a world where intolerance is common, this course considers how all religions are interesting and important; that every religion and belief system has something to teach us about what it means to be a human being. The course does not advocate religion in general nor any particular religion, but offers a chance to study several faiths and belief systems.

CAREER AND TECHNICAL EDUCATION—HARKNESS

COURSE	LENGTH	CREDIT PER YR.
Animal Science	2 yrs	3.75
Auto Technician Training	2 yrs	3.75
Aviation Technology	2 yr	3.75
Baking and Pastry Arts	2 yrs	3.75
Barbering	2 yrs	3.75
Building Trades	2 yrs	3.75
Career Exploration	1 yr	3.75
Collision Repair	2 yrs	3.75
New Visions: Connections: Health Related Careers	1 yr	4
Cosmetology	2 yrs	3.75
Criminal Justice	2 yrs	3.75
Culinary Arts	2 yrs	3.75
Cybersecurity and Networking	2 yrs	3.75
Dental Laboratory Technology	2 yrs	3.75
New Visions: Diesel Technology (Tech Prep)	1 yr	4
Early Childhood Education	2 yrs	3.75
New Visions: Education Pathways Academy	1 yr	4
Electrical Systems	2 yrs	3.75
Electronics and Applied Technology	2 yrs	3.75
Emergency Medical and Fire Services	2 yrs	3.75
Engineering and Robotics	2 yrs	3.75
Esports and Management and Game Development	2 yrs	3.75
Exercise Science	2 yrs	3.75
Fashion Design Technology	2 yrs	3.75
Health Careers	2 yrs	3.75
Heating, Ventilation and Air Conditioning	2 yrs	3.75
New Visions: Legal Academy	1 yr	4
Occupational Education (OE) I Exploratory	1 yr	CDOS Credential or Pathway Program only available with successful completion of standard state assessments and OE II.
Occupational Education (OE) II Skill Building	1+ yrs	
Occupational Education (OE) III	1 yr	
Plumbing	2 yrs	3.75
New Visions: Plant Science	1 yr	4
Social Media Marketing	1 yr	3.75
Video Production and Recording Arts	2 yrs	3.75
Virtual Production and Design	2 yrs	3.75
Web Technologies and Game Programming	2 yrs	3.75
Welding	2 yrs	3.75
New Visions: Zoo, Wild Life and Conservative Careers*	1 yr	4

Enrollments for Harkness programs delivered through BOCES will be finalized as a result of the student schedule -creation process. All course requests made by students will be reviewed at that time, and a final schedule will be developed with the student's counselor. Due to recent changes made by BOCES to their procedures, some Harkness classes or programs may have a definitive number of seats available per school/district. Therefore, seats are not guaranteed. Please contact your child's counselor with any questions.

ANIMAL SCIENCE

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will be prepared for a wide range of careers related to animal care and veterinary science. Topics of study include: animal health and disease, nutrition, reproduction, parasitology, anatomy and physiology, and animal behavior. Students will perform clinical procedures that are commonly performed at veterinary clinics and learn the technical skills to operate and manage a veterinary practice. Animal care and grooming clinics are implemented to help students learn standard operating procedures by following written protocols, documentation, team work, problem solving, and verbal communication/instruction in a professional work environment.

AUTO TECHNICIAN TRAINING

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will learn the skills necessary to troubleshoot and repair today's modern vehicles. Topics of study include: engine performance, tire repair/ replacement, alignment, fuel systems, wiring and electrical systems, power trains and transmissions, brake repair and replacement, steering and suspension. Students will diagnose, troubleshoot, and perform preventative maintenance on foreign/domestic cars and light trucks by using the latest techniques and computerized diagnostic equipment.

AVIATION TECHNOLOGY

(2 YEAR PROGRAM – HARKNESS)

Students will study and apply aerodynamic principles, aircraft control, and instrumentation both in the classroom and during flight opportunities. Topics of study include: flight principles, systems and performance, aerodynamics, weight and balance, navigation, weather reports and interpretation, aviation meteorology, and ground and space based navigation. Students will learn the aeromedical factors for pilots as well as ground operations, piloting skills, and unmanned aerial vehicles, as well as aerospace engineering principles.

BAKING AND PASTRY ARTS

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will learn the fundamentals of baking, measurement and mixture methods, and plating and finishing techniques to create beautiful, edible works of art. Topics of study include: holiday baking, cookies and pastries, cakes, icing, and decorating, quick breads and bistro-style cooking. Students will build a professional portfolio by learning sugar and confectionary techniques, working with a variety of doughs and ingredients, and creating candies and chocolates. Students will earn a ServSafe certification during the two-year program.

BARBERING

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will learn the technical and communication skills required to be successful in a professional shop environment. Topics of study include: implements, tools and equipment, anatomy and physiology, properties and disorders of the skin and scalp, and New York State Board procedures. Students will perform professional barbering techniques, such as mustache and beard design, a variety or shear and clipper cutting techniques, hair color and lightening, as well as the basics of business, effective client communication, shop management, and safe work practices. Students must accumulate 500 hours of instruction in order to be eligible for the NYS Certification exam.

BUILDING TRADES

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will learn the fundamental practical skills needed in the construction field, such as: proper use of hand and power tools, safety procedures, blueprint reading, and obtaining accurate measurements. Practical knowledge will be applied by working with drywall installation, rough and finish carpentry, framing, painting, roofing, floor installation, door and window installation, siding, restoration work, and more.

CAREER EXPLORATION

(1 YEAR PROGRAM – HARKNESS, KENTON)

Students will experience a variety of programs in pursuit of their career interests. Time is spent shadowing the program and completing various projects designed for the Career Explorer.

**Requires application and interview* *+First year exploratory/2nd year skill development* ***All courses are subject to change based on BOCES enrollment*

COLLISION REPAIR

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will train in collision repair, automotive detailing, painting and restoration work. Topics of study include: collision and auto body repair, auto refinishing, welding techniques, and replacement of parts and sections of panels. Students learn to use hand, power, and specialized auto body tools and equipment to repair dents and frame work on metal and plastic sections of automobiles. Students have the opportunity to create customized paint graphics, airbrushing, and restoration work on vehicles.

NEW VISIONS: CONNECTIONS: HEALTH RELATED CAREERS

(1 YEAR PROGRAM – BUFFALO GENERAL MEDICAL CENTER | OISHEI CHILDREN'S HOSPITAL)

Students will learn anatomy and physiology, medical terminology, pathophysiology and disease as if affects individual health, as well as observe normal anatomy and physiology and disease process and treatment through clinical observation. Health care internships will provide opportunity for students to observe diverse medical professionals while participating in a clinical setting and apply theory to what is observed in the internship facility.

COSMETOLOGY

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will learn the communication and technical skills required to be successful in a professional salon work environment. Topics of study include: hair coloring, styling, conditioning and shaping, infection control and safety standards, esthetics, and nail care. Product knowledge, proper application and technical procedures are taught to enhance the personal care of hair, nails, and skin. Students develop and practice their skills during clinic events. Students must accumulate 1,000 hours of instruction in order to be eligible to take the NYS Certification exam.

CRIMINAL JUSTICE

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will learn criminal and civil law, vehicle and traffic law, arrest and court procedures, report writing and professional communication skills. Topics of study include: interviewing skills, self-defense, emergency response, security, fingerprinting, civil rights, courts and corrections, and forensics. Students will participate in community service projects, participate in guest speaker presentations, conduct physical conditioning exercises, learn patrolling skills, collect evidence and crime scene investigation tactics.

CULINARY ARTS

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will learn the fundamentals of safety and sanitation, equipment operation, and how to prepare short order and large quantity cooking meals in this exciting and fast-paced program. Topics of study include: baking breads and pastries, creating main entrees, side dishes, and soups, practicing professional skills through customer services, menu planning, and recipe conversions. Students will work effectively with their team members, learn restaurant management skills through catering services and food orders.

CYBERSECURITY AND NETWORKING

(2 YEAR PROGRAM – HARKNESS)

Students will use the latest software to analyze data traffic and troubleshoot PC hardware and operating systems. Topics of study include: digital forensics, computer data and hardware analysis for evidence collection and criminal prosecution, network traffic analysis, vulnerability and network activity identification, and research ethics and morals in relation to cyber-attacks and cyberterrorism. Students will configure hardware firewalls for added network security, setup secure wireless devices for homes and businesses, and us various programs to hide data within pictures, videos, and music files.

DENTAL LABORATORY TECHNOLOGY

(2 YEAR PROGRAM – HARKNESS)

Students will combine the art and science of the fabrication of corrective devices and replacements for natural teeth. Topics of study include: dental and oral anatomy, dental terminology, laboratory safety and infection control, and tooth morphology. Students will create orthodontics and restorations, all phases of complete dentures, crown and bridge restorations, ceramic and orthodontic techniques, and digital design, scanning, and milling. Students with an interest in dentistry, dental hygiene, and orthodontics may be interested in this course.

NEW VISIONS: DIESEL TECHNOLOGY (TECH PREP)

(1 YEAR PROGRAM – CONWAY BEAM TRUCK COMPANY)

Students will work on trucks and diesel engines and engage with professionals at the Conway Beam Truck Group site. Topics of study include: engine repair, lamps, accessories and wiring, welding, bearings and seals, engine removal, disassembly and installation, circuit fundamentals, wheel alignment, principles of hydraulics, and the parts and tools needed to build an engine.

VIRTUAL PRODUCTION AND DESIGN

(2 YEAR PROGRAM – HARKNESS)

Students will experience real world skills and techniques in the fields of graphic design, animation, illustration, and virtual production. The 2-year program studies topics like digital photography and videography, 2D and 3D animation and compositing, visual effects, combining virtual and physical worlds. They will create dynamic content through cutting edge, modern technology and techniques taught by industry professionals as well as gain real world experience through internships and collaborative opportunities with today's top producers and creative professionals.

ESPORTS AND MANAGEMENT AND GAME DEVELOPMENT

(2 YEAR PROGRAM – CALSPAN)

Students will explore the growing world of Esports and learn the business components of this booming industry. Topics of study include: computer literacy, game industry fundamentals, narrative design, principles and elements of design, game audio components, broadcasting and streaming, logo and brand design, game theory and strategy, and marketing strategies.

EARLY CHILDHOOD EDUCATION

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will examine the physical, social/emotional, and intellectual development of children. Topics of study include: child development, child psychology, nutrition, social/emotional learning, special needs of children, and health and safety of children. Students will design and implement lesson plans, care for children in a preschool environment, enhance professional written and oral communication skills, and gain hands-on experience through internships at local preschools, childcare centers, and elementary schools.

NEW VISIONS: EDUCATION PATHWAYS ACADEMY

(1 YEAR PROGRAM – BUFFALO STATE COLLEGE)

Students learn the fundamentals of education through both theory-based and experiential learning. The program functions to show educator candidates everything that education has to offer, and ultimately allows students to select and consider the areas they find most relevant and appealing. Topics of study include: classroom and behavior management, child and adolescent development, lesson planning and execution, data-driven instruction and assessment, social emotional learning and best teacher practices, and working with students with disabilities.

ELECTRICAL SYSTEMS

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will learn the theory and fundamentals of electrical systems and apply it to hands-on projects. Topics of study include: electrical safety, basics of hand and power tools, specialized tools and equipment, wiring methods, calculations and measuring, electrical circuits and troubleshooting methods, industrial motor controls, and residential and blue print reading. Students will explore renewable technologies and energy sources, control systems, and business and industry principles like financial literacy. Students will earn their OSHA 10 Safety Certification.

ELECTRONICS AND APPLIED TECHNOLOGY

(2 YEAR PROGRAM – HARKNESS)

Students will use soldering irons, hand tools, meters, and oscilloscopes to build computers, robots, amplifiers, wireless devices, and other high tech projects. Topics of study include: microcomputer systems, amplification, digital electronics, Soldering, desoldering, and PCB repair. Students will understand semiconductor, DC, and AC electronics, analog/digital conversion, telephone and cellular communications, and radio communications.

EMERGENCY MEDICAL AND FIRE SERVICES

(2 YEAR PROGRAM – KENTON)

Students will explore a wide range of career paths in Emergency Medical and Fire Services while developing hands-on skills in patient assessment, treatment, team communication, and safe transport. Coursework includes anatomy and physiology, medical terminology, and common diseases, along with in-depth training in emergency medication administration, trauma care, EMS operations, and treatment for special patient populations.

ENGINEERING AND ROBOTICS

(2 YEAR PROGRAM – HARKNESS)

Students will experience hands on learning projects and skill based competitions that will prepare them for their future by learning how to develop their ideas from concept to reality. Topics of study include: engineering essentials, introduction to engineering design, principles of engineering, computer integrated manufacturing, and engineering design and development.

EXERCISE SCIENCE

(2 YEAR PROGRAM – KENTON)

Students will explore how exercise impacts health, wellness, and athletic performance through cardio conditioning, strength training, and flexibility techniques. Coursework covers fitness safety, functional movement screening, anatomy and physiology, nutrition, weight management, and both general and sport-specific program design—along with the latest trends and the business side of fitness. Students will learn to create, implement, and adapt personalized training programs based on individual client goals, while also exploring a variety of career paths in the health and fitness industry over the two-year program.

FASHION DESIGN AND TECHNOLOGY

(2 YEAR PROGRAM – CALSPAN)

Students will learn to dress, style, and create trends based on design elements and the fashion cycle. Topics of study include: basic sewing skills, fashion trend forecasting, fashion psychology, fiber, yarn, fabric, and garment production. Students will analyze fashion collections, study fashion history, explore fashion merchandising, marketing and advertising by creating a working business plan, and produce a professional fashion show.

HEALTH CAREERS

(2 YEAR PROGRAM – HARKNESS, KENTON)

Students will learn the skills to be a supportive caregiver through clinical experiences in a variety of health care environments including long term care facilities and hospitals. Topics of study include: anatomy and physiology, medical terminology, infection control, legal and ethical responsibilities, vital signs and conversions, professional communication, personal health and wellness, and physical, mental, emotional, and social developments. During clinical rotations, students perform personal care procedures, learn to take vital signs, and assist patients with mobility using crutches, canes, walkers, and wheelchairs.

HEATING, VENTILATION AND AIR CONDITIONING

(2 YEAR PROGRAM – HARKNESS)

Students will gain an understanding of the fundamentals of residential and light commercial heating, ventilation, and air conditioning installation, service, and repair. Topics of study include: potable water systems, forced air heating systems, steam and hydronic heating systems, drainage, waste and vents, and central air conditioning systems. Students will practice soldering, brazing, blue print interpretation and isometric drawing analysis. Students will earn trade related certifications like OSHA 10 and EPA 608.

NEW VISIONS: LEGAL ACADEMY

(1 YEAR PROGRAM – CANISIUS COLLEGE AND THE UNIVERSITY AT BUFFALO)

Students will learn the foundations of law and the legal system, develop a network of professional connections through field experiences, and complete internships in political offices, courts, law offices, and more. Topics of study include criminal, family, and consumer law, lawmaking, torts, policing, freedoms and individual rights, and contemporary issues in law.

OCCUPATIONAL EDUCATION

(2 YEAR PROGRAM – HARKNESS, KENTON)

Occupational Education offers supportive career development programs for students with learning or management needs who require small classes and individually modified curricula.

PLUMBING

(2 YEAR PROGRAM – HARKNESS)

Students will learn how to cut and install various types of materials that are used within the field. Topics of study include: plumbing and professional safety, blue print reading, fixture assembly, codes, pressure, temperature and water heaters, and water supply systems, mains, and wells.

NEW VISIONS: PLANT SCIENCE

(1 YEAR PROGRAM – IN PARTNERSHIP WITH BOTANICAL GARDENS)

Students will learn greenhouse management, plant and soil science, and landscape design. Topics of study include: the foundations of horticulture, plant cells and tissues, roots and soils, greenhouse management, watering and hydroponics, and native and invasive species. Students will engage in propagation techniques, integrated pest management (IPM), plant identification, and complete a variety of seasonal projects while on the grounds of the Buffalo and Erie County Botanical Gardens.

SOCIAL MEDIA MARKETING
(1 YEAR PROGRAM – CALSPAN)
Students will learn the variety of social media platforms available to businesses, learn how to build a company's brand, increase sales in e-commerce spaces, and drive website traffic. Students will explore ways to engage existing customers, reach new ones, and analyze analytics and demographic information that allow marketers to track the success of their efforts and identify more ways to engage.

VIDEO PRODUCTION AND RECORDING ARTS
(2 YEAR PROGRAM - CALSPAN)
Students will learn to create and produce their own original films and music with the guidance of industry professionals. Topics of study include: Video production basics, video language and project development, video program creation, microphone design and application, digital audio technology, digital audio workstation, the process and concept of sound mixing, digital console and DAW mixer technology and automation.

WELDING
(2 YEAR PROGRAM – KENTON)
Students will learn to manipulate metal using a variety of welding techniques and the many different job skills that will set students up for lucrative careers in manufacturing, field work, or entrepreneurship. Topics of study include: welding safety, equipment and maintenance and care, metal working safety, oxy-fuel cutting, shielded metal arc welding, gas metal arc welding, gas tungsten arc welding, plasma arc cutting, and light manufacturing. Students will practice these methods on a variety of materials and create unique designs by using the CNC (Computer Numerical Control) Plasma Machine or by developing metal sculpture projects.

WEB TECHNOLOGIES AND GAME PROGRAMMING
(2 YEAR PROGRAM - CALSPAN)
Students will bring ideas to life by writing software, designing and coding games, and developing web pages and sites. Topics of study include: web design, web development applications, programming, game development applications, and databases.

NEW VISIONS: ZOO, WILD LIFE AND CONSERVATION CAREERS
(1 YEAR PROGRAM – BUFFALO ZOO)
Students will learn about zoological care and animal sciences, experience the zoo's day-to-day operations, ways to incorporate and educate about conservation, and correlate concepts of ELA, government, and economics as they relate to animal and conservation topics. Topics of study include conservation, animal husbandry, the evolution of zoos, animal ethics and welfare, basic animal behavior, veterinary care, exhibit design, horticulture, and zoo operations.

The OE program is divided into two phases as follows:

OCCUPATIONAL EDUCATION (OE) I EXPLORATORY
(1 YEAR PROGRAM – HARKNESS, KENTON)
OE I (One School Year): Students will explore career modules in Automotive Services, Building Maintenance, Food Service, and Human Services. Student performance is evaluated at the end of each five-week period. Evaluations from OE I are used as a guide to help choose an appropriate training area for OE II.

OCCUPATIONAL EDUCATION (OE) II SKILL BUILDING
(2 YEAR PROGRAM – HARKNESS, KENTON)
OE II (Two School Years): Students will choose one of four focus areas to continue skill development.
These include:
- Automotive Services
- Building Maintenance
- Food Service
- Human Services

Curriculum activities relate to entry level employment skills necessary for successful performance.

OCCUPATIONAL EDUCATION (OE) III
(1 YEAR PROGRAM)
OE III (One School Year): Students will develop and strengthen job skills through a variety of on-site and internal internship opportunities. Curriculum activities relate to entry level employment skills necessary for successful performance.
- Students will be provided opportunities for hands-on job training in preparation for competitive employment.
- Students will be able to explore multiple pathways while in the program.

