

2024-2025
**COURSE
CATALOG**



Williamsville South High School



Williamsville Central Schools

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 South High School

5950 Main Street

Williamsville, NY 14221

Mr. Keith S. Boardman

Principal

Mr. Adam Erickson, *Asst. Principal*

Mr. Salvatore Curella, *Asst. Principal*

Ms. Andrea Rozansky, *Asst. Principal*

School Counselors

Mrs. Terri Jacobs

Mrs. Elizabeth Lanni-Manley

Mrs. Kelly Peller

Mr. Kevin VanDermeid

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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2023 SCHOOL PROFILE

5950 Main Street Williamsville, New York 14221
www.williamsvillek12.org/SOUTHHIGH
Counseling Office: (716)626-8210
Fax: (716)626-8216

CEEB CODE: 335982

Superintendent of Schools: Dr. Darren J. Brown-Hall
Principal: Keith Boardman
Assistant Principals: Andrea Rozansky
Salvatore Curella
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Williamsville South

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 the 2021-22 enrollment of 9,506 students, K-12, including three high schools with approximately 3,159 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 South is accredited by the NYS Board of Regents and Regional Accreditation Association, with over 130 courses offered to approximately 875 students. Students at South 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. South High School offers over 36 clubs and activities to our students. The South Billies athletic teams are traditionally among the best in their division in Western New York, posting recent state championships in Class B Varsity Girls Softball, Varsity Girls Volleyball, and Varsity Girls Basketball. Twenty-one sport programs are offered through 60 athletic teams at the Varsity, Junior Varsity, and Modified competitive levels.

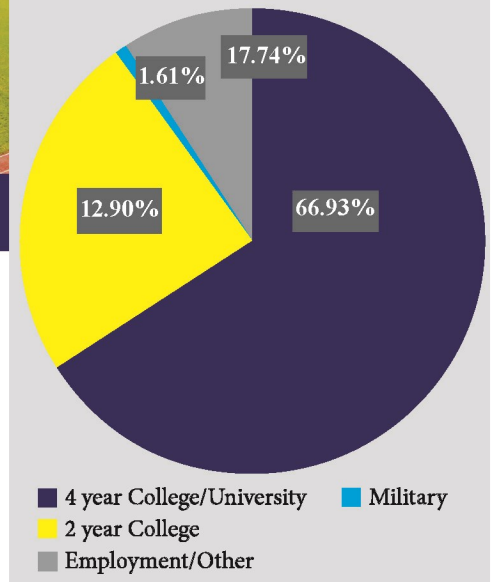
First opened in 1950 as a junior-senior high school, Williamsville South is listed on the National Register of Historic Places earning the designation, in part, because of the significant role it played in the growth and importance of public education in Western New York.



Class of 2023

National Merit Finalists: 0
National Merit Commended Students: 3
Regents Diploma with Advanced Designation: 158 students-63.709%
Regents Diploma with Advanced Designation with Honors: 78 students-31.451%
Regents Diploma with Honors: 3 students-<3%
Regents Diploma: 89 students-35.88%
Local Diploma: 0 students-0%

Graduating Class: 348 Future Plans



GRADING SYSTEM

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 carry 6.5 credits each year of high school.

CURRICULUM

ART: Studio In Art, Studio in Photo & Media Arts, Advanced Studio in Photo, Studio In Drawing & Painting, Advanced Studio in Drawing & Painting, Studio in Sculpture & Ceramics, Graphic Design, Exploring Contemporary Art, Art Portfolio, AP Art & Design.

BUSINESS: Accounting I & II, Advertising & Media Relations, Business and Personal Law, College & Career Communications, Entrepreneurship, International Business, Introduction to Business, Microsoft Office Computer Applications, Advanced Microsoft Office Computer Applications, Finance, Principles of Marketing, Sports & Entertainment Marketing, Youth Leadership, Internship, Work Experience, DECA.

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

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

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

LOTE: French 1R, French 2R, French 2A, French 3R, French 3A, Comprehensive French, French 4A, French 5A, AP French, Latin 1R, Latin 2A, Latin 3A, Latin 4A, Spanish 1R, Spanish 2R, Spanish 2A, Spanish 3R, Spanish 3A, Comprehensive Spanish, Spanish 4A, Spanish 5A, AP Spanish.

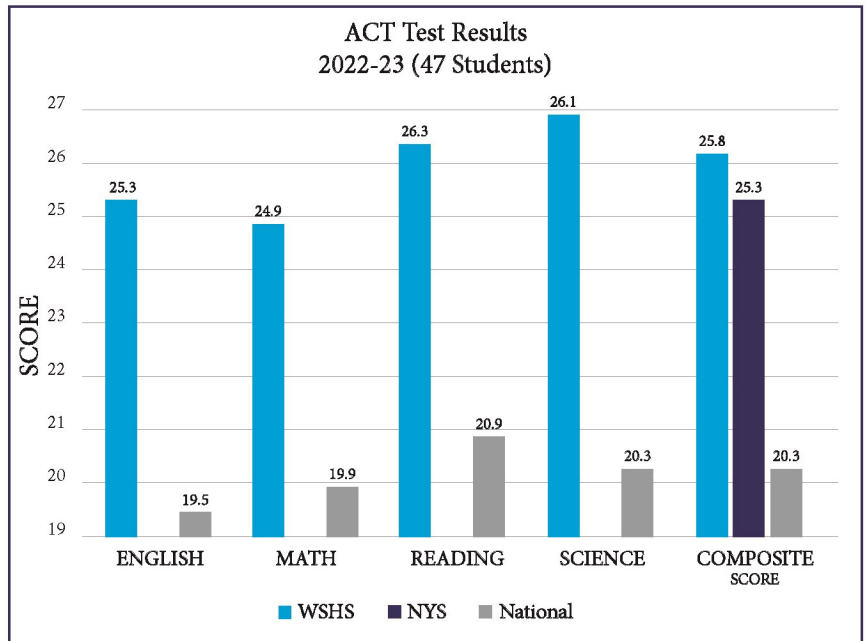
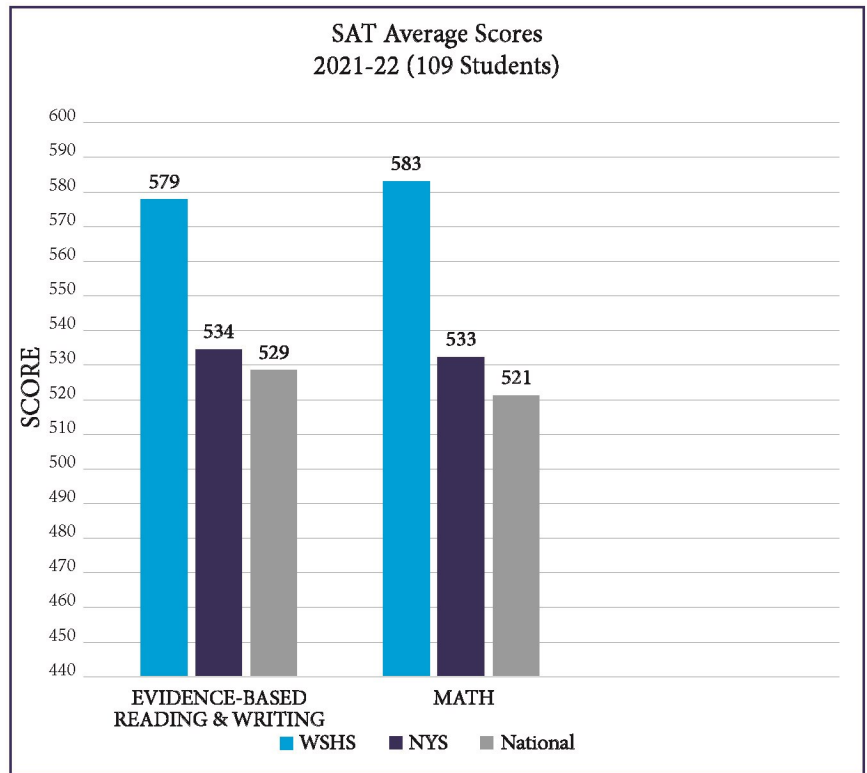
MATH: Fundamentals of Algebra, Algebra 1R, Geometry, Geometry R & A, Algebra 2, Algebra 2R & 2A, Pre-Calculus, Pre-Calculus R & A, Calculus 5R, AP Calculus AB, AP Calculus BC, AP Statistics.

MUSIC: Music Theory, AP Music Theory, Wind Symphony, Wind Ensemble, Mixed Chorus, Concert Choir, Choraleers/Dynamics, Symphony Orchestra, Philharmonia, Jazz Improvisation, Jazz Ensemble, Jazz Band.

SCIENCE: AP Biology, AP Chemistry, AP Environmental Science, AP Physics II, Anatomy & Physiology A, Astronomy, Chemistry, Chemistry R & A, Earth Science R, Environmental Science, Forensic Science, Great Lakes, Living Environment 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, AP US Gov't. & Politics & Economics, Economics, AP Macro Economics, Participation in Government, AP European History, AP Psychology, Current Events, Human Rights & Genocide, History of Woman in the U.S., Humanities, Psychology, Sociology, Thinking Critically in the Age of Misinformation, Turbulent 60's, War and Diplomacy.

*Not all courses run each school year.



ADVANCED PLACEMENT RESULTS -- 379 students took 453 exams (PERCENTAGE SCORING 3 OR HIGHER)

Biology (79%)	Macroeconomics (80%)
Calculus AB (100%)	Music Theory (%)
Calculus BC (100%)	Physics 2 (60%)
Computer Science Principles (%)	Psychology (56%)
English Language (70%)	Statistics (88%)
English Literature (100%)	US History (66%)
US Government & Politics (75%)	World History: Modern (78%)
Chemistry (90%)	Computer Science A (%)
Art Design (%)	Environmental Science (71%)



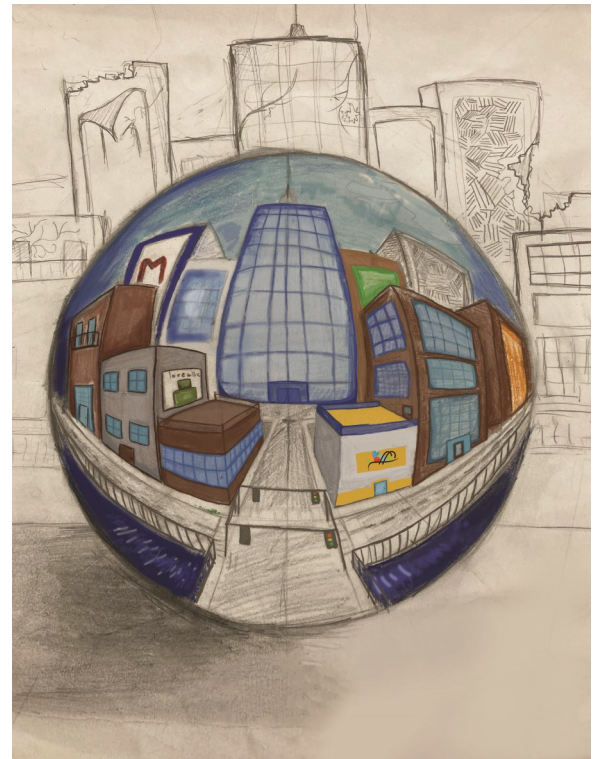
PREFACE

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: Elizabeth Lanni-Manley (A-D, O)
 Kelly Peller (E-K)
 Kevin VanDerMeid (L-N, P-R)
 Terri Jacobs (S-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 through Naviance.

CALENDAR FOR COLLEGE BOUND SENIORS

September

- Register for fall SAT/ACT or SAT II's for college admissions.
- Distribute student evaluation sheets to teachers.
- Complete activity sheet for Guidance/Counseling and college information.
- Early decision applications must be initiated. (See your counselor)
- Meet visiting college representatives at South High School.
- SUNY college guidebook application and other information distributed to seniors.
- Scholarship/financial aid information available in Career Center.

October

- Individual student appointments, following group orientation with school counselor regarding graduation and post high school plans.
- Register for college entrance testing.
- Meet visiting college representatives; attend college days.
- Submit early decision applications to Guidance/Counseling two weeks prior to the due date.

November

- Submit all college applications to Guidance/Counseling office for processing two weeks prior to the due date.
- Scholarships processed on an ongoing basis as determined by due date.

December

- Register for January ACT and SAT tests, as necessary.
- Submit all college applications to Guidance/Counseling office. Late applications MAY jeopardize college admission.
- Financial Aid Forms and information discussed with all seniors. Materials are disseminated to students to bring home.

January

- Mid-year grades sent to colleges IF requested by student, or college.
- Submit appropriate Financial Aid Forms as required by each college as soon after October 1st as possible.

March - April

- SUNY and other public and private colleges admission notification.
- Financial Aid Awards made. (Some notified at later date)

May - June

- Common reply date – May 1 – deposits paid to colleges.
- Communicate with school counselor regarding future college decisions.

CAREER CENTER

Services:

1. Scholarship and financial aid information publicized and posted
2. Career interest survey available
3. Testing information and registration forms available
4. Materials regarding personal concerns available
5. One-on-one computer searches for students and parents
6. Part-time job and volunteer opportunities information posted
7. Summer opportunities available
8. Occupational reference file - individual contacts

On-going programs:

1. College videos available daily
2. Career-oriented videos available daily
3. College representatives - as advertised
4. Military representatives - as advertised

GRADUATION REQUIREMENTS

Regents Diploma	Credits	Regents w/Advanced Designation Diploma	Credits
English	4	English	4
Social Studies	4	Social Studies	4
Math[a]	3	Math	3
Science[a]	3	Science	3
World Languages	1[b]	World Languages[c]	3
Art/Music	1	Art/Music	1
Health	.5	Health	.5
Physical Education	2	Physical Education	2
Sequence/Electives	3.5	Sequence/Electives	1.5
TOTAL	22	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)

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:
 $\frac{1}{3}$ first marking period, $\frac{1}{3}$ second marking period, $\frac{1}{3}$ 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 in order to earn a Regents credit. If they pass the course only, they will receive local credit.

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. For full-year classes, grades are distributed over four marking periods. Semester courses are computed on a 2/3 yearly average, 1/3 final assessment.
 - (a) In all cases, the final grade is computed on a 4/5 yearly average, 1/5 final assessment basis. Semester courses are computed on a 2/3 yearly average, 1/3 final assessment.
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.

NCAA CLEARINGHOUSE

National Collegiate Athletic Association (NCAA)

www.ncaa.org

CONTACT NCAA AT: 1-877-262-7492

Student athletes wishing to play sports in college at the Division I or II levels must register with the NCAA Eligibility Center. It is recommended that this registration is completed during the summer prior to the student's junior year. Information regarding NCAA eligibility can be found using the following link: <http://www.ncaa.org/student-athletes/future>.

Division I

<http://www.ncaa.org/student-athletes/play-division-i-sports>

Division II

<http://www.ncaa.org/student-athletes/play-division-ii-sports>

Other links are provided below.

Eligibility Center:

<https://web3.ncaa.org/ecwr3/>

Eligibility center Website Registration Checklist:

http://fs.ncaa.org/Docs/eligibility_center/Student_Resources/Registration_Checklist.pdf

List of NCAA-Approved Courses:

<https://web3.ncaa.org/hportal/exec/hsAction?hsActionSubmit=searchHighSchool>

Guide for the College-Bound Student-Athlete:

<http://www.ncaapublications.com/productdownloads/CBSA18.pdf>

Frequently Asked Questions (FAQ):

<http://ncaa.org/student-athletes/future/student-athlete-faq-search>

Please be aware that non regents math classes are not approved courses for the NCAA eligibility center.

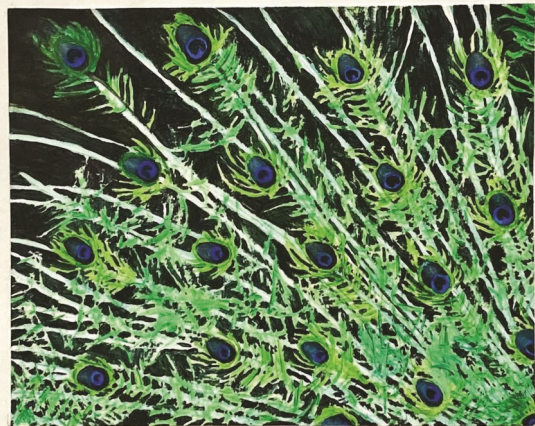
The DI and DII Academic Requirements Fact Sheets

DI Academic Requirements

http://www.ncaa.org/sites/default/files/2018DIEC_Requirements_Fact_Sheet_20180117.pdf

DII Academic Requirements

http://www.ncaa.org/sites/default/files/2018DIIIEC_Requirements_Fact_Sheet_20180117.pdf



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 - Civil Engineering & Architecture (CEA)

PLTW - Computer Integrated Manufacturing (CIM)

PLTW - Design Drawing for Production (DDP)

PLTW - Digital Electronics (DE)

PLTW - Principles of Engineering (POE)

PLTW - Engineering Design and Development (EDD)

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 ECC 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 ECC. Fees for dual-credit are set by ECC and students will be billed directly by the college. The following courses offer dual credit:

Advanced Studio in Drawing & Painting

Graphic Design

Studio Sculpture

Personal Finance

Principles of Marketing

Accounting 1

Business & Personal Law

College and Career Communications

Microsoft Office Applications

Advanced MS Office Computer Applications

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

Computer Programming

Advanced Placement Computer Science Principles

Advanced Placement Computer Science A

4A French and 4A Spanish

5A French and 5A Spanish

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 assist our English language learners with acquisition of language and content, we also encourage each to share their customs and traditions in an effort to develop a deeper understanding of the cultures represented in our school community as well as our global community.

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 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, and the Blueprint for English Language Learner/Multilingual Learner Success. 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. 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 virtually 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

NOT OFFERED 2024-2025

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

NOT OFFERED 2024-2025

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.



**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 2024-2025

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

NOT OFFERED 2024-2025

PREREQUISITE: None

CREDIT: 1.0

CODE #:

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.

ADVANCED STUDIO IN PHOTOGRAPHY

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: Photography I (South Only)

CREDIT: 1.0

CODE #:

This course is designed to meet the needs of students who wish to learn advanced techniques in photography. Students will build upon skills learned in the introductory photography course. Topics may include: documentary photography (photojournalism), studio photography (portrait lighting techniques), how to build strong compositions, operation of a DSLR (digital single lens reflex) camera, and advanced Photoshop techniques. Students are encouraged to develop their own personal vision and style. Students have the opportunity to submit work to competitions throughout the year.

STUDIO IN DRAWING AND PAINTING

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

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 2024-2025

PREREQUISITE: *Studio in Art, Studio in Drawing and Painting*

CREDIT: 1.0

CODE #: 6246

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 ECC.*



STUDIO IN SCULPTURE & CERAMICS

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

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 ECC.*



GRAPHIC DESIGN

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

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 ECC.*



EXPLORING ART: CREATION & CURATION

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: *None*

CREDIT: 1.0

CODE #: 6265

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: 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2024-2025

PREREQUISITE: None

CREDIT: 1.0

CODE #: TBD



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.

Prior experience in drawing and/or film/video production is beneficial, but not required. College credit offered through Syracuse University - per University policies, college credit is available to students in grades 11 and 12 only.

VISUAL PRESENTATION & PORTFOLIO

GRADE: 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: Junior/Senior level course - consultation with and permission of instructor, based on coursework student has completed and future plans.

CREDIT: 1.0

CODE #: 6256

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

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: Studio in Art, Studio in Drawing & Painting and one other basic or advanced art course relating to the student's interests and talents.

CREDIT: 1.0

CODE #: 6355



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

Business & Marketing Education is a program of study whose purpose is to provide students with the skills, attitudes and competencies to be successful in post-secondary study, the workforce, and as adult consumers. Our unique business courses allow students to explore career and higher education interests. Students can gain knowledge and develop skills in finance, marketing, management, entrepreneurship, accounting, communications and business technology. A comprehensive business and marketing education program, in conjunction with academic study, will most effectively prepare a student for lifelong success.

ACCOUNTING I

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

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 ECC.*

SUPA: ACC 151 INTRODUCTION TO FINANCIAL ACCOUNTING

GRADE: 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2024-2025

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. ACC 151 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.

In addition to the use of a traditional textbook, lectures, quizzes, and exams to deliver basic accounting skills, students are required to complete a comprehensive project that demonstrates their ability to analyze the financial statements of publicly traded companies and make an informed investment decision based on the analysis.

By the end of the course, students will understand the basic accounting information system, have the ability to read and understand a set of basic financial statements, have an awareness of the current issues in financial accounting and the impact of these issues on organizational stakeholders, and understand career opportunities available to accounting graduates. If you plan to major in any area of Business, this first level Accounting course will be required so you can get ready for your major by taking it in high school for less and getting the foundational knowledge you need. This could also serve as a great exploration of the growing accounting and financial services field!

ACCOUNTING II

GRADE: 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2024-2025

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

NOT OFFERED 2024-2025

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 2024-2025

PREREQUISITE: None

CREDIT: 1.0

CODE #: 7156



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 ECC.*

COLLEGE & CAREER READINESS

GRADE: 11, 12

LENGTH: 20 Weeks

OFFERED 2024-2025

PREREQUISITE: None

CREDIT: 0.5

CODE #: 7236



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 ECC. Recommended for Juniors - Spring Semester / Recommended for Seniors - Fall Semester*

ENTREPRENEURSHIP

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: None

CREDIT: 1.0

CODE #: 7256



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 involved 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 ECC.*

INTERNATIONAL BUSINESS

GRADE: 10, 11, 12

LENGTH: 20 Weeks

NOT OFFERED 2024-2025

PREREQUISITE: *Introduction to Business*

CREDIT: 0.5

CODE #: 7176

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 2024-2025

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.

MICROSOFT COMPUTER APPLICATIONS

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: *None*

CREDIT: 1.0

CODE #: 7186



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 ECC.*

ADVANCED MICROSOFT COMPUTER APPLICATIONS

GRADE: 10, 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2024-2025

PREREQUISITE: *Microsoft Office Computer Applications and Keyboarding*

CREDIT: 1.0

CODE #: 7296



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 ECC.*

This is the capstone course for the CTE endorsement in Computer & Information Sciences.

PERSONAL FINANCE

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2024-2025

PREREQUISITE: None

CREDIT: 0.5

CODE #: 7126



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 ECC.*

PRINCIPLES OF MARKETING

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: None

CREDIT: 1.0

CODE #: 7246



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 ECC.*

SPORTS & ENTERTAINMENT MARKETING

GRADE: 11, 12

LENGTH: 20 Weeks

OFFERED 2024-2025

PREREQUISITE: *At least one of the following: Principles of Marketing, Advertising & Media Relations or Entrepreneurship*

CREDIT: 0.5

CODE #: 7226

Sports and Entertainment Marketing (SEM) will serve as an extension of the Principles of Marketing pathway and course of study. SEM focuses on marketing and management functions/tasks that can be applied to all levels of sports and entertainment industries. The impact that sports and entertainment marketing has on the economy, tourism, local business, national brands, consumer behavior will be examined. There will be a focus on marketing management including, but not limited to: 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

NOT OFFERED 2024-2025

PREREQUISITE: None

CREDIT: 1.0

CODE #: 7306

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 2024-2025

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 #: 7376C/7376

OFFERED 2024-2025

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 the student's income but to permit him/her the opportunity to learn the skills necessary to seek, obtain, maintain, and be successful on the job. 150 hours of work equals 1/2 unit of credit and 300+ hours of work equals 1 unit credit. A student must be enrolled in a business course during the year in which he/she is receiving credit.

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

GRADE: 9, 10, 11, 12

CREDIT:

LENGTH:

CODE #:

OFFERED 2024-2025

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.

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

NOT OFFERED 2024-2025

PREREQUISITE: Grade 8 Math

CREDIT: 1.0

CODE #: 3626



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 2024-2025

PREREQUISITE: Algebra 1R or permission of the teacher.

CREDIT: 1.0

CODE #: 3606



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

NOT OFFERED 2024-2025

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 2024-2025

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



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 Manufacturing*
 - o Digital Electronics*
 - o Principles of Engineering*
- Engineering Design and Development*

•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 2024-2025

PREREQUISITE: *Introduction to Woodworking or teacher approval*

CREDIT: 1.0

CODE #: 7646

EXAMINATION: *Local Assessment*

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 2024-2025

PREREQUISITE: *Design and Drawing for Production or teacher approval*

CREDIT: 1.0

CODE #: 7606

EXAMINATION: *Local Assessment*

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 2024-2025

PREREQUISITE: None

CREDIT: 1.0

CODE #: 7736

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

NOT OFFERED 2024-2025

PREREQUISITE: Completed or concurrently enrolled in Living Environment

CREDIT: 1.0

CODE #: 7506

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

OFFERED 2024-2025

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 2024-2025

PREREQUISITE: Introduction to Woodworking

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 2024-2025

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 2024-2025
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 2024-2025
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
OFFERED 2024-2025
PREREQUISITE: None

CREDIT: 1.0
CODE #: 7536
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
OFFERED 2024-2025
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
OFFERED 2024-2025
PREREQUISITE: None

CREDIT: 1.0
CODE #: 7576
NOT OFFERED AT EAST HS AND NORTH HS
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**OFFERED 2024-2025****PREREQUISITE:** *PLTW-Design and Drawing for Production or teacher approval***CREDIT:** 1.0**CODE #:** 7446**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 2024-2025****PREREQUISITE:** *PLTW-Design and Drawing for Production or teacher approval***CREDIT:** 1.0**CODE #:** 7426**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 2024-2025****PREREQUISITE:** *None***CREDIT:** 1.0**CODE #:** 7416**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**NOT OFFERED 2024-2025****PREREQUISITE:** *Design and Drawing for Production, and Electronics & Robotics, or teacher approval***CREDIT:** 1.0**CODE #:** 7436**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 – ENGINEERING DESIGN AND DEVELOPMENT (EDD)

GRADE: 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: A minimum of two PLTW courses or teacher approval

CREDIT: 1.0

CODE #: 7466

EXAMINATION: Local Assessment

This course is an engineering research course in which you will work in teams to research, design and construct a solution to an open-ended engineering problem. The product development lifecycle and a design process will be used to guide and help your team reach a solution to the problem. Students will maintain a journal as part of a portfolio of their work. Each team will be responsible for delivering periodic progress reports and will present and defend your solution to a panel of outside reviewers at the end of the school year. The completed portfolio will be invaluable as students apply to college. Engineering Design and Development™ serves as the capstone course within the Project Lead the Way® course sequence and allows you to apply all the skills and knowledge learned in the previous Project Lead the Way, Inc. courses that you have taken during your high school career. This course will also test your time-management and team-working skills which are a valuable asset to you in the future.

PLTW – PRINCIPLES OF ENGINEERING (POE)

GRADE: 10, 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2024-2025

PREREQUISITE: Design and Drawing for Production or teacher approval

CREDIT: 1.0

CODE #: 7456

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 2024-2025

PREREQUISITE: None

CREDIT: 0.5

CODE #: 7666

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 2024-2025

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 2024-2025

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 2024-2025

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 discussions is required. 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 2024-2025

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.

* *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.*

ENGLISH 11A

GRADE: 10, 11
LENGTH: 40 Weeks
OFFERED 2024-2025
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 discussions is required. 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 2024-2025
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 2024-2025
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 2024-2025
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 2024-2025
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 WCSU. 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 2024-2025

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 WCSU. Upon passing the course and paying the discounted tuition fee, students earn 3 credits from Syracuse University.

SUPA: CRS 325 PRESENTATIONAL SPEAKING

GRADE: 12

LENGTH: 20 Weeks

OFFERED 2024-2025

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 WCSU. 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 2024-2025

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 WCSU. 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 2024-2025

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 WCSU. 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 2024-2025

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 2024-2025

PREREQUISITE: None

CREDIT: 0.5

CODE #: 1656

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

NOT OFFERED 2024-2025

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 2024-2025

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

NOT OFFERED 2024-2025

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

OFFERED 2024-2025

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.

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 Program

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 (2021) for both Classical and Modern Languages, student language proficiency will be measured in accordance with these standards.

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 2024-2025

EXAMINATION: *Locally developed Regents Checkpoint A examination*

CHECKPOINT A: GERMAN

GRADE: 9, 10, 11, 12

CODE #: 5213

CREDIT: 1

OFFERED 2024-2025

EXAMINATION: *Locally developed Regents Checkpoint A examination*

CHECKPOINT A: LATIN

GRADE: 9, 10, 11, 12

CODE #: 5413

CREDIT: 1

OFFERED 2024-2025

EXAMINATION: *Locally developed Regents Checkpoint A examination*

CHECKPOINT A: SPANISH

GRADE: 9, 10, 11, 12

CODE #: 5513

CREDIT: 1

OFFERED 2024-2025

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 2024-2025

EXAMINATION: *District Exam*

SPANISH 2R

GRADE: 9, 10, 11, 12

CODE #: 5523

CREDIT: 1

OFFERED 2024-2025

EXAMINATION: *District 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 2024-2025

EXAMINATION: *District Exam*

LATIN 2A

GRADE: 9, 10, 11, 12

CODE #: 5434

CREDIT: 1

OFFERED 2024-2025

EXAMINATION: *District Exam*

GERMAN 2A

GRADE: 9, 10, 11, 12

CODE #: 5234

CREDIT: 1

OFFERED 2024-2025

EXAMINATION: *District Exam*

SPANISH 2A

GRADE: 9, 10, 11, 12

CODE #: 5534

CREDIT: 1

OFFERED 2024-2025

EXAMINATION: *District Exam*

LEVEL 3R level courses focus on the following:

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 2024-2025

EXAMINATION: *District Exam*

SPANISH 3R

GRADE: 10, 11, 12

CODE #: 5543

CREDIT: 1

OFFERED 2024-2025

EXAMINATION: *District Exam*

LEVEL 3A

PREREQUISITE: *Students must have passed the 2A course in the same language. Students are recommended to the 3A level of study by their World Languages teachers and are strongly advised to follow these recommendations.*

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 2024-2025

EXAMINATION: *Locally developed Regents Checkpoint B examination*

GERMAN 3A

GRADE: 10, 11, 12

CODE #: 5254

CREDIT: 1

OFFERED 2024-2025

EXAMINATION: *Locally developed Regents Checkpoint B examination*

LATIN 3A

GRADE: 10, 11, 12

CODE #: 5454

CREDIT: 1

OFFERED 2024-2025

EXAMINATION: *Locally developed Regents Checkpoint B examination*

SPANISH 3A

GRADE: 10, 11, 12

CODE #: 5554

CREDIT: 1

OFFERED 2024-2025

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 2024-2025

EXAMINATION: *Locally developed Regents Checkpoint B examination*

COMPREHENSIVE SPANISH

GRADE: 10, 11, 12

CODE #: 5563

CREDIT: 1

OFFERED 2024-2025

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 language*

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 2024-2025

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 2024-2025

EXAMINATION: *Teacher developed examination***GERMAN 4A**

GRADE: 11, 12

CODE #: 5264

CREDIT: 1

OFFERED 2024-2025

EXAMINATION: *Teacher developed examination***SPANISH 4A**

GRADE: 11, 12

CODE #: 5564

CREDIT: 1

OFFERED 2024-2025

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 level course in the same language*

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 2024-2025

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 2024-2025

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

NOT OFFERED 2024-2025

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

NOT OFFERED 2024-2025

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

NOT OFFERED 2024-2025

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).

FUNDAMENTALS OF ALGEBRA

GRADE: 9
LENGTH: 40 Weeks
OFFERED 2024-2025
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 2024-2025
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 2024-2025
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 2024-2025
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 2024-2025
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 2024-2025

PREREQUISITE: Successful completion of Algebra with notable achievement 1R is recommended; however, successful completion of Algebra 1A is strongly encouraged.

CREDIT: 1.0

CODE #: 3224

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 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 2024-2025

PREREQUISITE: Successful completion of Algebra 1R and Geometry or Geometry R.

CREDIT: 1.0

CODE #: 3332

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 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 2024-2025

PREREQUISITE: Successful completion of Algebra 1R and Geometry R or Geometry A.

CREDIT: 1.0

CODE #: 3333

EXAMINATION: Regents Algebra 2

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 2024-2025

PREREQUISITE: Concurrent enrollment in Algebra 2R.

CREDIT: 0

CODE #: 3331

EXAMINATION: Regents Algebra 2

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 2024-2025

PREREQUISITE: Successful completion of Geometry A.

CREDIT: 1.0

CODE #: 3334

EXAMINATION: Regents Algebra 2

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 Pre-Calculus A.

MATHEMATICAL CONNECTIONS

GRADE: 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2024-2025

PREREQUISITE: This elective math course is recommended as a third- or fourth-year of math.

CREDIT: 1.0

CODE #: 3452

EXAMINATION: Local Final Exam

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 2024-2025

PREREQUISITE: Successful completion of Algebra 2 or Algebra 2R.

CREDIT: 1.0

CODE #: 3442

EXAMINATION: Local Final Exam

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 from 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 2024-2025

PREREQUISITE: Successful completion of Algebra 2R or Algebra 2A.

CREDIT: 1.0

CODE #: 3443

EXAMINATION: Local Final Exam

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. Pre-Calculus A 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.

PRE-CALCULUS A or ADVANCED PLACEMENT (AP) PRE-CALCULUS*

GRADE: 11, 12
LENGTH: 40 Weeks
OFFERED 2024-2025

CREDIT: 1.0
CODE #: 3444 or 3445
EXAMINATION: Local Final Exam (all students)
 AP Pre-Calculus Exam (only for those who register)



PREREQUISITE: Successful completion of Algebra 2A.

The College Board introduced a new *Advanced Placement (AP) Pre-Calculus* course starting in 2023-24. Upon review of the *AP Pre-Calculus* syllabus, it was determined that our current *Pre-Calc A* curriculum met the necessary rigor and included the required topics to prepare students to take the *AP Pre-Calculus* Exam in May. Therefore, in an effort to provide students with the opportunity and option to take the *AP Pre-Calculus* Exam in May, students can choose to either register for this advanced Pre-Calculus course as either “Pre-Calc A” or “AP Pre-Calculus.” Students registering for this course as “AP Pre-Calculus” will take the AP Exam in May. Students who sign up for “Pre-Calc. A” will *not* take the AP Exam in May. Either way, students will be in the same class receiving the same curriculum and instruction. Additionally, all students are required to take Williamsville’s local final exam in June.

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. Pre-Calculus A 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.

CALCULUS 5R

GRADE: 11, 12
LENGTH: 40 Weeks
OFFERED 2024-2025

CREDIT: 1.0
CODE #: 3553
EXAMINATION: Local Final Exam



PREREQUISITE: Successful completion of Pre-Calculus R or Pre-Calculus A.

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 Pre-Calculus A 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 2024-2025

CREDIT: 1.0
CODE #: 3545
EXAMINATION: AP Exam



PREREQUISITE: Successful completion of Pre-Calculus A.

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 2024-2025

CREDIT: 1.0
CODE #: 3555
EXAMINATION: AP Exam



PREREQUISITE: Successful completion of Pre-Calculus A 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**LENGTH:** 40 Weeks**OFFERED 2024-2025****PREREQUISITE:** Successful completion of Algebra 2A with a grade of 85 or better and passing the Algebra 2 Regents Exam is strongly encouraged.**CREDIT:** 1.0**CODE #:** 3455**EXAMINATION:** AP Exam

This course is equivalent to an introductory statistics course typically required for majors such as 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**LENGTH:** 40 Weeks**NOT OFFERED 2024-2025****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.**CREDIT:** 1.0**CODE #:** 3453**EXAMINATION:** Local Final Exam

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

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

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 2024-2025

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 2024-2025

PREREQUISITE: GMP I

CREDIT: 1 high school seat credit / 2 college credits (optional)

CODE #: 3944 (Middle School: 3970)

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 2024-2025

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 2024-2025
PREREQUISITE: GMP III

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 2024-2025
PREREQUISITE: GMP IV

CREDIT: 0.5 high school seat credit / 4 college credits (optional)
CODE #: 3975



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 2024-2025
PREREQUISITE: GMP V (MTH-141)

CREDIT: 0.5 high school seat credit / 4 college credits (optional)
CODE #: 3975



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 2024-2025
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 2024-2025
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.

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



MUSIC IN OUR LIVES

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2024-2025

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

NOT OFFERED 2024-2025

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 2024-2025

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 College – 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 2024-2025

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.

WIND SYMPHONY

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

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 #: 6656

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 have opportunities to create 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. 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 2024-2025

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 have opportunities to create 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. 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 2024-2025

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.

CONCERT CHOIR

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: *Audition is required*

CREDIT: 1.0

CODE #: 6646

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.

Note: High school choruses meet every day with the exception of certain men's and women's ensembles which meet every other day.

CHORALEERS/DYNAMICS

GRADE: 9, 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2024-2025

PREREQUISITE: *Audition is required*

CREDIT: 0.5

CODE #: 6616/6636

This is an auditioned ensemble which meets every other day 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.

SYMPHONY ORCHESTRA

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: *The ability to read music and perform satisfactorily on a string instrument.*

CREDIT: 1.0

CODE #: 6697

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.

PHILHARMONIA

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

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.*

CREDIT: 1.0

CODE #: 6686

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 2024-2025

PREREQUISITE: *None*

CREDIT: 0.5

CODE #: 6726

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: 9, 10, 11, 12

CREDIT: 0.5

LENGTH: 20 Weeks

CODE #: 6736

NOT OFFERED 2024-2025

PREREQUISITE: *Introductory Jazz Improvisation*

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 ENSEMBLE

GRADE: 9, 10, 11, 12

CREDIT: 0.5

LENGTH: 20 Weeks

CODE #: 6666

OFFERED 2024-2025

PREREQUISITE: *Audition*

This is an audition only course. As a member of Jazz Ensemble, students will perform varying levels of jazz repertoire in concerts throughout the year. Repertoire includes works by major big band composers and student composers, and explores all styles of jazz. A major guest artist is featured with the ensemble each year. This performance-based curricular course meets every other day.

*Wind and Percussion players should be active members of their school band program. *This excludes guitar, piano, and bass.*

JAZZ BAND

GRADE: 9, 10, 11, 12

CREDIT:

LENGTH:

CODE #:

OFFERED 2024-2025

PREREQUISITE: *None*

Jazz Band is an extracurricular performance ensemble that meets outside of the regular school day. Students of all levels are welcome as long as they have a strong desire to learn and experience jazz music. and major styles and composers of jazz are studied.

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

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 2024-2025

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)

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

SCIENCE



Science Education = Science Literacy

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 Science, Living Environment, Chemistry, 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 66-67 for recommended science courses based on college and career fields

Grade	Science Course(s)	Science Course(s)
8	Grade 8 Science	Earth Science (R)
9	Earth Science (R) or Living Environment (R)	Living Environment (R or H)
10	Earth Science (R) or Living Environment (R)	Chemistry (R or H), and AP Biology, and/or choice of Electives
11	Chemistry (R or Non-R), or Environmental Science, and/or choice of Electives	Physics (R or H), and AP Chemistry, or AP Environmental Science, or Anatomy & Physiology, and/or choice of Electives
12	Chemistry (R or Non-R), or 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: Biology / Living Environment, Chemistry, Earth 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 (Living Env)	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 2024-2025

PREREQUISITE: *Completed Living Environment Regents or Honors, and completed or concurrently enrolled in Chemistry Regents or Honors*

CREDIT: 1.0

CODE #: 4245

EXAMINATION: *AP Biology*



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 2024-2025

PREREQUISITE: *Completed Chemistry Regents or Chemistry Honors*

CREDIT: 1.0

CODE #: 4345

EXAMINATION: *AP Chemistry*



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 of 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 2024-2025

PREREQUISITE: *Completed Living Environment Regents and one other regents science*

CREDIT: 1.0

CODE #: 4515

EXAMINATION: *AP Environmental 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) PHYSICS 2

GRADE: 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

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) 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 C - MECHANICS

GRADE: 11, 12

LENGTH: 40 Weeks

NOT OFFERED AT NORTH HS AND SOUTH HS

PREREQUISITE: Completed Physics R or Physics A

COREQUISITE: Calculus

CREDIT: 1.0

CODE #: 4455

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

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: None

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 2024-2025

PREREQUISITE: Students must have completed Earth Science

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 2024-2025

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.

* **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.**

CHEMISTRY R

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2024-2025
PREREQUISITE: None

CREDIT: 1.0
CODE #: 4333
EXAMINATION: NYS Chemistry Regents

Chemistry - Regents is an introduction to the study of matter, the changes which matter undergoes, and the energy relationships involved in those changes. Beginning with the basic concepts of the atomic theory, students learn the composition of matter, and how matter changes when reactions occur. The students learn to name chemicals, balance equations, and calculate amounts of chemicals involved in reactions. The three phases of matter – solid, liquid and gas – are studied. Atomic structure and the bonding of atoms are related to properties as defined by position on the Periodic Table of Elements. Substances are classified as to properties, with acids, bases, and salts given special emphasis. Rates of reactions, principles of equilibrium, organic chemistry, and nuclear chemistry are also covered. This is a lab course that emphasizes hands-on laboratory experiences. Students will have a regularly scheduled lab period in addition to their traditional class periods. Successful completion of the Regents Lab Requirement, which is 1200 minutes of lab work with satisfactory written lab reports, is necessary for admission to the New York State Regents Exam, which serves as the final exam for the course.

CHEMISTRY A/H

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2024-2025
PREREQUISITE: None

CREDIT: 1.0
CODE #: 4334
EXAMINATION: NYS Chemistry Regents

Chemistry – Honors is a comprehensive course in chemistry presented at an advanced level. It is designed to give students in-depth background into the topics studied; the physical behavior of matter, atomic structure, the periodic table, stoichiometry, chemical bonding, kinetics/equilibrium, chemical reactions, organic chemistry, and nuclear chemistry. All areas of study are extended beyond the Chemistry – Regents curriculum with a greater emphasis on the mathematical treatment of chemistry topics. Students should be relatively self-directed and capable of handling a more rigorous curriculum. Special emphasis is placed on developing students' laboratory skills. Students will have a regularly scheduled lab period in addition to their traditional class periods. Successful completion of the Regents Lab Requirement, which is 1200 minutes of lab work with satisfactory written lab reports, is necessary for admission to the New York State Regents Exam, which serves as the final exam for the course.

EARTH SCIENCE R

GRADE: 9, 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2024-2025
PREREQUISITE: None

CREDIT: 1.0
CODE #: 4113
EXAMINATION: NYS Earth Science Regents

The Earth Science course is designed to develop the concept of the Earth as a complex and changing body. The main areas of study are astronomy, geology, and meteorology. Within those broad concepts, students will study topics, such as; Earth's motions, the solar system, plate tectonics, earthquakes, land forms, erosion, the seasons, weather, climate, etc. Students will be asked to use science process skills to analyze, interpret, and explain Earth science processes and phenomena. This is a lab course that requires a minimum of 1200 minutes of hands-on laboratory experiences with satisfactorily completed lab reports. The course's final exam is the NYS Earth Science regents exam and laboratory performance test.

ENVIRONMENTAL SCIENCE

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2024-2025
PREREQUISITE: Completed two science courses, one being *Living Environment*, and the other from the *Physical Setting*, and successfully

CREDIT: 1.0
CODE #: 4513
EXAMINATION: Local Final Exam

completed one science regents examination.

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 2024-2025

PREREQUISITE: *It is recommended that students have successfully completed two Regents science courses and exams, one being Living Environment.*

CREDIT: 1.0

CODE #: 4532/4533

EXAMINATION: *NU approved common final*



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: 2024-2025

PREREQUISITE: *Successfully completed Earth Science*

CREDIT: 0.5

EXAMINATION: *Local Final Exam*

CODE:

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.

LIVING ENVIRONMENT R

GRADE: 9, 10

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: *None*

CREDIT: 1.0

CODE #: 4223

EXAMINATION: *NYS Living Environment Regents*

Living Environment - Regents is a comprehensive course in life science. It is designed to give students a broad, in-depth background in a diversity of biological concepts. Living Environment provides students with an understanding of how the human body functions and how humans relate to other organisms and the nonliving environment around them. Topics covered in the course include: biochemistry, cells, plants and animals, human physiology, reproduction and development, genetics, biotechnology, evolution, ecology, and scientific methodology. This course emphasizes hands-on laboratory experiences that are designed to have students "see and do" what has been discussed in class. Students will have a regularly scheduled lab period in addition to their traditional class periods. Successful completion of the Regents Lab Requirement, which is 1200 minutes of lab work with satisfactory written lab reports, is necessary for admission to the New York State Regents Exam, which serves as the final exam for the course.

LIVING ENVIRONMENT A/H

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: *None*

CREDIT: 1.0

CODE #: 4224

EXAMINATION: *NYS Living Environment Regents*

Living Environment - Honors is a comprehensive course in life science presented at an advanced level. It is designed to give students a broad, in-depth background in a diversity of biological concepts. Topics covered include: biochemistry, cells, plants and animals, human physiology, reproduction and development, genetics, biotechnology, evolution, ecology, and scientific methodology. All areas of study are expanded beyond the Living Environment – Regents curriculum with a more significant emphasis on the topics of biochemistry, molecular genetics, cell processes, and organismal physiology. Special emphasis is placed on developing students' laboratory skills. This course is intended for the well-above average student who is reading above a tenth grade level. Students should be relatively self-directed and capable of handling a more rigorous curriculum. Students will have a regularly scheduled lab period in addition to their traditional class periods. Successful completion of the Regents Lab Requirement, which is 1200 minutes of lab work with satisfactory written lab reports, is necessary for admission to the New York State Regents Exam, which serves as the final exam for the course.

NATURAL DISASTERS

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2024-2025

PREREQUISITE: *Students must have completed Earth Science.*

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 2024-2025

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.

PHYSICS R

GRADE: 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: *None*

CREDIT: 1.0

CODE #: 4443

EXAMINATION: *NYS Physics Regents*

Physics R is recommended for the student who may wish to pursue some area of physical science or mathematics in college. Critical thinking, problem solving, and applications of concepts will be stressed. The course includes: Mechanics – how objects move, why they move the way they do, the motion of the planets, the study of energy; Waves and Optics – mechanical, sound and light waves, reflection, refraction, diffraction, interference, lenses, electromagnetic spectrum; Electricity and Magnetism – static charges, circuits, magnetic forces and fields, electric motors, electro-magnetic waves; Modern Physics – quantum theory, models of the atom, the nucleus, atomic spectra, atomic reactions, fission, fusion. Laboratory work is used to reinforce concepts covered in the classroom. This course emphasizes hands-on laboratory experiences that are designed to have students “see and do” what has been discussed in class. Students will have a regularly scheduled lab period in addition to their traditional class periods. Successful completion of the Regents Lab Requirement, which is 1200 minutes of lab work with satisfactory written lab reports, is necessary for admission to the New York State Regents Exam, which serves as the final exam for the course. The course is designed for students who have completed, or are concurrently enrolled in Algebra Trigonometry.

PHYSICS A/H

GRADE: 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

PREREQUISITE: *Completed Algebra II/Trigonometry*

CREDIT: 1.0

CODE #: 4444

EXAMINATION: *NYS Physics Regents*

Physics–Honors is a comprehensive course in Physics presented at an advanced level. It is intended to be for students that want a greater preparation for AP physics or physics in college. Critical thinking, problem solving, and applications of concepts will be stressed. The course includes: Mechanics – how objects move, why they move the way they do, the motion of the planets, the study of energy, rotational motion, torque; Waves and Optics – mechanical, sound and light waves, reflection, refraction, diffraction, interference, lenses, electromagnetic spectrum; Thermodynamics – relationships between heat and work, defining heat, changes in temperature and phase; Electricity and Magnetism – static charges, circuits, magnetic forces and fields, electric motors, electro-magnetic waves; Modern Physics – quantum theory, models of the atom, the nucleus, atomic spectra, atomic reactions, fission, fusion. Many areas of study are extended beyond the Physics-Regents curriculum with a greater emphasis on the mathematical treatment of physics topics. Students should be relatively self-directed and capable of handling a more rigorous curriculum than Physics-Regents. Laboratory work is used to reinforce concepts covered in the classroom. This course emphasizes hands-on laboratory experiences that are designed to have students “see and do” what has been discussed in class. Students will have regularly scheduled lab periods in addition to their class periods. Successful completion of the Regents Lab Requirement, which is 1200 minutes of lab work with satisfactory written lab reports, is necessary for admission to the New York State Regents Exam, which serves as the final exam for the course.

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) .

GLOBAL HISTORY AND GEOGRAPHY IR

GRADE: 9

LENGTH: 40 Weeks

OFFERED 2024-2025

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 2024-2025

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 2024-2025

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 focuses on developing students' abilities to think conceptually about world history from approximately 8000 BCE to the present and apply historical thinking skills as they learn about the past. Five themes of equal importance — focusing on the environment, cultures, state-building, economic systems, and social structures — provide areas of historical inquiry for investigation throughout the course. AP World History encompasses the history of the five major geographical regions of the globe: Africa, the Americas, Asia, Europe, and Oceania, with special focus on historical developments and processes that cross multiple regions. 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.



* 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.

UNITED STATES HISTORY AND GOVERNMENT

GRADE: 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

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

CREDIT: 1.0

CODE #: 2333

EXAMINATION: United States History and Government Regents

(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 2024-2025

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).

This is a college level, chronological study of the history of the United States. It 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. The course may be taken as an elective in addition to United States History and Government R as an elective.



CREDIT: 1.0

CODE #: 2335

EXAMINATION: AP United States History, United States History and Government Regents

ADVANCED PLACEMENT (AP) UNITED STATES GOVERNMENT AND POLITICS

GRADE: 11, 12

LENGTH: 20 Weeks

OFFERED 2024-2025

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 ½ 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 affected 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. This course may be taken in lieu of the Participation in Government required for graduation. As such, students will be required to meet the District performance standard for service hours required for Participation in Government.



CREDIT: 0.5

CODE #: 2555

EXAMINATION: AP US Government and Politics

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

GRADE: 11, 12

LENGTH: 40 Weeks

OFFERED 2022-2023 NORTH & SOUTH ONLY

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.



CREDIT: 1.0

CODE #: 2555

EXAMINATION: AP US Government & Politics, District Performance Standard for Economics

ECONOMICS

GRADE: 11, 12

LENGTH: 20 Weeks

OFFERED 2024-2025

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

CREDIT: 0.5

CODE #: 2446

EXAMINATION: District Performance Standard

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

NOT OFFERED 2024-2025

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.

CREDIT: 0.5

CODE #:

EXAMINATION: Syracuse University



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

LENGTH: 20 Weeks

OFFERED 2024-2025

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).

CREDIT: 0.5

CODE #: 2445

EXAMINATION: AP Macro Economics



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. This ½ year course is designed to provide students with a thorough understanding of the principles of economics in examining overall (aggregate) economic behavior. Students taking the course can expect to learn how the measures of economic performance, such as GDP, inflation and unemployment, are constructed and how to apply them to evaluate the overall economy. Students will also learn the basic analytical tools of macroeconomics, primarily the aggregate demand and aggregate supply model and its application in the analysis and determination of national incomes, as well as evaluating the effectiveness of fiscal policy and monetary policy in promoting economic growth and stability. In a growing global market place, 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.

- * **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.**

PARTICIPATION IN GOVERNMENT

GRADE: 11, 12

LENGTH: 20 Weeks

OFFERED 2024-2025

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

CREDIT: 0.5

CODE #: 2546

EXAMINATION: *District Performance Standard*

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 government 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 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 work ethic.

ADVANCED PLACEMENT (AP) AFRICAN AMERICAN STUDIES

GRADE: 10, 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2024-2025

CREDIT: 1.0

CODE #: 2110

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).

Advanced Placement African American Studies is an interdisciplinary course that examines the diversity of African American experiences through direct encounters with authentic and varied sources. Students explore key topics that extend from early African kingdoms to the ongoing challenges and achievements of the contemporary moment. 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 (AP) EUROPEAN HISTORY

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

CREDIT: 1.0

CODE #: 2245

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).

Advanced Placement European History is a full-year elective offered to students who have demonstrated superior interest and achievement in the Social Studies. The course, taught on the college freshmen level, covers the history of Europe from 1500 to the present through lectures, research and discussions, and individual reading. Opportunity is offered for independent study in a period of special interest to the student.



ADVANCED PLACEMENT (AP) PSYCHOLOGY

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2024-2025

CREDIT: 1.0

CODE #: 2675

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).

The Advanced Placement Psychology course is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice.



ADVANCED PLACEMENT (AP) COMPARATIVE GOVERNMENT AND POLITICS

GRADE: 11, 12

LENGTH: 20 Weeks

NOT OFFERED 2024-2025

CREDIT: 0.5

CODE #:

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 2024-2025

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 2024-2025

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 2024-2025

CREDIT: 0.5

CODE #: 2736

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

NOT OFFERED 2024-2025

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

OFFERED 2024-2025

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.*

CREDIT: 0.5

CODE #: 2716

EXAMINATION: District Performance Standard

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

OFFERED 2024-2025

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.*

CREDIT: 0.5

CODE #: 2646

EXAMINATION: District Performance Standard

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 2024-2025

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.*

CREDIT: 0.5

CODE #: 2676

EXAMINATION: District Performance Standard

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 2024-2025

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.*

CREDIT: 0.5

CODE #: 2686

EXAMINATION: District Performance Standard

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.

THINKING CRITICALLY IN THE AGE OF MISINFORMATION

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2024-2025

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.*

CREDIT: 0.5

CODE #: 2786

EXAMINATION: *District Performance Standard*

Thinking Critically in the Age of Misinformation is an elective course that 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

TURBULENT 60'S

GRADE: 10, 11, 12

LENGTH: 20 Weeks

NOT OFFERED 2024-2025

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.*

CREDIT: 0.5

CODE #: 2726

EXAMINATION: *District Performance Standard*

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 CENTURY

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2024-2025

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.*

CREDIT: 0.5

CODE #: 2706

EXAMINATION: *District Performance Standard*

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

LENGTH: 20 Weeks

NOT OFFERED 2024-2025

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.*

CREDIT: 0.5

CODE #: 2696

EXAMINATION: *District Performance Standard*

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.

- * **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.**

CAREER AND TECHNICAL EDUCATION—HARKNESS

COURSE	COURSE CODE #	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		1 yr	4
Digital Media		2 yrs	3.75
Esports and Management and Game Development		2 yrs	3.75
Early Childhood Education		2 yrs	3.75
New Visions: Education Pathways Academy		1 yr	4
Electrical Systems		2 yrs	3.75
Electronics and Computer Technology		2 yrs	3.75
Engineering and Robotics		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		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
Web Technologies and Game Programming		2 yrs	3.75
New Visions: Zoo, Wild Life and Conservative Careers*		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	

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, POTTER)

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, POTTER)

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)

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 of 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, POTTER)

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, POTTER)

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.

COLLISION REPAIR

(2 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

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 - VETERANS AND MILLARD FILLMORE SUBURBAN HOSPITALS, BUFFALO GENERAL MEDICAL CAMPUS)

Students will learn anatomy and physiology, medical terminology, pathophysiology and disease as it 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, POTTER)

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, POTTER)

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, POTTER)

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 use 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

(1 YEAR PROGRAM - HARKNESS)

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.

DIGITAL MEDIA

(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, POTTER)

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 - HARKNESS)

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, POTTER)

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 COMPUTER 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.

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.

FASHION DESIGN AND TECHNOLOGY

(2 YEAR PROGRAM - HARKNESS)

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, POTTER)

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 – POTTER)

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, POTTER)

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

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.

WEB TECHNOLOGIES AND GAME PROGRAMMING

(2 YEAR PROGRAM - POTTER)

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, POTTER)

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, POTTER)

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.

