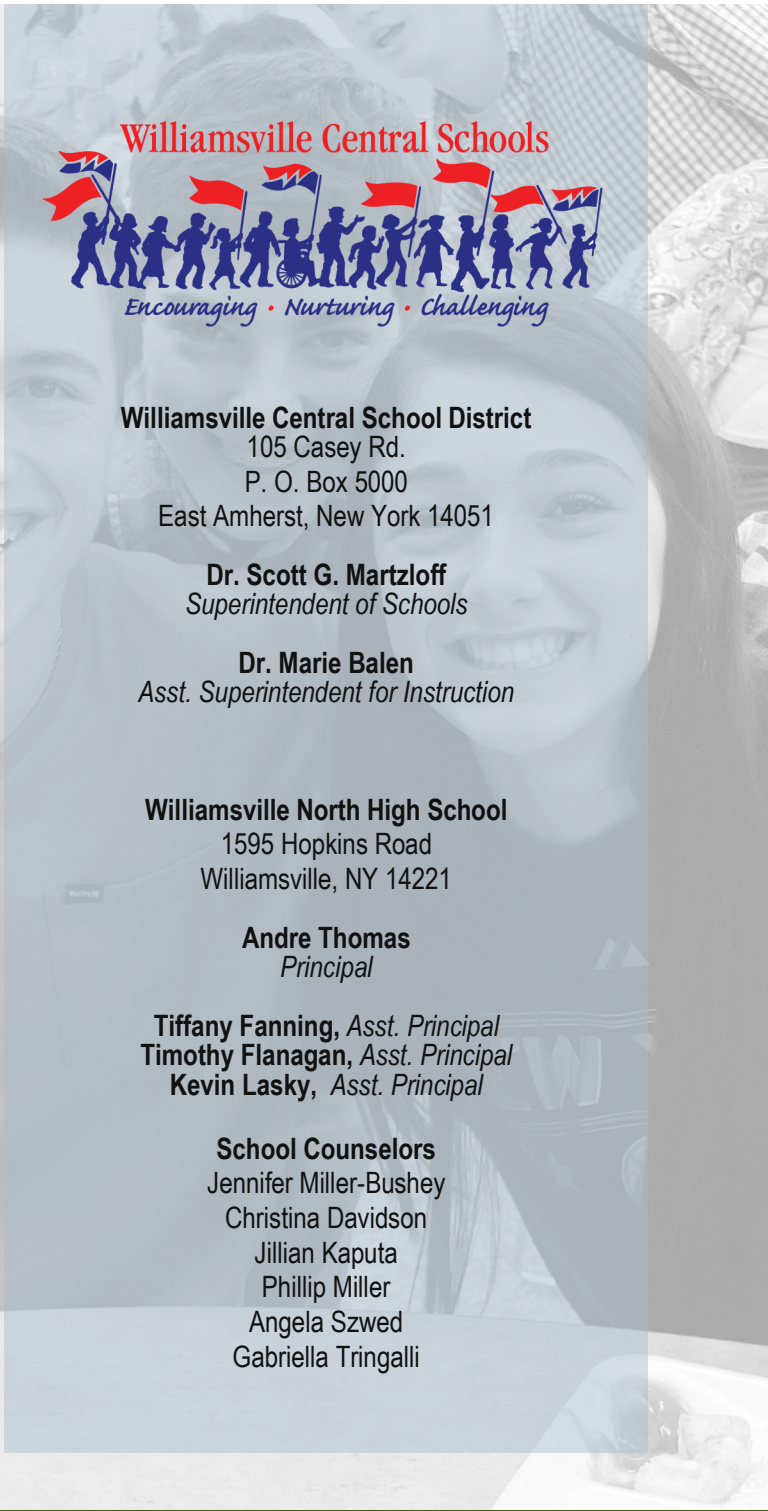


2020-2021

COURSE CATALOG



Williamsville North High School



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

Dr. Scott G. Martzloff
Superintendent of Schools

Dr. Marie Balen
Asst. Superintendent for Instruction

Williamsville North High School
 1595 Hopkins Road
 Williamsville, NY 14221

Andre Thomas
Principal

Tiffany Fanning, Asst. Principal
Timothy Flanagan, Asst. Principal
Kevin Lasky, Asst. Principal

School Counselors
 Jennifer Miller-Bushey
 Christina Davidson
 Jillian Kaputa
 Phillip Miller
 Angela Szwed
 Gabriella Tringalli

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

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

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2019 SCHOOL PROFILE

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

CEEB CODE: 335983

Williamsville North

Superintendent of Schools: Scott G. Martzloff, Ed.D.
Principal: Andre Thomas
Assistant Principals: Kevin Lasky
Tiffany Fanning
Timothy Flanagan
Counselors: Jennifer Miller-Bushey
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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 2019-20 enrollment of 9,967 students, K-12, including three high schools with approximately 3,300 students in grades nine through twelve. The District adjoins the University at Buffalo Amherst Campus and encompasses 40 square miles including portions of the towns of Amherst, Clarence and Cheektowaga. Williamsville is consistently ranked as one of the top school districts in Western New York among 98 school districts in an eight-county region.

SCHOOL

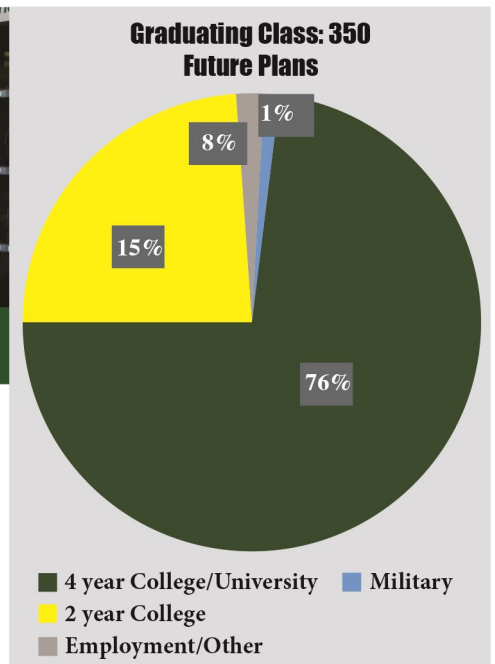
Williamsville North is accredited by the NYS Board of Regents and Regional Accreditation Association, with over 146 courses offered to approximately 1,434 students. Students at North complete the NYS Regents level curriculum, with many pursuing accelerated and Advanced Placement courses. Extra-curricular activities and athletics round out the District's commitment to a total education. North High School offers over 43 clubs and activities to our students. The North Spartans athletic teams are traditionally among the best in their division in Western New York with 21 sport programs offered through 60 athletic teams at the Varsity, Junior Varsity, and Modified competitive levels.

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



Class of 2019

| | |
|---|--|
| National Merit Semi-Finalists: 5 | Regents Diploma with Honors: 3 students-1% |
| National Merit Commended Students: 11 | Regents Diploma: 116 students-33% |
| Regents Diploma with Advanced Designation: 119 students-34% | Local Diploma: 7 students-2% |
| Regents Diploma with Advanced Designation with Honors: 105 students-30% | |



GRADING SYSTEM

As of the Class of 2021 our district no longer calculates class rank. The academic level of a course is indicated on the transcript by the letters AP, A (Accelerated), or R (Regents). All grades are based on a 100 point scale and the Grade Point Average is not weighted. The Gifted Math Program (GMP) is offered to select students through the University at Buffalo. In configuring the Grade Point Average, all courses are used. The total average of the courses is divided by the total number of credits received. Results are calculated to the fourth place. A half credit course uses only part of the students final average. (i.e. Health=1/2 credit-90 average-grade used =45) Anytime a credit for a course is less than the full unit we divide by the amount of the credit indicated.

CURRICULUM

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

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

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

ENGINEERING & TECHNOLOGY EDUCATION: Advanced Woodworking, Architectural Design & Drawing, Biotechnical Engineering, Civil Engineering & Architecture, Computer Integrated Manufacturing, Construction/Production Research & Development, Design & Drawing for Production, Digital Electronics, Energy & Aerospace, Engineering Design & Development, Manufacturing/Materials Processing, Multi-Media 1 & 2, Principles of Engineering, Transportation/Land Systems, Video Game Design & Development.

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

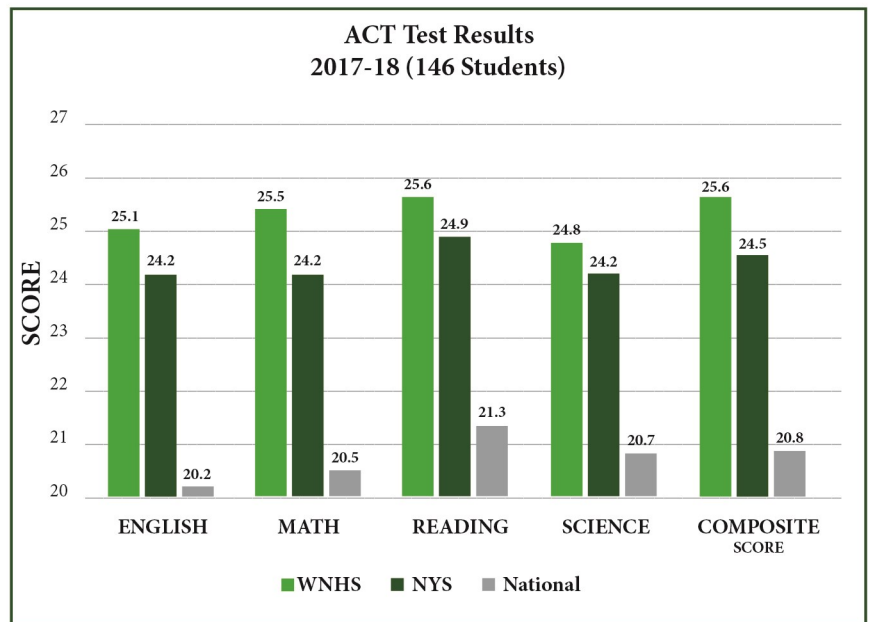
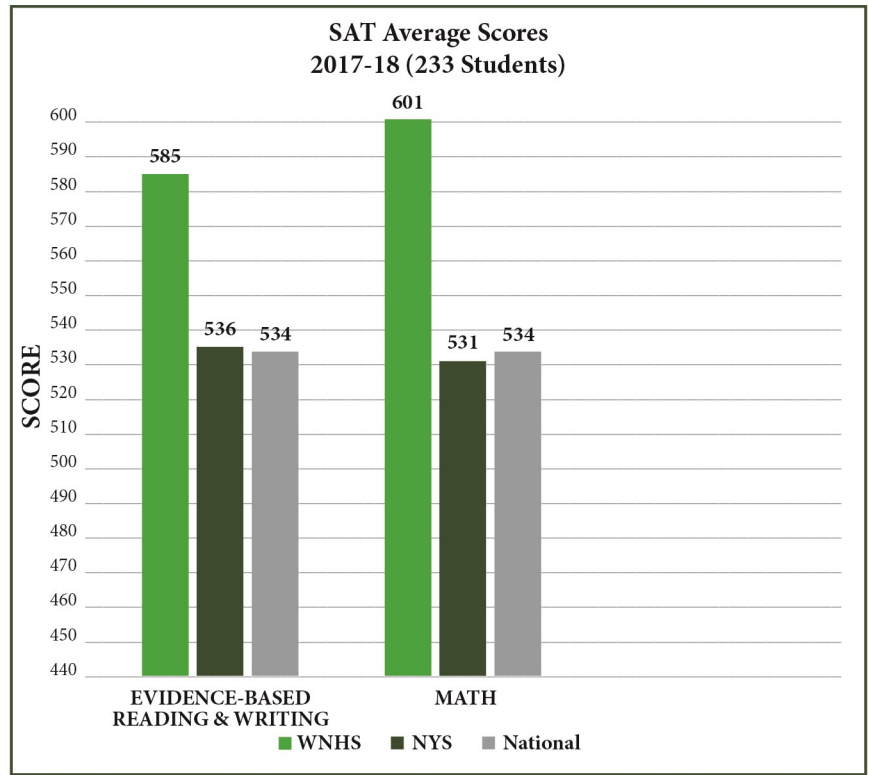
LOTE: French 1R, French 2R, French 2A, French 3R, French 3A, Comprehensive French, French 4A, French 5A, AP French, German 1R, German 2A, German 3A, German 4A, Latin 1R, Latin 2A, Latin 3A, Latin 4A, Spanish 1R, Spanish 2R, Spanish 2A, Spanish 3R, Spanish 3A, Comprehensive Spanish, Spanish 4A, Spanish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

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

MUSIC: Chorale, Concert Choir, Choraleers, Concert Orchestra, Concert Band, Symphonic Orchestra, Symphonic Band, Wind Ensemble, Music In Our Lives, Music in Our Lives II, Music Theory, AP Music Theory, Introductory Jazz Improvisation, Intermediate/Advanced Jazz Improvisation.

SCIENCE: Earth Science R, Living Environment R & A, Chemistry, Chemistry R & A, Physics, Physics R & A, Anatomy & Physiology A, Environmental Science, Forensic Science, Astronomy, Natural Disasters, AP Biology, AP Chemistry, AP Environmental Science, AP Physics.

SOCIAL STUDIES: Global History & Geography 1R, Global History & Geography 2R, AP World History, US History & Govt. R, AP United States History, AP US Govt. & Politics, Economics, Participation in Government, AP European History, AP Psychology, Psychology, War in the 20th & 21st Centuries, Genocide & Human Rights.



ADVANCED PLACEMENT RESULTS -- 430 students took 894 exams (PERCENTAGE SCORING 3 OR HIGHER)

Biology (96%)
Calculus AB (91%)
Computer Science A (81%)
English Language (68%)
English Literature (82%)
Environmental Science (72%)
Calculus BC (86%)
Chemistry (70%)
Computer Science Principles (100%)
Music Theory (91%)

Government & Politics (79%)
Physics 1 (100%)
Psychology (94%)
Statistics (81%)
US History (92%)
World History (93%)
Physics 2 (95%)
Studio Art (100%)



PREFACE

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

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

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

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



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

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

GUIDANCE/COUNSELING SERVICES and SCHOOL SERVICES

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

It is the goal of the WSHS Guidance/Counseling Department to promote the potential of each student based upon a realistic understanding of his/her 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 & Referrals

Career Education, Interest Inventories, Individual Counseling, Career Center

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
- Group and individual scheduling for 11th grade

Grade 11:

- PSAT/NMSQT - class orientation and preparation (September)
- Review of graduation
- Career/college exploration (September - June)
- College testing - SAT/ACT
- SAT II's following AP classes
- College Fairs (Sept./Oct.)
- Tentative decisions on career/college selection
- Group and individual scheduling for 12th grade

Grade 12:

- Senior orientation - career/college selection
- 11 – 12 grade Parent Information Night: financial aid/college solutions (Spring)
- Class meetings regarding high school transcript, graduation procedures, SAT's, college applications, etc.
- Individual student meetings with counselor
- Career/college programs (throughout the year)

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

- Naviance
- Career Center services - Grades 9-12
- Choices after high school – challenges, opportunities and preparation

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

CALENDAR FOR COLLEGE BOUND SENIORS

September

- Register for fall SAT/ACT or SAT II's for college admissions.
- Group orientation with school counselor
- Early decision applications must be initiated. (See your counselor)
- Meet visiting college representatives at North High School.
- Scholarship/financial aid information available

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.
- Request letters of recommendation from teachers and counselors
- Submit early decision applications to Guidance/Counseling two weeks prior to the due date.
- Submit appropriate Financial Aid Forms as required by each college as soon after October 1st as possible.

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.

January

- Mid year grades sent to colleges

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.
- Senior data sheets compiled by Guidance/Counseling office.

Naviance Student is a comprehensive website that students and parents can use to make plans about careers and colleges. In addition, Naviance Student can be used to track and analyze data about career and college plans, which provides up-to-date information that is specific to our school.

Naviance Student allows students & parents to:

- Be involved in the high school planning process – Write a resume, manage timelines and deadlines for making decisions about colleges and careers
- Research careers and colleges – Research hundreds of careers, take career assessments and research colleges
- Create plans for the future – Create goals and to-dos, and complete tasks assigned by the school to better prepare your student for future college and career goals

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

To visit our school's Family Connection site, use an Internet browser to connect to:

<https://student.naviance.com/williamsvillenh>

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

Student Login:

The Student User is your WITS ID (first initial, middle initial and first five letters of last name) and Student Password is your birthdate (2 digits for month, day, year – no spaces) and last 4 of your school ID.

Here is an example for a student account >>

| | | | |
|------------|----------------------------------|-------------------|------------|
| Student: | William E. Flame | Student Username: | weflame |
| Birthdate: | September 1 st , 1998 | Password: | 0901981234 |
| Student #: | 999-50-1234 | | |

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 |
| LOTE | 1[b] | LOTE[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
- Regents Global Studies Exam
- Regents U.S. History Exam
- Regents Science Exam

Required Exams

[All exams require a score of 65 or above]

- English Comprehensive Exam
- 3 Regents Math exams
- Regents Global Studies Exam
- Regents U.S. History Exam
- 2 Regents Science Exams
- Regents LOTE Exam [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 LOTE on their IEP, are required to have completed two units of study and earn 1 credit in LOTE 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; 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 his/her 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.
- II. Students who have failed the final exam but passed the course or failed the course by virtue of failing the exam must do the following:
- 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 every subject taken, a final grade, which is the average of the four marking period grades plus the final exam grade, is recorded on the student's transcript.
 - (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. A student will receive Regents credit for a course only if the final grade for the course AND the Regents examination grade are both 65 or higher.
6. If a student retakes a final Regents examination, the higher exam grade will be used to compute the overall cumulative average.

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.

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. Students are encouraged due to the demand and rigor of an AP course to not enroll in more than two AP courses each year.

Due to the staffing considerations given to Advanced Placement courses, a student may not be allowed to drop the Advanced Placement course once he/she has committed to enrolling in the spring.

As with any other course, an AP course must have 15 or more students enrolled in order to be scheduled for the following year.

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.

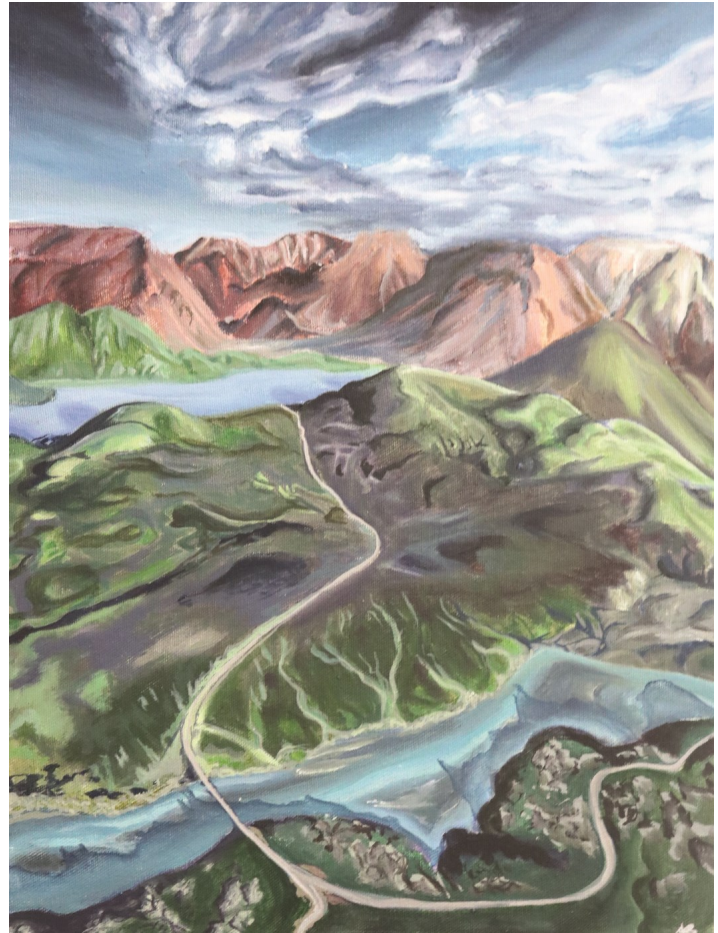
The DI and DII Academic Requirements Fact Sheets

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. Therefore, following the Error and/or Omission Deadline in June, 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 Guidance Counselor in writing for consideration.

Course request Error and/or Omission change Deadline:

Second Friday in June.

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)

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

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:

Personal Finance

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

Calculus 5R

Exploring Computer Science

Computer Programming

Advanced Placement Computer Science Principles

Advanced Placement Computer Science A

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 many 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 them to share their cultures with us in an effort to develop a deeper understanding of the diverse 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 upon registration. Once identified as an English language learner (ELL), students are placed in classes designed to meet their instructional needs based on their English proficiency level. Instructional requirements identified by New York State include Stand-Alone ENL and/or Integrated ENL.

In Stand-alone ENL, students receive instruction on English language development taught by a New York State certified ESOL teacher as a way to acquire the English Language needed for success in core content areas. All English Language Learners at the Entering and Emerging proficiency levels receive Stand-alone ENL instruction. ELLs at other proficiency levels may be scheduled for Stand-alone ENL depending on their English language learning needs.

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

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

The NYSESLAT provides information about English language development of ELLs, which drives instruction aligned to the NYS Common Core Learning Standards (CCLS), Blueprint for ELL Success (BELLS), and Bilingual Common Core Initiative (BCCI). An ELL's performance on the NYSESLAT indicates his or her 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 by the ESOL teacher to ensure the continued acquisition of the English language.



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 unique 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 fully 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 who are successful in 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. Secondary students requiring home instruction are typically provided with 10 hours of instruction per week (5 subjects, 2 hours per subject). Resident children unable to attend school due to physical, mental or emotional illness or injury, as substantiated by a licensed physician and/or private licensed mental health practitioner, meet with a certified teacher provided by the School District at home or the local library. 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 a diverse population, the District 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 District Committee on Special Education (CSE) as having a disability that interferes with learning and/or educational progress. A multidisciplinary team of professionals and 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:

- Alternate instructional strategies and adaptations geared to a student's learning style;
- Targeted intervention through the provision of curriculum modifications and 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 provided to support students with post-secondary planning, vocational skill development and readiness for work and/or higher education. Job shadowing experiences, employer-led interviews, community-based field trips and completion of interest inventories are components of transition planning. Internships may also be accessed, either within the school building or in the community once the student has acquired the necessary competencies for success in a job placement (these typically do not begin until a student is 16 years of age or older).

WHAT IS THE AP CAPSTONE PROGRAM?

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

Two new courses – AP Seminar and AP Research – allow you to immerse yourself in topics that matter to you while developing the analytic, research, problem-solving, and communication skills that colleges seek in their applicants.

This challenging program helps you deepen your passion for learning, gives you greater confidence in your academic skills, and provides a broader perspective on your world. More information can be found at: <https://lp.collegeboard.org/ap-capstone>

HOW AP CAPSTONE WORKS

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

HERE'S WHAT YOU CAN EXPECT:

YEAR ONE/AP SEMINAR

GRADE: 10, 11

LENGTH: 40 Weeks

OFFERED 2020-2021

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 2020-2021

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.

EXPLORING CONTEMPORARY ART

GRADE: 9, 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 0.5

CODE #: 6265

This unique visual arts course will include class discussions, investigation of artworks, art criticism, and art production. Students will explore the world of contemporary art, make connections to other disciplines and current events, while gaining understanding of the artists' ideas and intentions. This course is open to all students, no prerequisite required.

STUDIO IN ART

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 1.0

CODE #: 6116

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

STUDIO IN PHOTOGRAPHY & MEDIA ARTS

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 1.0

CODE #: 6126

In this art course, students will learn how to use a 35mm film camera, digital camera, as well as the basics of Adobe Photoshop. Students have the opportunity to develop their own black and white film, and enlarge their own photographs. Topics include: basic and experimental darkroom techniques, digital manipulation and how to incorporate traditional art media. Students will also study significant photographers in history. All of the camera techniques learned in this course can be applied to the most advanced digital cameras. Cameras are available for student use. NOTE: This course SATISFIES THE CULTURAL ART GRADUATION REQUIREMENT.

ADVANCED STUDIO IN PHOTOGRAPHY

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: *Studio in Photography & Media Arts*

CREDIT: 1.0

CODE #: 6226

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 2020-2021

PREREQUISITE: *Studio in Art*

CREDIT: 1.0

CODE #: 6216

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 2020-2021

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

CREDIT: 1.0

CODE #: 6316



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

STUDIO IN SCULPTURE & CERAMICS

GRADE: 10, 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2020-2021

PREREQUISITE: *Studio in Art*

CREDIT: 1.0

CODE #: 6266



This upper-level art course offers an opportunity for students who wish to create three-dimensional art. Students will explore the element of form using a variety of materials such as clay, plaster, wood, and metals. Students will also learn the methods of working with clay such as coiling, slab building, and throwing on the wheel. Final products will be displayed around the school and community. Students are encouraged to explore individual styles while producing a diverse body of three-dimensional work. Advanced Studies Course - SUNY College Credit available through ECC.

GRAPHIC DESIGN

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: *Studio in Art or Studio in Photography & Media Arts*

CREDIT: 1.0

CODE #: 6136



This course (previously titled Design for the Graphic Artist) 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.

ART PORTFOLIO

GRADE: 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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

CREDIT: 1.0

CODE #: 6416

In this course, advanced students will focus on portfolio development as they continue to develop skills in producing high quality works of art. Emphasis is placed on creating more complex visual statements. A wide range of materials and processes will be further explored, and students will have the opportunity to focus on a chosen subject or medium. The course is intended for advanced students creating a portfolio, but not taking the AP exam.

AP STUDIO IN ART

GRADE: 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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 #: 6515



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 CEEB (College Entrance Examinations Board) 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 COURSE OFFERINGS

GRADES 9, 10, 11 & 12

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. Students begin to learn the knowledge and 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 2020-2021

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 business major at the collegiate level. Advanced Studies Course - SUNY College Credit available through ECC.

This is the capstone course for the CTE endorsement in Accounting.

SUPA: ACC 151 INTRODUCTION TO FINANCIAL ACCOUNTING

GRADE: 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2020-2021

PREREQUISITE: None, but Accounting I is recommended.

CREDIT: 1.0

CODE #:



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

OFFERED 2020-2021

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.

ADVERTISING AND MEDIA RELATIONS

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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. This is a capstone course for the CTE endorsement in Marketing.

BUSINESS AND PERSONAL LAW

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 1.0

CODE #: 7156



This exciting 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 COMMUNICATIONS

GRADE: 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 0.5

CODE #: 7236



This half-year course will prepare students for College and Career readiness. Topics include: Finding a major/degree/career path for undergraduate and graduate studies, college search, applying to college, the common application, college essays, financing college costs/loans, tuition, room and board, fees, books, scholarships, comparing college and university programs/costs, obtaining letters of recommendation, resume strategies, communication skills, writing and formatting papers, reading skill development, study strategies, the communication model, presentation skills, applying advanced computer software skills, weekly budgets, time management/scheduling, individual college and career prospects, college life, committing and preparing for college. Advanced Studies Course - SUNY College Credit available through ECC. Recommended for Seniors, Fall Semester and Juniors, Spring Semester.

ENTREPRENEURSHIP

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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 involves students in a variety of activities that will provide them with the skills necessary to be successful in a constantly changing workplace.

This is the capstone course for the CTE endorsement in Business Administration and Marketing.

INTRODUCTION TO BUSINESS

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 1.0

CODE #: 7066



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

INTERNATIONAL BUSINESS

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

PREREQUISITE: *Introduction to Business*

CREDIT: 0.5

CODE #: N7176

This course will provide students with the foundation necessary to understand International Business and the various aspects of conducting business in a global economy. It will aid students in gaining an understanding about the customs of people from different geographic, cultural, racial, and ethnic backgrounds of the world. 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 prepares students to work, live, and think in a global environment.

MICROSOFT OFFICE COMPUTER APPLICATIONS

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 1.0

CODE #: 7186



This course places emphasis on the use of computer applications: Word processing, spreadsheets, databases, desktop publishing, multimedia presentations, and online collaboration (e.g. Google tools) to prepare for college and careers. Students will build on existing skills in computer applications and technology. Students will become proficient in the use of the computer and the preparation and proper formatting of documents such as letters, research papers, tables, envelopes, labels, and résumés in Microsoft Word. In Microsoft Excel, students will be learning cells, formulas, functions and charts. Image editing (utilizing and manipulating graphics) will be used with Microsoft Publisher templates and in Microsoft Word. Entering, sorting, and retrieving information will be employed in Microsoft Access. Student hands-on multimedia presentation strategies and techniques will be performed using Microsoft PowerPoint. Students will be learning proper keyboarding skills to enter and manipulate text, graphics, and data. Students should achieve the industry standard of typing 40 words per minute by the end of the course. They will also develop skills in file management (creating new folders, saving, deleting, storage, etc.), Internet research strategies, and the many uses of WITS. Advanced Studies Course—SUNY College Credit available through ECC. This is a required course for all CTE diploma endorsements through the Williamsville Business Department.

ADVANCED MICROSOFT OFFICE COMPUTER APPLICATIONS

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021

CREDIT: 1.0
CODE #: 7216



PREREQUISITE: *Microsoft Office Computer Applications and Keyboarding*

This advanced course will expand upon skills learned in Microsoft Office Computer Applications and Keyboarding. Students will increase their working knowledge of Word, Excel, PowerPoint, Access, and Publisher using Microsoft Office 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. There are no structured keyboarding lessons (timings, etc.) in this course. 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 2020-2021
PREREQUISITE: *None*

CREDIT: 0.5
CODE #: 7276



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.

This is a required course for all CTE diploma endorsements through the Williamsville Business Department.

PRINCIPLES OF MARKETING

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021
PREREQUISITE: *None*

CREDIT: 1.0
CODE #: 7246



A Google search results in over 70 different definitions for marketing. However it is defined, marketing provides the bridge between business and consumers. One goal of the course is to open the student's eyes to the world of marketing that is all around and to become educated decision-makers. Students will study consumer behavior in order to understand and apply marketing, management, and entrepreneurial principles to make rational economic decisions and to exhibit social responsibility in a global economy.

Marketing is a process that involves a variety of activities focused on customers and the profitable execution of those activities, including but not limited to market segmentation, target marketing, market research, promotion, pricing, product/service management, distribution, and selling. Instructional activities include case studies, current event analysis, research and discussion, demonstrations, guided notes and guest speakers. A district final assessment will be given and count as one-fifth of the student's final grade. Marketing is a course for anyone to take who is and will continue to be a consumer. This is a required course for the CTE endorsement in Marketing.

SPORTS & ENTERTAINMENT MARKETING

GRADE: 11, 12
LENGTH: 20 Weeks
OFFERED 2020-2021

CREDIT: 0.5
CODE #: N7226

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

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 in amateur or professional sports or sporting events, or entertainment events.

There will be a focus on brand development and branding of athletes and celebrities as well as event planning. Through the course students will see how sports and entertainment events and professionals are used to develop and sell merchandise and other services. Students will also be able to explore careers related to the sports and entertainment industries.

YOUTH LEADERSHIP

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021
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.

This is a capstone course for the CTE endorsement in Business Administration.

INTERNSHIP (CAREER EXPLORATION INTERNSHIP PROGRAM—CEIP)

GRADE: 11, 12 **CREDIT:** 0.5
LENGTH: 20 Weeks (school year) or 6 weeks (summer) **CODE #:** 7916
OFFERED 2020-2021
PREREQUISITE: None

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

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

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

WORK EXPERIENCE (GENERAL EDUCATION WORK EXPERIENCE PROGRAM—GEWEP)

GRADE: 11, 12 **CREDIT:** 0.5 or 1.0 (depending on hours worked)
LENGTH: **CODE #:** 7906
OFFERED 2020-2021
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:** N/A
LENGTH: N/A **CODE #:** N/A
OFFERED 2020-2021
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.

* **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.**

CTE Williamsville Central Schools
Business Pathways
Career & Technical Education

Required for all Pathways:



Choose (1) Business Pathway Capstone Course, recommended 11th or 12th Grade



Business Administration



Accounting



Marketing



Computer Information Systems



National Assessment (potential to earn up to 6 college credits):



CTE (Career & Technical Education) PATHWAY & DESIGNATION BENEFITS:

- The highest New York State diploma designation you may earn.
- Credibility in the business world.
- National exam similar to AP exams; fee paid by the district.
- Potential to earn up to six (6) college credits based on NOCTI standards.
- Mastery of essential employability skills and rigorous academic content standards.
- Supports a seamless transition to postsecondary education and entry to a career.

*Required for all CTE

Microsoft Office Computer Applications*

- Learn to type properly in order to increase speed and accuracy – save time in your future!
- Gain skills in Word, Excel, PowerPoint, Publisher and Access – great for the rest of High School, college, and for your resume.

Introduction to Business*

- Explore career options for yourself while gaining a solid foundation of business skills.
- Learn the best methods for studying, organization, time management and other important life skills.

Personal Finance* (half-year)

- Help yourself get ready for the real world with personal finance skills such as investing, playing the stock market, making money, budgeting, banking, credit cards, and school loans!
- This is what people are always saying, *I wish I had learned this in High School.*

CTE PATHWAY CAPSTONE COURSE OPTIONS – YOUR CHOICE:

Accounting 1 OR SUPA Accounting *Accounting Requirement (College Credit)

- Learn the accounting process and see if the many career opportunities with great financial earnings could be for you.
- If you like procedures (a set way to do things) or independent work this is great for you.

Principles of Marketing AND Advertising & Media Relations OR Entrepreneurship *Marketing Requirement

- Examine the world of marketing that is always all around you! Become a wise consumer and decision maker.
- You will examine both creative and strategic approaches to marketing. Especially helpful for DECA students.

Entrepreneurship *Business Administration Requirement (or Youth Leadership)

- Small businesses are the backbone of our economy! Learn what it takes to start your own business.
- If you love Shark Tank this is a great course for you.

Youth Leadership *Business Administration Requirement (or Entrepreneurship)

- Apply and grow your own leadership skills through a variety of activities.

Advanced Microsoft Office Computer Applications *Computer & Information Requirement

- Take your computer applications skills to the advanced level here-better equipping you for college & your career.

COMPUTER SCIENCE



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

EXPLORING COMPUTER SCIENCE

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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 2020-2021

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. During the year, students are exposed to three programming languages. Object-oriented programming is introduced through Visual Basic, classes are taught with C++, and the course concludes with JAVA. With an emphasis on problem-solving and algorithm development, this rigorous course will prepare students for the AP Computer Science course, which will be taught in JAVA.

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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 COMPUTER SCIENCE PRINCIPLES

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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 COMPUTER SCIENCE A

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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, vectors, 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 her/his college's policies, s/he may receive college credit, advanced placement, or both. This course is recommended for the student who has competence in written communication, familiarity with mathematical notation (2nd year algebra level), experience in problem solving, and an appreciation of the need to structure and develop a given topic in a logical manner.

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

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

ENGINEERING & TECHNOLOGY EDUCATION (ETE)



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

COURSE PATHWAY SAMPLES(* - indicates a PLTW course)

•Architecture

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

•Engineering

- Design and Drawing for Production*
- (Any combination of three or more courses)
 - o Biotechnical Engineering
 - o Civil Engineering and Architecture*
 - o Computer Integrated 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 2020-2021

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 2020-2021

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

CREDIT: 1.0

CODE #: 7426

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: 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 1.0

CODE #: 7536

EXAMINATION: Local Assessment

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

BIOTECHNICAL ENGINEERING

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: Completed or concurrently enrolled in Living Environment

CREDIT: 1.0

CODE #: 7476

EXAMINATION: Local Assessment

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

COMMUNICATIONS AND MEDIA PRODUCTION

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

NOT OFFERED AT EAST HS AND NORTH HS

PREREQUISITE: None

CREDIT: 1.0

CODE #: 7526

EXAMINATION: Local Assessment

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

CONSTRUCTION/PRODUCTION

GRADE: 10, 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2020-2021

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 his/her project.

ELECTRONICS AND ROBOTICS

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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 2020-2021
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 2020-2021
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 2020-2021
PREREQUISITE: None

CREDIT: 1.0
CODE #: 7686
EXAMINATION: Local Assessment

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

MULTIMEDIA 2

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021
PREREQUISITE: Multimedia 1

CREDIT: 1.0
CODE #: 7586
EXAMINATION: Local Assessment

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

PHOTOGRAPHY 1

GRADE: 9, 10, 11, 12
LENGTH: 40 Weeks
NOT OFFERED AT EAST HS AND NORTH HS
PREREQUISITE: None

CREDIT: 1.0
CODE #: 7576
EXAMINATION: Local Assessment

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

NOTE: This course meets the NYS one unit Fine Arts graduation requirement.

PLTW – CIVIL ENGINEERING AND ARCHITECTURE (CEA)

GRADE: 10, 11, 12

LENGTH: 40 Weeks

NOT OFFERED 2020-2021PREREQUISITE: *PLTW-Design and Drawing for Production or teacher approval*

CREDIT: 1.0

CODE #: 7606

EXAMINATION: *PLTW Assessment*

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

NOTE: College credit may be earned for students who successfully complete this course.

PLTW – COMPUTER INTEGRATED MANUFACTURING (CIM)

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021PREREQUISITE: *PLTW-Design and Drawing for Production or teacher approval*

CREDIT: 1.0

CODE #: 7696

EXAMINATION: *PLTW Assessment*

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

PLTW – DESIGN AND DRAWING FOR PRODUCTION (DDP)

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021PREREQUISITE: *None*

CREDIT: 1.0

CODE #: 7596

EXAMINATION: *PLTW Assessment*

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

NOTE:

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

PLTW – DIGITAL ELECTRONICS (DE)**GRADE:** 10, 11, 12**LENGTH:** 40 Weeks**OFFERED 2020-2021****PREREQUISITE:** *Design and Drawing for Production, and Electronics & Robotics, or teacher approval***CREDIT:** 1.0**CODE #:** 7566**EXAMINATION:** *PLTW Assessment*

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

PLTW – ENGINEERING DESIGN AND DEVELOPMENT (EDD)**GRADE:** 12**LENGTH:** 40 Weeks**OFFERED 2020-2021****PREREQUISITE:** *A minimum of two PLTW courses and teacher approval***CREDIT:** 1.0**CODE #:** 7616**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 2020-2021****PREREQUISITE:** *Design and Drawing for Production or teacher approval***CREDIT:** 1.0**CODE #:** 7676**EXAMINATION:** *PLTW Assessment*

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

VIDEO GAME DESIGN AND DEVELOPMENT

GRADE: 9, 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 0.5

CODE #: 7667

EXAMINATION: Local Assessment

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

TSA—TECHNOLOGY STUDENT ASSOCIATION

GRADE: 9, 10, 11, 12

LENGTH:

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: n/a

CODE #:

The Technology Student Association (TSA) is the only after school student organization devoted exclusively to the needs of students interested in engineering & technology. North's TSA chapter is open to any students who are interested and meets once a week in order to prepare for competitions. TSA's membership includes over 150,000 middle and high school students in 2,000 schools spanning 48 states. TSA is supported by educators, parents and business leaders who believe in the need for a technologically literate society. Members learn through exciting competitive events, leadership opportunities and much more by competing at local, state and national competitions. The diversity of activities makes TSA a positive experience for every student.

* **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 LANGUAGE ARTS

ENGLISH 9R

GRADE: 9

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: *English 8*

CREDIT: 1.0

CODE #: 1113

English 9 is aligned to NYS Generation Learning standards for reading, writing, listening, and speaking. Students become more proficient readers, writers, and critical thinkers. They strengthen analytical 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 2020-2021

PREREQUISITE: *English 9R*

CREDIT: 1.0

CODE #: 1223

English 10 continues students' preparation for the NYS English Regents Examination by building upon the reading, writing, listening, and speaking 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 2020-2021

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 analytical 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 an excellent foundation for 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 2020-2021

PREREQUISITE: *English 10R or 10A*

CREDIT: 1.0

CODE #: 1333

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

ENGLISH 11A

GRADE: 10, 11
LENGTH: 40 Weeks
OFFERED 2020-2021

CREDIT: 1.0
CODE #: 1334

PREREQUISITE: *English 10R or English 10A*

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, including American 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 an excellent 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 2020-2021

CREDIT: 1.0
CODE #: 1446

PREREQUISITE: *English 11R or 11A*

English 12 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, including American 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 ENGLISH LANGUAGE AND COMPOSITION*

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021

CREDIT: 1.0
CODE #: 1335



PREREQUISITE: *English 10R, English 10A, English 11R, or English 11A*

The AP English Language and Composition course aligns to an introductory college-level rhetoric and writing curriculum, which requires students to develop evidence-based analytical and argumentative essays that proceed through several stages or drafts. Students evaluate, synthesize, and cite research to support their arguments. Throughout the course, students develop a personal style by making appropriate grammatical choices. Additionally, students read and analyze the rhetorical elements and their effects in non-fiction texts, including graphic images as forms of text, from many disciplines and historical periods. Students will take the AP English Language and Composition Examination. *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 2020-2021

CREDIT: 1.0
CODE #: 1445



PREREQUISITE: *English 10R, English 10A, English 11R or English 11A*

The AP English Literature and Composition course aligns to an introductory college-level literary analysis course. The course engages students in the 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, symbolism, and tone. Writing assignments include expository, analytical, and argumentative essays that require students to analyze and interpret literary works. Students will take the AP English Literature and Composition Examination. *The course is open to third and fourth year English students.*

SUPA: WRT 114 INTRODUCTION TO CREATIVE NONFICTION*

GRADE: 11, 12
LENGTH: 20 Weeks
OFFERED 2020-2021

CREDIT: 0.5
CODE #: 1746



PREREQUISITE: *Open to juniors and seniors*

This course focuses on the genre of creative nonfiction. Students explore varieties of creative nonfiction, such as memoir; biography; the personal essay; travel, science, and food writing; and "new journalism." As its name suggests, creative nonfiction borrows elements from fiction and poetry (e.g., description, scene construction, dialogue, etc.) yet still aims to tell the truth. For a writer to "tell it slant," however, is to acknowledge the ways in which one's subjective viewpoint shapes what counts as "the truth" in telling a story about one's own or another's experiences. Students will have the opportunity to experiment with style, genre, and subject in a writing studio environment and to read varied examples of contemporary creative nonfiction (e.g., Michael Pollan's *The Omnivore's Dilemma*). Students will craft and workshop their own creative nonfiction compositions. **This is a college course offered through Syracuse University, and students paying the (discounted) fee for SU credit will receive a Syracuse University transcript.** Students who pass the course earn 3 credits from Syracuse University.

SUPA: WRT 105 PRACTICES OF ACADEMIC WRITING *

GRADE: 12
LENGTH: 20 Weeks
OFFERED 2020-2021
PREREQUISITE: *Seniors only*

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: CRS 325 PRESENTATIONAL SPEAKING *

GRADE: 12
LENGTH: 20 Weeks
OFFERED 2020-2021
PREREQUISITE: *Speech & Communications or Seniors Only*

CREDIT: 0.5
CODE #: 1726



This course presents the conceptual and practical dimensions of formal presentations in organizational settings. We will 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. **This is a college course offered through Syracuse University, and students paying the (discounted) fee for SU credit will receive a Syracuse University transcript.** Students who pass the course earn 3 credits from Syracuse University.

SUPA: ETS 181 CLASS AND LITERACY TEXTS *

GRADE: 12
LENGTH: 20 Weeks
OFFERED 2020-2021
PREREQUISITE: *Seniors only*

CREDIT: 0.5
CODE #: 1736



Class & Literary Texts 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. Fostering a richer understanding of their own implication within these systems of power, this course helps students become better writers and stronger interpretive readers by practicing close reading, evidence-based analysis and argumentation, and independent-inquiry skills. Thus through interpretive practice students develop a basic understanding of core concepts of social class, including stratification, inequality, privilege, capitalism and labor. **This is a college course offered through Syracuse University, and students paying the (discounted) fee for SU credit will receive a Syracuse University transcript.** Students who pass the course earn 3 credits from Syracuse University.

CREATIVE WRITING

GRADE: 9, 10, 11, 12
LENGTH: 20 Weeks
OFFERED 2020-2021
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. Students also submit their works for inclusion in district poetry festivals.

FILM STUDY

GRADE: 9, 10, 11, 12
LENGTH: 20 Weeks
OFFERED 2020-2021
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

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 0.5

CODE #: 1626

In a world of 24-hour news network 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 material 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

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 0.5

CODE #: 1676

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

SPEECH AND COMMUNICATION

GRADE: 9, 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

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 2020-2021

PREREQUISITE: None

CREDIT: 0.5

CODE #: 1646

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

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

LOTE PHILOSOPHY

The Williamsville School District's LOTE Program is built on the philosophy of three major New York State documents. They include the *Learning Standards for Languages Other than English*, *Modern Languages for Communication Syllabus*, and *The Learning Centered Curriculum and Assessment*. Our program aims to provide students with learner-centered classrooms that emphasize a communicative approach.

The purpose of our LOTE 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.

LOTE (Languages Other Than English)

The Williamsville Central School District offers high school language study in 4 languages: French, German, Latin, and Spanish. A Regents sequence is available in each language. Students are encouraged to continue their language study through Grade 12. The LOTE curriculum represents a focus on proficiency at Checkpoint A and competency at Checkpoints B and C, as defined by the New York State syllabi: *Modern Languages for Communication* and *Latin for Communication*.

New York State (NYSED) LOTE Graduation Requirement

Students entering 9th grade in the fall of 2002 and thereafter must complete two units of study in a second language by the end of 9th grade AND have a passing grade on a locally developed Regents assessment OR successfully complete a high-school level second language course in order to receive a Regents diploma.

- Regents Diploma: 1 high school LOTE credit is required
- Regents Diploma with Advanced Designation: Students successfully complete study of a language through the Checkpoint B level AND pass the locally developed Regents assessment ***in the same language***
- All students must meet the minimum LOTE requirement except those who have an IEP that specifically identifies a disability that adversely affects the child's ability to learn a language other than English

There are two high 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 District Checkpoint B Assessment, a locally developed Regents Exam. The overall advantage of this option is additional exposure to the four language skills which results in 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 language other than English. 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 the District Checkpoint B Assessment, a locally developed Regents Exam. These courses are designed for students who have demonstrated superior performance in a language other than English. 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.

Accelerated courses (A courses) are for students who have a strong desire to excel in communication in a language other than English. 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 the District Checkpoint B Assessment. These courses are designed for students who have demonstrated superior performance in a language other than English. 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 phonology 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 2020-2021

EXAMINATION: *Locally developed Regents Checkpoint A examination*

CHECKPOINT A: GERMAN

GRADE: 9, 10, 11, 12

CODE #: 5213

CREDIT: 1

OFFERED 2020-2021

EXAMINATION: *Locally developed Regents Checkpoint A examination*

CHECKPOINT A: LATIN

GRADE: 9, 10, 11, 12

CODE #: 5413

CREDIT: 1

OFFERED 2020-2021

EXAMINATION: *Locally developed Regents Checkpoint A examination*

CHECKPOINT A: SPANISH

GRADE: 9, 10, 11, 12

CODE #: 5513

CREDIT: 1

OFFERED 2020-2021

EXAMINATION: *Locally developed Regents Checkpoint A examination*

INTRODUCTION TO MANDARIN

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

CREDIT: 1.0

CODE #: 5613

EXAMINATION: *Regents Checkpoint A examination*

Study of Chinese culture and language allows students to make connections to their own culture as well as further develop global awareness and understanding. This introductory course approaches the study of Mandarin through the four modalities of listening, speaking, reading and writing. Content includes dialogue, vocabulary, pronunciation and grammar, with the culture of Chinese speaking countries infused into classroom activities. Performance-based speaking and writing assessments will provide students the opportunity to practice language in context. Listening and reading tasks and assessments will focus on recognition and acquisition of the target language.

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 completed the District Checkpoint A Assessment 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 2020-2021
 EXAMINATION: *Distinction Exam*

SPANISH 2R

GRADE: 9, 10, 11, 12
 CODE #: 5523
 CREDIT: 1
 OFFERED 2020-2021
 EXAMINATION: *Distinction Exam*

LEVEL 2A

PREREQUISITE: *Students must have passed the Checkpoint A course in the same language or enroll with teacher permission. Students are recommended to the 2A level of study by their LOTE teachers and 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 LOTE teachers and 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 2020-2021
 EXAMINATION: *Distinction Exam*

LATIN 2A

GRADE: 9, 10, 11, 12
 CODE #: 5434
 CREDIT: 1
 OFFERED 2020-2021
 EXAMINATION: *Distinction Exam*

GERMAN 2A

GRADE: 9, 10, 11, 12
 CODE #: 5234
 CREDIT: 1
 OFFERED 2020-2021
 EXAMINATION: *Distinction Exam*

SPANISH 2A

GRADE: 9, 10, 11, 12
 CODE #: 5534
 CREDIT: 1
 OFFERED 2020-2021
 EXAMINATION: *Distinction Exam*

MANDARIN 2A**GRADE:** 9, 10, 11, 12**LENGTH:****OFFERED 2020-2021****CREDIT:** 1.0**CODE #:** N5623**EXAMINATION:** *District examination*

Aiming to the Novice-High proficiency level, students will participate collaboratively in guided conversation and presentation in both oral and written patterns. The course continues to provide four themes with twelve daily-life topics throughout the year, expanding the vocabularies and grammar concepts based on Mandarin I. Students will develop communication strategies and language skills to interact with others and express themselves on familiar topics in intercultural situation. Comparing and contrasting to their own cultures, students will also learn to understand and appreciate the diversity of languages and cultures around the world, which enhances their global awareness. Integrated performance assessment is mainly adopted in this course.

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 2020-2021****EXAMINATION:** *Distinction Exam***SPANISH 3R****GRADE:** 10, 11, 12**CODE #:** 5543**CREDIT:** 1**OFFERED 2020-2021****EXAMINATION:** *Distinction 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 LOTE 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 the District Checkpoint B Assessment satisfies the LOTE sequence and exam requirement for a Regents Diploma with Advanced Designation.

FRENCH 3A**GRADE:** 10, 11, 12**CODE #:** 5154**CREDIT:** 1**OFFERED 2020-2021****EXAMINATION:** *Locally developed Regents Checkpoint B examination***GERMAN 3A****GRADE:** 10, 11, 12**CODE #:** 5254**CREDIT:** 1**OFFERED 2020-2021****EXAMINATION:** *Locally developed Regents Checkpoint B examination***LATIN 3A****GRADE:** 10, 11, 12**CODE #:** 5454**CREDIT:** 1**OFFERED 2020-2021****EXAMINATION:** *Locally developed Regents Checkpoint B examination***SPANISH 3A****GRADE:** 10, 11, 12**CODE #:** 5554**CREDIT:** 1**OFFERED 2020-2021****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 the District Checkpoint B Assessment satisfies the LOTE sequence and exam requirement for a Regents Diploma with Advanced Designation.

COMPREHENSIVE FRENCH

GRADE: 10, 11, 12

CODE #: 5163

CREDIT: 1

OFFERED 2020-2021

EXAMINATION: *Locally developed Regents Checkpoint B examination*

COMPREHENSIVE SPANISH

GRADE: 10, 11, 12

CODE #: 5563

CREDIT: 1

OFFERED 2020-2021

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 the District Checkpoint B Assessment. 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 LOTE 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 2020-2021

EXAMINATION: *Teacher developed examination*

GERMAN 4A

GRADE: 11, 12

CODE #: 5264

CREDIT: 1

OFFERED 2020-2021

EXAMINATION: *Teacher developed examination*

LATIN 4A

GRADE: 11, 12

CODE #: 5464

CREDIT: 1

OFFERED 2020-2021

EXAMINATION: *Teacher developed examination*

SPANISH 4A

GRADE: 11, 12

CODE #: 5564

CREDIT: 1

OFFERED 2020-2021

EXAMINATION: *Teacher developed examination*

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). This course culminates with the CLEP exam or a locally developed 5A exam. The optional CLEP exam offered in the spring at a local testing site provides students an opportunity to earn college credits. Students wanting to avoid a gap in their study who are not interested in the AP course of study should enroll in a 5A course.

FRENCH 5A

GRADE: 11, 12

CODE #: 5174

CREDIT: 1

OFFERED 2020-2021

EXAMINATION: *Teacher developed examination*

SPANISH 5A

GRADE: 11, 12

CODE #: 5574

CREDIT: 1

OFFERED 2020-2021

EXAMINATION: *Teacher developed examination*

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 French/Spanish 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.

AP FRENCH

GRADE: 11, 12

CODE #: 5175

CREDIT: 1

OFFERED 2020-2021

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.



AP SPANISH**GRADE:** 11, 12**CODE #:** 5575**CREDIT:** 1**OFFERED 2020-2021**

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.

AP LATIN**GRADE:** 11, 12**CODE #:** 5475**CREDIT:** 1**OFFERED 2020-2021****PREREQUISITE:** *Students must have passed Latin 4A or enroll with teacher permission*

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

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

MATHEMATICS



Welcome to the Mathematics Department!

"A regional leader in math." - Business First

We offer a wide variety of courses to develop your mathematical reasoning, communication, and problem solving skills. Many of the courses are leveled (e.g., honors). Assignment to levels is made on the basis of performance in previous courses, student ability, and teacher recommendations. District-wide 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 2020-2021

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 2020-2021

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 2020-2021

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 2020-2021

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 A

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: Successful completion of Algebra 1R with notable achievement 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 2020-2021

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 2020-2021

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 2A

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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

OFFERED 2020-2021

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 2020-2021

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 2020-2021

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. Topics of study include: sequences and series, vectors and matrices, conic sections, solving equations and inequalities, functions and graphs including exponential, logarithmic, and trig functions, as well as other functions such as polynomial, rational, and polar functions, and limits and derivatives. Pre-Calculus R is highly recommended preparation for the motivated, average-to-very good student whose plans include formal education beyond high school.

PRE-CALCULUS A

GRADE: 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: *Successful completion of Algebra 2A.*

CREDIT: 1.0

CODE #: 3444

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.

CALCULUS 5R

GRADE: 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021

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 CALCULUS AB*

GRADE: 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021

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 CALCULUS BC*

GRADE: 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021

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.

AP STATISTICS*

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021

CREDIT: 1.0
CODE #: 3455
EXAMINATION: AP Exam



PREREQUISITE: Successful completion of Algebra 2A or Algebra 2R with a grade of 85 or better and passing the Algebra 2 Regents Exam is strongly encouraged.

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

- * **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.**

STATISTICS

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2019-2020

PREREQUISITE: Successful completion or concurrent enrollment of Algebra 2R or higher level math course.

CREDIT: 1.0

CODE #: 3453

EXAMINATION: Local Final Exam

COLLEGE



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.

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 2020-2021

PREREQUISITE: Entrance Exam Required

CREDIT: 1 college credit (optional)

CODE #: 3690

COLLEGE



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 2020-2021
PREREQUISITE: GMP I

CREDIT: 1 high school seat credit / 2 college credits (optional)
CODE #: 3944 (Middle School: 3790)
EXAMINATION: Regents Algebra 1



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

GMP III: GSE 122 – ANALYTIC GEOMETRY

GRADE: 9
LENGTH: 40 Weeks
OFFERED 2020-2021
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 2020-2021

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 2020-2021
PREREQUISITE: GMP IV

CREDIT: 0.5 high school seat credit / 4 college credits (optional)
CODE #: 3974



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

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

GRADE: 11
LENGTH: 40 weeks
OFFERED 2020-2021
PREREQUISITE: GMP V (MTH-141)

CREDIT: 0.5 high school seat credit / 4 college credits (optional)
CODE #: 3974



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

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

GRADE: 12
LENGTH: Fall Only (20 weeks)
OFFERED 2020-2021
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 2020-2021
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 Music Program is to develop in K-12 students an appreciation, understanding and talent for music in order that they might progress on to a career in music, continue with music throughout their life as an avocation and support music and the arts as adults.

Student performance in any performing ensemble at the high school level is dependent upon a student having reached a certain level of proficiency on his or her instrument of choice. The required level of minimum proficiency and the indicator of such achievement will be determined by the music directors of the respective ensembles.

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

MUSIC IN OUR LIVES

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 1.0

CODE #: 6706

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

MUSIC IN OUR LIVES II

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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 2020-2021

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.

AP MUSIC THEORY**GRADE:** 10, 11, 12**LENGTH:** 40 Weeks**OFFERED 2020-2021****PREREQUISITE:** *Music Theory***CREDIT:** 1.0**CODE #:** 6725

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

CONCERT BAND**GRADE:** 9, 10, 11, 12**LENGTH:** 40 Weeks**OFFERED 2020-2021**

PREREQUISITE: *Ability and desire to develop musicianship, read music and perform at an appropriate level on a wind, brass, or percussion instrument (placement in the appropriate ensemble is done by audition).*

CREDIT: 1.0**CODE #:** 6696**SYMPHONIC BAND****GRADE:** 9, 10, 11, 12**LENGTH:** 40 Weeks**NOT OFFERED 2020-2021**

PREREQUISITE: *Ability and desire to develop musicianship, read music and perform at an appropriate level on a wind, brass, or percussion instrument (placement in the appropriate ensemble is done by audition).*

CREDIT: 1.0**CODE #:** 6666**WIND ENSEMBLE****GRADE:** 9, 10, 11, 12**LENGTH:** 40 Weeks**OFFERED 2020-2021**

PREREQUISITE: *Ability and desire to develop musicianship, read music and perform at an appropriate level on a wind, brass, or percussion instrument (placement in the appropriate ensemble is done by audition).*

The band 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 be encouraged to audition for and perform in festivals sponsored by the Erie County Music Educators Association, the New York State School Music Association, the New York State Band Directors Association, and the Music Educators National Conference. This includes opportunities for scholarships where applicable. The Symphonic and Concert Band instructional program will include public performances of music for winds, brass, and percussion, demonstrating skill development at a high school level (NYSSMA level 4 – 5). The Wind Ensemble instructional program will include public performances of music for winds, brass, and percussion, demonstrating skills development at a more advanced high school level (NYSSMA level 5 – 6).

CREDIT: 1.0**CODE #:** 6676**MIXED CHORUS****GRADE:** 9, 10, 11, 12**LENGTH:** 40 Weeks**OFFERED 2020-2021****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 2020-2021

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.

CHORALEERS

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: *Audition is required*

CREDIT: 1.0

CODE #: 6656

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

CONCERT ORCHESTRA

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: *Ability and desire to develop musicianship, read music and perform at an appropriate level on a string instrument (placement in the appropriate ensemble is done by audition.)*

CREDIT: 1.0

CODE #: 6686

SYMPHONY ORCHESTRA

GRADE: 9, 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

PREREQUISITE: *Ability and desire to develop musicianship, read music and perform at an appropriate level on a string instrument (placement in the appropriate ensemble is done by audition.)*

CREDIT: 1.0

CODE #: 6636

The Orchestra program at North consists of Symphonic Orchestra and Concert Orchestra. Both orchestras are comprised of students in grades 9-12 and rehearse daily. Students in the orchestra program are instructed in the development of skills in the following areas: tone production and bow control, rhythmic proficiency, technical advancement, and skills specific to string playing such as shifting, vibrato, and correct posture. The orchestra program also offers the student the opportunity to gain a better understanding and appreciation of orchestral music. The ability to work in a group, the discipline to practice at home, and the ability to be creative and expressive through music are developed through the participation in either orchestra.

Both Concert and Symphonic Orchestra students have numerous public performances throughout the year. Students in Concert Orchestra demonstrate skill development at a high school level (NYSSMA level 3-5) while students in Symphonic Orchestra will perform at a more advanced level (NYSSMA level 5-6).

INTRODUCTORY JAZZ IMPROVISATION

GRADE: 9, 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: 0.5

CODE #: 6736

This course focuses on the study of jazz music. In this course, students will develop repertoire of jazz tunes, blues, Latin, etc. Through ear training, transcription, historical study, jazz theory, development of executive skills (technical facility), and self-analysis, students develop the tools to become creative problem solvers and jazz artists. Performance opportunities are afforded to all students. The course meets every other day.

INTERMEDIATE/ADVANCED JAZZ IMPROVISATION

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

PREREQUISITE: *Introductory Jazz Improvisation*

CREDIT: 0.5

CODE #: 6746

This is the next course sequentially in the Jazz Improvisation curriculum. The content presented is similar to the introductory course; however, the concepts are studied in greater depth. Students may take this course each year upon recommendation. The course meets every other day.

JAZZ BAND & JAZZ ENSEMBLE

GRADE: 9, 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

PREREQUISITE: None

CREDIT: N/A

CODE #: N/A

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

* *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.*

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 |

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.

9-10 HIGH SCHOOL HEALTH

GRADE: 9, 10

LENGTH: 20 Weeks

OFFERED 2020-2021

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 physical activity and nutrition, sexual health education, tobacco, alcohol and other drugs, maintaining a healthy lifestyle and violence prevention.

In accordance with Williamsville Central School District Policy a student may be excused from specified units of the health course if they conflict with religious beliefs. (A written request, signed by the parent/guardian and certified in writing by a proper representative* of the parent/guardian's religion, is required.) At the beginning of the course parents are asked to sign a "consent" form in the area of sexual health education. For those students excused, alternate forms of study may be required. After completion of Health 9-10, students may also take Health 11-12 for a second half-unit of credit.

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.

*As defined by religious corporate law.

11-12 HIGH SCHOOL HEALTH

GRADE: 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

PREREQUISITE:

CREDIT: 0.5

CODE #: 8616

This course includes study in such areas as human growth and development, emotional health, nutrition, environmental health, family life education, diseases and disorders, consumer health, alcohol, tobacco and drug substances, safety, first aid and survival, community health and healthful lifestyles. In accordance with New York State Education Law, a student may be excused from certain parts of a health course if it conflicts with the religious beliefs of her/his parents. (A written request, signed by the parent/guardian and certified in writing by a proper representative* of the parent/guardian's religion, is required.) In accordance with Board of Education policy, at the beginning of the course parents are asked to sign a "consent" or "no consent" form in the instruction area of sexuality. For those students excused, alternate forms of study may be required. Although it is not a prerequisite, if a student already took Health 9-10, they may also take Health 11-12 for a second half-unit of credit.

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

*As defined by religious corporate law.

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: "All students in a Regents Science course must complete a State Education Department mandated laboratory requirement. The laboratory requirement consists of a minimum of 1200 minutes of hands-on (non-simulated) laboratory experiences with satisfactorily completed laboratory reports prior to admission into a Regents examination in Science. The 1200 minutes of laboratory experience must be in addition to the required classroom instruction associated with earning one 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 the link 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, AP Biology, AP Chemistry, AP Environmental Science, AP Physics, Astronomy, Environmental Science, Forensic Science, Great Lakes, Natural Disasters

AP BIOLOGY**GRADE:** 10, 11, 12**LENGTH:** 40 Weeks**OFFERED 2020-2021****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.

AP CHEMISTRY**GRADE:** 10, 11, 12**LENGTH:** 40 Weeks**OFFERED 2020-2021****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.

AP ENVIRONMENTAL SCIENCE**GRADE:** 10, 11, 12**LENGTH:** 40 Weeks**OFFERED 2020-2021****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) 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.**

AP PHYSICS 2

GRADE: 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021

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.

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*

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 A/H

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021

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

CREDIT: 1.0
CODE #: 4614
EXAMINATION: *Local Final Exam*

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

ASTRONOMY

GRADE: 10, 11, 12
LENGTH: 20 Weeks
OFFERED 2020-2021

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 2020-2021
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.

CHEMISTRY R

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021
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 2020-2021
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 2020-2021
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 2020-2021
PREREQUISITE: Completed two science courses, one being Living Environment, and the other from the Physical Setting, and successfully completed of one science regents examination.

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

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

FORENSIC SCIENCE

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED: 2020-2021

CREDIT: 1.0
CODE #: 4532
EXAMINATION: Forensic Science Final Exam



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

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
OFFERED: 2020-2021

CREDIT: 0.5
EXAMINATION: Local Final Exam
CODE: 4556

PREREQUISITE: Completed Earth Science

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, alga 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: 2020-2021
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: 2020-2021
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 2020-2021

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 2020-2021

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 2020-2021

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 2020-2021

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 2R (or AP equivalent), 1 unit of US 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 2020-2021

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 (following the Regents Global IIR format).

GLOBAL HISTORY AND GEOGRAPHY IIR

GRADE: 10

LENGTH: 40 Weeks

OFFERED 2020-2021

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 WORLD HISTORY

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

CREDIT: 1.0

CODE #: 2235

EXAMINATION: AP World History and Regents Global History & Geography 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 must be taken to fulfill the graduation requirement.



UNITED STATES HISTORY AND GOVERNMENT R

GRADE: 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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

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 UNITED STATES HISTORY

GRADE: 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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).

CREDIT: 1.0

CODE #: 2335

EXAMINATION: AP US History and Government Regents

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 must also be taken to fulfill the graduation requirement. The course may be taken in addition to United States History and Government R as an elective.



ADVANCED PLACEMENT UNITED STATES GOVERNMENT AND POLITICS AND ECONOMICS

GRADE: 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021 NORTH & SOUTH ONLY

PREREQUISITE: Successful completion of Global IR and Global IIR, US History & 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).

CREDIT: 1.0

CODE #: 2555

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

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 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.

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

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



ECONOMICS

GRADE: 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

PREREQUISITE: Successful completion of Global IR, Global IIR (or AP World History), US History & 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.

ADVANCED PLACEMENT MACRO ECONOMICS

GRADE: 11, 12

LENGTH: 20 Weeks

NOT OFFERED AT NORTH HS

CREDIT: 0.5

CODE #: 2445

EXAMINATION: AP Macro Economics



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

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.

PARTICIPATION IN GOVERNMENT

GRADE: 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

CREDIT: 0.5

CODE #: 2546

EXAMINATION: District Performance Standard

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

This one semester graduation requirement emphasizes the interaction between citizens and government at all levels: local, state, and federal. Public policy analysis is an integral aspect of the course with students using their social science skills and concepts to investigate social, political, and economics issues of their contemporary society. The development of active student participation in the processes of public policy analysis and 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 EUROPEAN HISTORY

GRADE: 10, 11, 12

LENGTH: 40 Weeks

OFFERED 2020-2021

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 PSYCHOLOGY

GRADE: 10, 11, 12
LENGTH: 40 Weeks
OFFERED 2020-2021

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 COMPARATIVE GOVERNMENT AND POLITICS

GRADE: 11, 12
LENGTH: 20 Weeks
NOT OFFERED AT NORTH HS

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.

SUPA ECONOMIC IDEAS AND ISSUES (ECN 203)

GRADE: 11, 12
LENGTH:
NOT OFFERED 2020-2021

CREDIT: 0.5
CODE #:
EXAMINATION: Syracuse University



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.

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.

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 2020-2021

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 2020-2021

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.

THINKING CRITICALLY IN THE AGE OF MISINFORMATION

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

CREDIT: 0.5

CODE #: 2786

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

CURRENT EVENTS

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

CREDIT: 0.5

CODE #: 2656

EXAMINATION: District Performance Standard

PREREQUISITE: Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.

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

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

HUMAN RIGHTS AND GENOCIDE STUDIES

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

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 2020-2021

CREDIT: 0.5

CODE #: 2716

EXAMINATION: District Performance Standard

PREREQUISITE: Social Studies electives are designed for students who have successfully completed Global History and Geography IR.

These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.

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

HUMANITIES

GRADE: 10, 11, 12

LENGTH: 20 Weeks

NOT OFFERED 2020-2021

CREDIT: 0.5

CODE #: 2646

EXAMINATION: District Performance Standard

PREREQUISITE: Social Studies electives are designed for students who have successfully completed Global History and Geography IR.

These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.

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

PSYCHOLOGY

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

CREDIT: 0.5

CODE #: 2676

EXAMINATION: District Performance Standard

PREREQUISITE: Social Studies electives are designed for students who have successfully completed Global History and Geography IR.

These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.

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

SOCIOLOGY

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

CREDIT: 0.5

CODE #: 2686

EXAMINATION: District Performance Standard

PREREQUISITE: Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.

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

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

TURBULENT 60'S

GRADE: 10, 11, 12

LENGTH: 20 Weeks

NOT OFFERED 2020-2021

CREDIT: 0.5

CODE #: 2666

EXAMINATION: District Performance Standard

PREREQUISITE: Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.

Why has the 1960's left such an indelible mark on the American psyche? While the disagreements persist, there is agreement on at least one point: the 60's represent a watershed in modern American history. This course is a more in depth exposure to the decade than what students would be exposed to in their United States History course. Students will explore the political, social, cultural, and controversial history of America during this crucial time period. Students will debate the many diverse topics that polarized American society during this decade.

WAR IN THE 20TH AND 21ST CENTURIES

GRADE: 10, 11, 12

LENGTH: 20 Weeks

OFFERED 2020-2021

CREDIT: 0.5

CODE #: 2706

EXAMINATION: District Performance Standard

PREREQUISITE: Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.

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

WORLD RELIGIONS

GRADE: 10, 11, 12

LENGTH: 20 Weeks

NOT OFFERED 2020-2021

CREDIT: 0.5

CODE #: 2696

EXAMINATION: District Performance Standard

PREREQUISITE: Social Studies electives are designed for students who have successfully completed Global History and Geography IR. These courses are recommended for students in grades 10-12. Interested freshmen should discuss their desire to enroll in social studies electives with their counselor, parents, and course instructor.

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

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

* **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 & Pastry Arts | | 2 yrs | 3.75 |
| Barbering | | 1 yr | 3.75 |
| Building Trades | | 2 yrs | 3.75 |
| Career Exploration | | 1 yr | 3.75 |
| Collision Repair | | 2 yrs | 3.75 |
| Cosmetology | | 2 yrs | 3.75 |
| Criminal Justice | | 2 yrs | 3.75 |
| Culinary Arts | | 2 yrs | 3.75 |
| Cybersecurity & Networking | | 2 yrs | 3.75 |
| Dental Laboratory Technology | | 2 yrs | 3.75 |
| Digital Media | | 2 yrs | 3.75 |
| Early Childhood Education | | 2 yrs | 3.75 |
| Electrical Systems | | 2 yrs | 3.75 |
| Electronics/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 |
| Occupational Education | | 2 yrs | 3.75 |
| OE I Exploratory | | 1 yr | 3.75 |
| OE II Skill Building | | 2 yrs | 3.75 |
| Video Production & Recording Arts | | 2 yrs | 3.75 |
| New Visions: Zoo, Wild Life and Conservative Careers* | | 1 yr | 4 |
| New Visions: Legal Academy* | | 1 yr | 4 |
| New Visions Connections: Health Related Careers* | | 1 yr | 4 |

*Requires application and interview +First year exploratory/2nd year skill development

**All courses are subject to change based on BOCES enrollment

ANIMAL SCIENCE

(2 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

The expanding animal care field offers a variety of career opportunities for students with an interest in animal studies and biology. This new, two year program teaches basic and advanced skills in areas such as nutrition, health and disease, animal handling and restraint, grooming, pet first aid, and medical terminology. This program provides both classroom instruction and hands-on learning with labs and clinic. Upon completion of this program, students can go on to entry-level employment or pursue further education in the fields of veterinary science, biology, business management, pet grooming, and much more.

AUTO TECHNICIAN TRAINING

(2 YEAR PROGRAM - HARKNESS, KENTON, POTTER)

This program is certified through the National Automotive Technician Education Foundation (NATEF). It provides an excellent foundation for students looking to enter an automotive college program or the entry-level workforce. Students are trained on the latest technical equipment by instructors that are Automotive Service Excellence (ASE) certified. Students who successfully complete this program will be eligible to sit for the ASE student certification exam in Auto Maintenance and Light Repair.

AVIATION TECHNOLOGY

(2 YEAR PROGRAM - HARKNESS)

This course will expose students to the world of aviation. Students will develop the skills, attitude, and flight background required by the aviation industry. Federal Aviation Administration regulations, pilot training, airport security, screening procedures, and ground control will be covered in this exciting program! Erie 1 BOCES has partnered with Prior Aviation to provide students with simulated flight training and up to 8 hours of actual flight time. Students are required to have completed 2 Regents math and 2 Regents science to enter the program.

BAKING & PASTRY ARTS

(2 YEAR PROGRAM – HARKNESS, KENTON)

Baking and Pastry Arts offers students an opportunity to understand what goes into creating beautiful finished pastries, breads, and cakes. Students will not only produce baked goods in both large and small quantities, but understand the science behind them. Baking students have an opportunity to create beautiful show pieces, plated desserts, chocolates, and individual pastries. Students will also have a chance to gain on-the-job experience during their internship program. Students in this program will gain the experience necessary to enter the baking and pastry industry at the entry level or get a jump start on their college career.

BARBERING

(1 YEAR PROGRAM - HARKNESS)

At the Erie 1 BOCES School of Barbering, students will learn the art of barbering through experienced instructors who will share the latest industry trends. Students will gain the essentials of complete hair and skin services such as steam facials, facial message, and foam shaves, as well as modern styling, hair cutting, coloring, and blow drying. Barbering is an art form that requires the skill and an understanding of the principles behind each cut. Barbering students will practice their art in a live, barbershop setting with clients from the community. As many graduates go on to open their own barbershops, students will also learn about shop ownership and business management. Erie 1 BOCES assists students in preparing for the practical exam in order to obtain a NYS Master Barbering License.

BUILDING TRADES

(2 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

This program offers instruction in carpentry and associated trade areas. Students participate in construction modules of introduction to carpentry, foundation and floor framing, wall framing, ceiling and roof framing, interior and exterior finish, cabinet making and remodeling. Students will also be introduced to the topics of masonry, plumbing and electrical systems. Practical experience through a variety of in shop projects, plus internship opportunities with regional contractors and businesses are provided to all students.

CAREER EXPLORATION

(1 YEAR PROGRAM- HARKNESS, KENTON, POTTER)

Career Exploration gives students a chance to “test drive” the Career and Technical programs of their choosing in their sophomore year of high school. Students will experience a variety of course offerings with the purpose of helping them make decisions concerning their future educational program. They will follow a set of objectives and complete projects designed for them within the various career and technical education classrooms.

Students may explore up to eight different occupational programs for five weeks each. At the end of each module, the teacher evaluates basic skills, career awareness, adherence to safety regulations, degree of interest and aptitude. The evaluations are sent to the home school guidance department. This will assist the student in selecting an appropriate occupational course for the junior and senior years.

COLLISION REPAIR

(2 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

The first 10 weeks of this program will consist of a core introduction to the automotive industry. Students will then specialize in collision repair for the remainder of the program. The program will cover the total process of auto body restoration: metal straightening, glass and panel replacement, fiberglass repair and all painting preparation and finishing techniques. Students will also perform repairs on donated vehicles, their own family vehicles, and participate in an internship at a local automotive collision repair facility.

CONNECTIONS: HEALTH RELATED CAREERS

(1 YEAR PROGRAM - VETERANS AND MILLARD FILLMORE SUBURBAN HOSPITALS, BUFFALO GENERAL MEDICAL CAMPUS)

This exciting program gives honors-level high school seniors the opportunity to observe careers in many allied health areas through a mentor relationship with a practicing professional. This 4 credit program includes Anatomy, Physiology and Disease, Health Core/Internship, English 12 and Social Studies: Participation in Government & Economics. Each of these 1 credit courses is integrated into the curriculum. Students spend three hours each day at a designated hospital site taking course work and observing all aspects of health careers. The program requires an application and interview. Must provide own transportation.

COSMETOLOGY

(2 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

This two-year program prepares students to work in the salon industry. During the active Customer Care Clinic, students put their skills into action by working on actual clients from the community. Local salon owners regularly visit classrooms to share the latest trends in cutting, coloring, and styling. In the second year, students participate in internships by working in the salon of their choice. Upon graduation, Erie 1 BOCES will assist students in completing the 1,000 instructional hours required to obtain a cosmetology license in NYS.

CRIMINAL JUSTICE

(2 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

This exciting course teaches students about various careers in the field of criminal justice. Students will explore the major areas of the system including law enforcement, courts, corrections, investigations/forensics, homeland and private security. Practical skills training includes handcuffing, searching (persons & cars), auto stops, field sobriety tests, radio communications, crime scene investigations, fingerprinting, foot impressions, composite sketching, jail cell search, and so much more. This program is an excellent choice in preparation for military service, or direct employment in private law enforcement (security), corrections or college. Local state and federal agencies participate in this program as guest speakers, field trip hosts, and internship sponsors.

CULINARY ARTS

(2 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

This program offers students a hands-on approach to the exciting world of culinary arts. Working alongside experts in the field, chefs-in-training develop a variety of sought after culinary skills and techniques through daily work experiences, in-house catering opportunities, and industry-related internships. They'll prepare and serve meals that look as good as they taste, while increasing their knowledge of food science, diet, and nutrition.

CYBERSECURITY & NETWORKING

(2 YEAR PROGRAM - HARKNESS)

Cybersecurity and Networking will examine cybercrime and consider its impact on law enforcement, national security, the corporate world and society. Students will enter the world of designing, building and maintaining networks capable of supporting and protecting national and global organizations in every industry. Students will gain skills needed to design and implement internet connectivity, Wide Area Networks (WANs) and Local Area Networks (LANs). The program is adapted to suit individual need and features hands-on, project-based training in high-demand job skills. The curriculum is aligned with National Science Education Standards, the American Association for the Advancement of Science Project 2061 Benchmarks, and Dartmouth Engineering Problem-Solving Methodology.

DENTAL LABORATORY TECHNOLOGY

(2 YEAR PROGRAM - HARKNESS)

The Dental Laboratory Technology Program is intended for students interested in pursuing a career in dental lab technology, dentistry, dental hygiene and dental assisting. The course covers five specialties of dental laboratory technology: complete denture, partial denture, crown and bridge restoration, porcelain and ceramics and orthodontics. A combination of science, art, skill and craftsmanship along with a complete comprehension of basic techniques, materials, anatomy and terminology will enable the students to fabricate an appliance from beginning to end. The program will prepare students for post-secondary education and / or entry level work in the dental field.

DIGITAL MEDIA

(2 YEAR PROGRAM - HARKNESS)

Digital Media is a two-year course designed to prepare students for entry into the professional world of media production for digital distribution. The main focus of this class is learning how to use software and hardware to create graphics, animation, audio and video, in our computer lab and studios. Throughout the course, students will be able to publish their work on the Web and participate in large scale production projects that would encompass the entire digital media needs of a company or client. Seniors will also participate in a three week internship in the digital media industry, gaining valuable experience while connecting with industry professionals. All students will leave the course with a personal portfolio Web site of work they have done throughout the two-year course. Students will be able to publish their portfolio online for use in gaining employment or entry into a college program.

EARLY CHILDHOOD EDUCATION

(2 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

The Early Childhood Program provides an in-depth study of early childhood care and education (birth – 8 years). Students will participate in and create a variety of activities for infants, toddlers, and preschoolers. Creative activities in the areas of music, art, science, math and storytelling will be investigated and practiced. Students will have a variety of hands-on experiences in both the Erie 1 BOCES playgroup and on-site preschool! Students in this program will also participate in an internship, create a professional portfolio and develop curriculum and lesson writing skills. Students who complete the program are ready to enter the job market as teacher aides, child care providers, or get a head start in college.

ELECTRICAL SYSTEMS

(2 YEAR PROGRAM – HARKNESS, POTTER)

This course deals with the application of electrical technologies in all phases of the electrical industry. It prepares students for the planning, installation, maintenance and troubleshooting of wiring systems in residential and light industrial settings according to the standards of the National Electrical Code. Instruction in principles of electricity, reading of blueprints and wiring diagrams, proper use of tools and equipment, and basic principles of motor controls with ladder logic are covered. Installation of solar and wind technology is emphasized.

ELECTRONICS & COMPUTER TECHNOLOGY

(2 YEAR PROGRAM - HARKNESS)

Students in the Electronics and Computer Technology program will develop the skills and knowledge needed to pursue careers in a wide range of fields including consumer (personal computers, video gaming, radio and television), mobile (car audio & video, navigation, security), medical (biomedical, clinical), Industrial (manufacturing) and telecommunications (cellular, telephony, data). Students are immersed in a comprehensive technical and hands-on training environment where they learn about electronics by constructing real-world projects including personal computers, amplifiers, speakers, digital clocks, computer networks and robots. They also learn to use multimeters, oscilloscopes, logic probes and other test equipment to troubleshoot and repair electronic devices. In addition to electronics and computer skills, other "in demand" skills including the development of a good work ethic, time management, punctuality, interpersonal and communication skills are stressed.

ENGINEERING AND ROBOTICS

(2 YEAR PROGRAM - HARKNESS)

Through hands on learning projects and skill based competitions, Engineering and Robotics students are prepared for industry careers or post secondary education by utilizing state-of-the-art computers, software, modeling, prototyping and robotic building components, and robotic development systems. Students will explore many areas of robotic manufacturing and engineering design technologies in order to help them make sound, career oriented decisions. This program offers students insight into how things work and the opportunity to build real mechanisms and components formulated from their own ideas or to fulfill a need or complete a concept. Our participation in First Robotics, a pumpkin throwing contest, VEX robotic competitions and other technical oriented endeavors bring together class work, your ideas, your concepts, and visions to offer real world solutions to everyday problems.

FASHION DESIGN & TECHNOLOGY

(2 YEAR PROGRAM - HARKNESS)

This two-year program focuses on the exciting world of fashion! Students will study the fashion industry discovering the steps necessary for a design to turn into a garment for sale at a retail store. Students will use state-of-the-art computer software, sewing machines and serges to create their own designs. The curriculum includes units of study in: fabric, color, design, sewing, computer applications, and retail management. Adobe Photoshop and Illustrator will be used to enhance fashion photos and create design drawings. The Fashion Design and Merchandising program will provide students with the necessary skills and knowledge to gain entry level employment or further their education in the design, manufacturing and merchandising of garments and accessories.

HEALTH CAREERS

(2 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

This program is designed to help students explore and deepen their knowledge of the many careers available to them in the field of health care, so they can make informed college and career choices. Students learn the importance of health and wellness promotion as an integral element of any health related career. The study of medical terminology and the human body in health and disease add insight for the student pursuing any medical / health career. The core curriculum provides basic skills, knowledge, and attitudes common to present and emerging health careers. Units of study in the first year of this program form the basic foundation for more specialized study in basic nursing skills for the second year. "Basic nursing skills" available as a 1-year only option.

LEGAL ACADEMY

(1 YEAR PROGRAM)

CANISIUS COLLEGE AND THE UNIVERSITY AT BUFFALO

The New Visions Legal Academy allows highly motivated, academically strong, college-bound seniors the opportunity to work on site with law-related professionals, while earning 4 hours of high school credit in government, economics, criminal justice and internship field experience. For 20 out of 40 weeks, students work on-site with law-related career professionals from the courts, law enforcement and legal support services. While in class, students work independently and cooperatively on projects grounded in Common Core Learning Standards on topics ranging from community service to free enterprise. Additional projects include the development of a public policy action plan, career portfolio, and a written resume. This program requires an application and interview. Students are responsible for their own transportation.

OCCUPATIONAL EDUCATION

(2 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

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

The OE program is divided into two phases as follows:

OE I EXPLORATORY

(1 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

OE I students explore four different career modules in automotive services, building maintenance, food service and human service. Student performance is evaluated at the end of each five week period. Evaluations from OE I should be used as a guide to help choose an appropriate area of training for OE II.

OE II SKILL BUILDING

(2 YEAR PROGRAM – HARKNESS, KENTON, POTTER)

OE II students choose one of four strands to continue skill development (automotive services, building maintenance, food service or human service listed below for two years of skill building). Curriculum activities relate to entry level employment skills necessary for successful performance in competitive jobs. Internships are available for those students who are ready to work in the community.

VIDEO PRODUCTION & RECORDING ARTS

(2 YEAR PROGRAM - HARKNESS)

The Video Production program is a two-year hands-on course for creative students who love video, film, sound, and music. While in the program, students learn to create and produce original film and music in our state-of-the-art labs.

ZOO, WILD LIFE AND CONSERVATION CAREERS (1 YEAR PROGRAM – BUFFALO ZOO)

The New Visions Zoo, Wildlife and Conservation Careers program allows highly motivated, honors level seniors the opportunity to explore a career in the many areas related to wildlife conservation and zoo management. Students will have the unique opportunity to study and shadow at the 23 Acre Buffalo Zoo. This unique program includes study in Conservation, Wildlife Research, Animal Care, Veterinary Care and Exhibit Design. Students will also gain experience in Conservation Education and Zoo Marketing and Development as well as Horticulture and Grounds and Life Systems Maintenance. Each semester will culminate with a project in which the students research and design their own animal exhibit with input from the zoo's animal experts. This program requires an application and interview. Students are responsible for their own transportation. Students must have completed 2 academic credits in Regents math and 2 academic credits in Regents science.

