PROGRAM OF STUDIES



2018 - 2019

CONESTOGA HIGH SCHOOL

200 IRISH ROAD BERWYN, PÅ 19312

DR. AMY A. MEISINGER, PRINCIPAL



2017-2018 Tredyffrin/Easttown School District

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Assistant Principal	1		
Assistant Principal.			
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Some of the words and terms used in this booklet or in the course selection and scheduling process may not be familiar to all students and parents. The following explanations may be helpful.

Academic (A) Courses

Academic courses prepare students for admission into colleges and universities. As the name implies, the emphasis is on serious academic studies. The pace accommodates students' individual needs. Academic courses receive appropriate weight when the Grade Point Average (GPA) is calculated. When instructional levels are combined, differentiation between levels may be made through adjustments to curriculum, instruction and assessment.

Accelerated (X) Courses

Accelerated courses provide a solid foundation for admission to colleges and universities. As the name implies, the pace is accelerated and the workload is demanding. Accelerated courses receive appropriate weight when the Grade Point Average (GPA) is calculated. When instructional levels are combined, differentiation between levels may be made through adjustments to curriculum, instruction and assessment.

Advanced Placement (AP) Courses

Advanced Placement, or AP, refers to college-level courses taught according to syllabi prescribed by The College Board Advanced Placement Program and/or to courses designed to prepare students for College Board AP Tests. Success in AP courses can be an important factor in admission to colleges and universities. Successful performance on AP tests (a score of 3, 4, or 5 on a five-point scale) may lead to college credit and/or advanced placement in college courses. For further information on college policies for granting of AP credit, consult the catalogs of specific colleges and universities. AP courses receive appropriate weight when the Grade Point Average (GPA) is calculated. When instructional levels are combined, differentiation between levels may be made through adjustments to curriculum, instruction and assessment.

Chester County Technical College High School

The Chester County Technical College High School (TCHS) is located in Pickering, which is near Phoenixville. TCHS provides vocational and technological training to prepare students for employment or further education in a variety of areas. Conestoga students may attend on either a full-day or half-day basis. Students attending on a half-day basis may take their required courses in English, social studies, math, science, and health at either location as offered.

Co-curricular Experiences

Co-curricular experiences refer to activity-oriented courses which are offered both for credit during the school day and as activities outside the school day.

Conflict

A scheduling conflict occurs when two or more selected courses are offered at or can only be scheduled at the same time.

Course Fee / Lab Fees

Several course descriptions indicate that a course fee or a lab fee is required of students to help defray the cost of materials associated with instruction. No student should avoid electing a course on the basis of a course fee requirement. For eligible students, course fee waivers may be confidentially obtained from a school counselor or from the Assistant Principal for the Academic Program.

Credits

One credit is earned upon successful completion (passing grade) of a course that meets the equivalent of one period daily for a full school year. Partial credit is offered for semester courses and courses that do not meet every day.

Elective Courses

Individual elective courses, by definition, are not required. However, to meet graduation requirements, students must choose electives that satisfy graduation requirements (see page 4 for more information).

Extracurricular Activities

Extracurricular refers to student clubs and activities that meet outside of the regular school day and which are not part of specific courses within the traditional school curriculum. For further information, consult the Student Organizations section of this book.

Grade Point Average (GPA)

A student's Grade Point Average is computed on both a weighted and an unweighted scale, and both are reported on the student's transcript. GPA is computed annually for all students.

Honors (H) Courses

Honors courses are those which are taught at a high school level but which, like AP courses, provide the greatest challenge and the best preparation for admission to and success at highly selective colleges. Honors level courses receive appropriate weight when the Grade Point Average (GPA) is calculated. Courses identified as H* receive AP-equivalent weight in the calculation of GPA. When instructional levels are combined, differentiation between levels may be made through adjustments to curriculum, instruction and assessment.

Interscholastic

Interscholastic refers to athletic and scholastic activities which involve competitive events with other secondary schools.

Intramural

Intramural refers to athletic and other activities which involve informal competition among students within Conestoga High School.

Maior

A major subject meets every day and, if satisfactorily completed, carries one or more credits for a full year or a half credit for a semester. The term "academic major" generally applies to major subjects within the departments of English, Social Studies, Mathematics, Science, and World Languages.

Minor

A minor subject is any subject that does not meet every day and carries less than 0.50 credit for a semester course or less than 1.00 credit for a full-year course.

Prerequisite

A prerequisite is a course that a student must complete in order to qualify for entry into another course. Before students can take Algebra 2, for example, they must have completed Algebra 1. Therefore, Algebra 1 is a prerequisite for Algebra 2.

Required Courses

Required courses are specific courses that must be taken by all students to satisfy graduation requirements. Examples of required courses are Biology, American Literature, and United States History.

Semester

A semester is half of a school year and includes two of the four marking periods. Semester 1 begins in August and ends in late January or early February. Semester 2 ends in June.

** (Double Asterisk)

Courses marked with a double asterisk may be taken more than once for credit

Introduction

One of the outstanding features of Conestoga High School is its philosophy of access, options and choice within its vast academic program. We are committed to providing an academic program that meets the needs of the individual student. With the assistance of the faculty and counseling staff, Conestoga students select from among a large number of distinct courses to develop a completely individualized program of study designed to address personal, educational, and career needs and goals. Students and their parent(s)/guardian(s) are encouraged to take advantage of the scheduled opportunities for meeting with Conestoga faculty to discuss academic options and to plan appropriate educational experiences.

The Conestoga Curriculum

Academic subjects—English, Social Studies, Mathematics, Science, and World Languages—are offered at various instructional levels to accommodate individual differences with respect to learning needs, interests, and academic preparation. Students should select the instructional level within each discipline that affords the greatest opportunity for both intellectual challenge and academic success. It is important to review course content, prerequisites, credits, and instructional levels as indicated in the *Program of Studies* in order to make the most appropriate course selections.

Experiential Learning Opportunities (ELO)

Students may apply through their counselors for administrative approval to schedule Experiential Learning Opportunities such as Independent Study, Community Service, Individualized Experience, Early College Study, Student Aide, or the Chester County Technical College High School. Applicants must be on track for graduation and qualify for the program requested. A notarized statement of parental approval or a written agreement resulting from a parent conference may be required. Early Admission to College or Early Graduation may also be options for some. Students are reminded that a strong academic program during all high school years is a key factor for many college admission officials as they evaluate applications. For additional information, visit the Student Services Center.

Scheduling Process

Students in grades 9 and 10 must schedule a minimum of 36 class periods, or the equivalent, per six-day cycle. Students in grades 11 and 12 must schedule a minimum of 32 class periods, or the equivalent, per six-day cycle. This requirement applies to both semesters. Approved experiential learning programs and science labs may be counted for purposes of this scheduling requirement. Unscheduled time may be devoted to study and/or use of the school's many support facilities: the Library/media center, learning centers, and Student Services Center. Students with special scheduling needs are encouraged to contact their counselors.

Students shall be awarded a maximum of 8.4 credits per academic year. Exceptions to this limit may be granted for students in danger of not fulfilling graduation requirements by the end of their senior year or for students who have been approved for Early College or Graduation. Other exceptions may be granted for circumstances deemed appropriate by the principal.

All students may schedule a maximum of 42 class periods per six-day cycle. Students may not exceed the 42 period maximum during either semester. The following courses shall not be counted toward the 42 period maximum:

- Learning Support classes
- English as a Second Language classes
- Science lab periods
- English, Math and Science Seminar classes
- Co-Curricular activities
- SAT Strategies course
- Team Sport or Extended Experience PE
- Experiential Learning Opportunities, e.g., Independent Study, Service Learning, or Online Coursework
- College and Career Transition

Exceptions may be granted for students needing to enroll in additional courses in order to graduate on time or for students with an approved plan for early graduation.

Course Selection

The course selection process is a complex experience in decision making. Students are encouraged to confer with parents, counselors, and teachers and to take full advantage of the many excellent opportunities available within the high school academic program. Courses that are under-subscribed may not be offered.

Equal Opportunity

The Tredyffrin/Easttown School District is an equal opportunity education institution and will not discriminate on the basis of race, color, national origin, sex, age, religion, or handicap in its activities, programs, or employment practices as required by Title VI, Title IX, section 504, Individuals with Disabilities Education Act, Chapter 15 of the *Pennsylvania School Code*, and Americans with Disabilities Act.

Access for the disabled is available in T/E's buildings. T/E will also provide assistance to the visually and/or hearing impaired and to people whose native language is not English in understanding this policy.

For information regarding civil rights, grievance procedures, services, activities, and facilities accessible to and usable by handicapped persons, contact Mrs. Jeanne Pocalyko or Mr. Chris Groppe, Tredyffrin/Easttown School District, 940 West Valley Road, Suite 1700, Wayne, PA, 19087, 610/240-1900.

Procedure for Selecting a Course of Studies

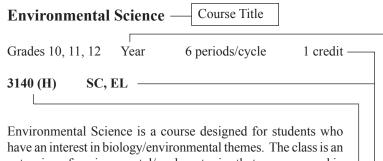
After students have chosen their courses and have obtained teacher and parent/guardian approval, their selections are prepared for data processing. Subsequently, a computer verification sheet is issued to each student. If scheduling conflicts occur, students and their parent(s)/guardian(s) are notified and requested to participate in resolving the conflict. Students are urged to consider the following suggestions as they select an individualized course of study:

- 1. Identify both short-range and long-range goals.
- 2. Consider the total high school program and anticipate course selections for future grade levels.
- 3. Review previous courses and grades.
- 4. Consult with parents, teachers and counselors.
- 5. Inventory personal skills, interests, learning pace and style, academic achievements, and aspirations.
- 6. Read this Program of Studies booklet carefully.
- 7. Review requirements for graduation.
- 8. Select courses with the desired instructional level and appropriate code number in accordance with parent/ teacher/counselor recommendation. Note that when the Grade Point Average (GPA) is calculated, courses are weighted to reflect rigor as follows:

AP/H*	AP
H	Honors
X	Accelerated
A	Academic

- 9. Schedule at least 36 class periods (grades 9 & 10) or at least 32 class periods (grades 11 & 12), or the equivalent, per six-day cycle. Students in grades 9 and 10 will schedule between 36 and 42 periods per cycle. Students in grades 11 and 12 will schedule between 32 and 42 periods per cycle. Exceptions are listed on page 2.
- 10. Consider experience-based learning opportunities such as Independent Study, Service Learning, Individualized Experience, Early College Study, Student Aide Program, or the Chester County Technical College High School. Students should work with their counselors to ensure the required approvals are met.
- 11. Submit all final choices on the Course Selection Card to the Student Services Center by the date announced. Selections submitted after the deadline will be given a lower scheduling priority, reducing one's chances of getting the courses requested.
- 12. Students will have the opportunity in the spring to verify that all courses have been correctly requested. Kindly understand that conflicts can occur, and students may be asked to submit different course requests. Student schedules are finalized and mailed home in August.

Interpreting Course Descriptions



Environmental Science is a course designed for students who have an interest in biology/environmental themes. The class is an extension of environmental/ecology topics that were covered in the student's first year Biology class. This is a multi-disciplinary science course that applies scientific concepts to real world problems and dilemmas. The course focuses on both background and laboratory studies of the environment. Course topics include traditional and experimental ecology, types of pollution, energy sources, oceanography, global trends, economics, ethics, and sustainability.

A course may be offered for a semester or for a full year. If no specific semester is stipulated, a semester course may be computer scheduled in either the first or second semester, with attention given to balancing a student's total schedule. However, semester balancing is not always possible.

Upon completion of this course, the student will have earned 1 credit in Science (SC) or Electives (EL).

The Course Code number for Environmental Science is 3140. This number is used for data purposes and computer scheduling.

"H" indicates the instructional level, which in this case is Honors. The instructional levels of English, social studies, mathematics, science, and world languages courses are designated according to the academic demands and instructional pace.

Graduation Requirements for Conestoga High School Students

Students must successfully complete 24.0 credits in grades 9 through 12 as follows:

- 4.0 credits in English to include 1.0 credit in World Literature, 1.0 credit in American Literature, and two additional year-long courses
- 3.0 credits in Mathematics
- 3.0 credits in Science to include 1.0 credit in Biology
- 3.0 credits in Social Studies to include 1.0 credit each in World History, United States History, and United States Government/Economics
- 1.9 credits in Health/Physical Education to include 1.4 credits in Physical Education and 0.5 credit in Health/Fitness
- 2.0 credits in World Languages to be fulfilled by completion of a Level II course in a second language or its equivalent. Students will demonstrate proficiency in a second language by successfully completing Level II (that is, up to and including a second year course in one language). Students who have completed the second year course in a language prior to entering high school shall be required to take one additional year of World Languages and to fulfill the second credit in an elective course in any area.

- 2.0 credits in core electives to include 1 course from each of the following three areas: Business/Technology, Visual and Performing Arts, and Family and Consumer Sciences.
- 5.1** credits in electives: any course that has not been or counted to fulfill other graduation requirements as
- 4.9* indicated in the Program of Studies shall also satisfy this requirement. Experiential Learning Opportunities listed in the *Program of Studies* shall also satisfy this requirement.
- 0.2* credits in College and Career Transition

24.0 total credits

See School Board Regulation 5227 for further information

- * Graduating class of 2020 and beyond
- ** Graduating classes prior to 2020

Promotion Requirements (Grades 9-12)

Promotion from one grade to the next is based upon credits earned. Credits earned through summer programs may be acceptable if approved in advance. Parents will be informed if a student has fewer than the required credits for promotion. To be promoted, students must meet the minimum credit requirements outlined in School District Policy #5223. Those requirements are as follows:

The promotion of a high school student is determined by cumulative credits earned.

Grade 9 to 10: Students must have passed at least four major courses and earned at least 5.5 credits.

Grade 10 to 11: Students must have earned at least 11.0 credits.

Grade 11 to 12: Students must have earned at least 17.0 credits. However, final decisions on promotion to grade 12 may be based on whether or not the student can be scheduled during the regular school day for the courses needed for a June graduation.

With advanced approval by the high school principal or designee, students may earn credits through successful completion of a summer school course or through successful completion of an Experiential Learning Program.

At all times, students in grades 9-11 must maintain a course schedule with sufficient credits to be eligible for promotion to the next grade. Students in grade 12 must maintain a course schedule with sufficient credits to qualify for June graduation. Students may not choose to repeat core academic courses that have been previously completed with a passing grade if doing so creates an inability to earn sufficient credits to achieve annual promotion (grades 9-11) or graduation (grade 12).

Assignment of Credits

Credits assigned to courses in grades nine through twelve reflect the number of instructional hours spent in the course. One unit of credit reflects approximately 120 clock hours of instruction, or a course that meets one period daily for a full year. Courses taken at schools other than Conestoga for remediation or acceleration must meet this standard to be approved. Credits earned in each course taken at Conestoga are designated to satisfy one or more graduation requirements. Listed in the heading of each course included in the *Program of Studies* are the categories to which the credits earned may be applied. The categories are as follows:

AL	American Literature	MA	Math
BI	Biology	PE	Physical Education
CE	BT, VP, FC	SC	Science
EL	Elective	UH	U.S. History
EN	English	WH	World History
GV	US Govt/Econ	WL	World Languages
HF	Health/Fitness	WT	World Literature
CC	Student Services		

Course Fees

Several course descriptions indicate that a course fee or a lab fee is required of students to help defray the cost of materials associated with instruction. No student should avoid electing a course on the basis of a course fee requirement. For eligible students, course fee waivers may be confidentially obtained from a school counselor or from the Assistant Principal for the Academic Program.

Midterm and Final Exams

Midterm and final exams are scheduled at the end of each semester for selected English, social studies, math, science, and world language courses. Students who have two or more exams scheduled at the same time should make arrangements with their teachers to take one of the exams during one of the "conflict exam times" that are built into the schedule.

If a student is unable to take an exam on the published date, the examination will be given to the student at a later date. Requests for alternate testing must be made in writing from the parent/guardian to the principal. No exam will be administered prior to its scheduled date.

Pennsylvania Keystone Exams

Keystone Exams are required for all Pennsylvania students for two purposes.

First, the Keystone Exams in Algebra 1, Literature, and Biology are used by Pennsylvania to satisfy federal testing requirements. All students enrolled in Algebra 1, American Literature, and Biology during the school year will be required to take Keystone Exams for these courses during the May testing window. Newly enrolled students who have already completed work in these courses prior to their arrival at Conestoga and have not yet achieved a proficient score on a particular Keystone Exam will be required to take that exam before the end of their junior year.

Second, in addition to complying with federal mandates, Pennsylvania requires all students in the classes of 2020 and beyond to demonstrate proficiency in Algebra 1, Literature, and Biology in order to receive a high school diploma.

Any student who does not demonstrate proficiency on a Keystone Exam will be required to receive supplemental instruction and retake the exam. If a student is unsuccessful again, he or she may be eligible to complete a Project-Based Assessment in order to meet Pennsylvania graduation requirements. All courses with a corresponding Keystone Exam are identified throughout the Program of Studies with the Keystone symbol:

Please note: This information reflects requirements reported to schools from the Pennsylvania Department of Education at the time of this publication.

Schedule Changes

The completed Course Selection Card should represent firm course choices on the part of the student and parent. Changes are not encouraged. A parental conference may be required when a change is considered absolutely necessary. Schedule changes will not be made to accommodate late arrival, early dismissal, period order requests, and/or lunch privileges for juniors and seniors. Requests by parents, guardians and students for specific teachers, instructional teams, or sections will not be considered. Students should understand that a course change in their schedules may necessitate other changes, minor or major, in their schedules. Parents of students who need to opt out of a course or part of a course for religious or personal reasons should contact the student's counselor and submit a written request to the Assistant Principal for the Academic Program. Approved schedule changes are processed only during specific time periods to be announced. Final approval for all schedule changes resides with the administration.

Drops and Withdrawals

A student may drop a course with no record of the course appearing on subsequent report cards or transcripts if the change is effected before certain dates. If a student drops a course after the 1st week in October for a 1st semester course, the 1st week in January for a year-long course, or the 1st week in March for a 2nd semester course, a WP for withdraw passing or a WF for withdraw failing shall be entered into the student's academic record, depending on the student's grade at the time of withdrawal.

Study Abroad

For course planning purposes, students interested in studying abroad should discuss options with his/her counselor in the school year prior to the year in which they plan to travel. It is the student's responsibility to provide Conestoga with verified grades and credits upon returning to Conestoga. High school level credits earned at a recognized institution will be treated as transfer credits. Grades earned while traveling abroad will not be factored into the student's CHS grade point average (GPA). Students participating in a study abroad experience are still expected to earn their TESD/CHS diploma in four years. Requests for exceptions to this must be made in writing to the building principal or designee at least one semester in advance of the travel abroad start date.

Instructional Levels

Note: H level courses identified with (H*) receive AP weight when calculating the Grade Point Average (GPA):

AP/H* Advanced Placement

H Honors
X Accelerated
A Academic

Grade Point Average

The weighted GPA includes only leveled courses valued at 0.5 credits or greater. The weighted GPA is cumulative and gives no advantage to the student with more courses. Appropriate weight is assigned to grades earned in AP, Honors, Accelerated, and Academic courses. The unweighted GPA is computed on a traditional 4.0 system in which grades earned in all leveled courses are valued as follows: A's (90-100) 4.0, B's (80-89) 3.0, C's (70-79) 2.0, and D's (65-69) 1.0. Only those courses taken at Conestoga High School are included in the weighted or unweighted GPA.

High School Courses Taken During The Middle School Years

Credits earned toward graduation begin with grade 9. Grade point average (GPA) is cumulative from grade 9 through grade 12. When courses which are traditionally viewed as predominately high school level courses are taken at a middle school, a record of them can be attached to the high school transcript. However, no credit will be awarded and the grade earned will have no impact on the student's GPA for grades 9 through 12.

Conestoga Grading System Grading Scale

Grades below 65 reflect unsatisfactory achievement and are, therefore, not credit worthy. Typically, the lowest failing grade is 55 for a student who demonstrates effort and cooperation. However, teachers may seek permission to assign grades of 50 as warranted for individual students.

Letter Grades

O - Outstanding IN - Incomplete
S - Satisfactory MX - Medical excused

N - Passing, but P - Passing improvement is needed F - Failing

U - Unsatisfactory

WP Withdraw/Passing (no credit) WF Withdraw/Failing (no credit)

TR Transfer credits

Notes: Courses taken in other educational settings will not appear on the Conestoga transcript. Documentation of these courses may be attached to the Conestoga transcript, but will not included in the calculation of GPA.

Pass-Fail Grading Option

A student who carries six major courses each semester may elect to be graded on a pass-fail (P/F) basis in one of the six major courses according to the following guidelines:

- 1. No course fulfilling a graduation requirement may be graded on a pass-fail basis.
- 2. The student must initiate the request for P/F grading by obtaining the Pass-Fail Grading Request Form in the Student Services Center.
- 3. The student must receive approval of the parent/guardian and obtain the signatures of the teacher, department chairperson, counselor, and Assistant Principal for the Academic Program, thereby notifying them of the intent to exercise the pass-fail grading option.
- The properly completed P/F Grading Request Form must be returned to the Assistant Principal for the Academic Program on or before the deadlines indicated on the form. Requests received after the deadline will not be honored.
- 5. Once approved and registered, the pass-fail grading option will not be revoked; however, should the student earn a final course grade of 95 or higher, the numerical grade will be entered in place of the letter grade and will impact the GPA.
- 6. It is especially important that throughout the process each student considering pass/fail discuss the implications of alternate grading on college admissions and college placement opportunities. Counselors are available to answer any questions about this issue.

Honor Roll

Honor Roll recognition at Conestoga High School is computed on an unweighted basis so that all students have an equal opportunity to be recognized, regardless of their course levels. Honor Roll is offered at three levels: Distinguished Honors, First Honors, and Second Honors. All three levels of recognition require that a student pass all courses taken, including majors and minors. To earn Honor Roll, a student must achieve one of the following requirements for all numerically-graded major subjects:

Distinguished Honors	95 average or higher
First Honors	90 average or higher
Second Honors	85 average or higher

A major subject is defined as any subject that meets daily and carries .50 or more credit for a semester course and 1.0 or more credits for a full-year course.

A minor subject is any subject that meets fewer than six periods per cycle and carries less than .5 credit for a semester or less than 1.0 for a full-year course.

Because of their alternate grading timeline, Experiential Learning Opportunities will not be considered in Honor Roll calculations.

The names of students achieving Honor Roll are published each marking period and at the end of the year. Certificates are sent to those students who achieve Final Honor Roll, which is based on final grades.

Class Attendance and Grades

The relationship between class attendance and student success at Conestoga cannot be overemphasized. In the event of a cut class, the student's marking period grade will be reduced by 10 points. A second cut will result in a maximum grade of 50 for the marking period.

Advanced Placement Program

Conestoga High School students have an opportunity to complete college-level courses at the secondary level and may obtain college credit and/or advanced standing. To meet this objective, academically challenging courses have been carefully developed in cooperation with The College Board. AP courses are subject to an auditing process by The College Board to ensure that curricular requirements are satisfied. This process has been successfully completed for all Advanced Placement courses. In the spirit of the Equity Policy Statement of The College Board, Conestoga is committed to welcoming into AP courses all students who are willing to accept the challenge of a rigorous academic curriculum. Students are advised to discuss Advanced Placement requirements with their counselor, individual faculty members and department chairpersons.

Departmental Scholar Recognition Program

These awards recognize graduating seniors who have excelled in a particular subject area or departmental curriculum during their four years of high school. Students qualify for consideration as a Departmental Scholar at the time of graduation if:

- They have earned outstanding final grades in all courses taken within that department or subject area, provided that the courses have been scheduled during the regular school session, excluding summer school
- These courses were Honors Level or the most advanced courses offered
- These courses met daily where available.

Departments may elect to recognize achievement in specific disciplines within the department, e.g., art, music. In addition to the above criteria, each department may establish additional requirements. Upon meeting the following criteria, transfer students may be eligible to participate in the Departmental Scholars Recognition Program:

- Enrollment in Conestoga High School for two consecutive semesters immediately prior to graduation
- · Validation of prior exemplary academic record
- Fulfillment of Department Scholar recognition program requirements.

All-School Scholar Recognition Program

This program is designed to recognize at the time of graduation those students who have excelled across the full range of academic subjects. To earn Conestoga's All-School Scholar recognition, a student must meet the following criteria in grades 9 through 12:

- Earn at least twenty academic credits, or the semester course equivalent, graded numerically (English, social studies, mathematics, science and world languages) in grades 9 through 12
- Achieve a cumulative, weighted GPA of 4.8 through the third marking period of the senior year
- Earn passing grades in all subjects
- Take at least nine (9) full-year, or the semester course equivalent, Honors/AP Level courses completed during the regular school session, excluding summer school
- Attend Conestoga High School for at least two (2) consecutive semesters immediately prior to graduation
- Provide validation, in the event of a transfer to CHS, of prior exemplary academic record.

NCAA Eligibility Standards

Students who intend to participate in Division I or II collegiate athletics are required to meet National Collegiate Athletic Association (NCAA) eligibility standards, which include the completion of high school courses. Only courses that have been approved by the NCAA can count toward fulfilling these requirements. The NCAA determines eligibility of courses on an ongoing basis. Be sure to look at Conestoga's list of NCAA-approved core courses on the Eligibility Center's web site to make certain that courses being taken have been approved as core courses. The web site address is **www.eligibilitycenter.org.** Enter Conestoga's school code 390295 for a complete list of approved courses. The NCAA typically determines courses as "not eligible" for one of two reasons: perceived level of academic rigor or subject area relevance. As of publication of this program, the following courses have not been approved by the NCAA:

- Language and Composition: 0072 (Academic level)
- English as a Second Language
- Accounting 1: 6009 and Accounting 2: 6019 (Math)
- Art History (ineligible for Social Studies credit) 7000,7010, 7001
- AP Computer Science (ineligible for Math credit) 2400
- Topics in Life Sciences

*This list of courses may not be inclusive of all CHS courses deemed "Ineligible" by the NCAA. Students are encouraged to speak with their counselor and log onto the NCAA website using the information above for a more complete listing.

Media Center

The Conestoga High School Library/Media Center is a model for high school libraries in the information age. The library provides a broad spectrum of materials and services, ranging from leisure reading through sophisticated tools for information retrieval, manipulation, and presentation. Current information technology and communication resources are integrated with instruction to encourage students to be critical and effective users of information and technology as part of a reasoned research strategy.

Literature appreciation, the ability to discover and use information, and the development of skills in support of each student's lifetime role as a thinking and contributing member of a democratic society underlie instructional philosophy. The Library/Media Center staff collaborates with the school community to teach students effective research skills in all curricular areas.

The library is open from 7:00 a.m. to 3:30 p.m. daily. Students are invited to use the facility to read, study, work with computer applications and use the Internet.

Certified Oral Presenter

Each Conestoga student has the opportunity to receive transcript recognition as a Certified Oral Presenter. To receive this recognition, a student must deliver at least three "successful" presentations. A successful presentation is defined as: 1) a presentation a teacher has evaluated using the Conestoga Oral Presentation Assessment Matrix and 2) scores of three or better in all the categories on the matrix. A Certified Oral Presenter also earns a certificate of achievement. For further details, students should speak with a teacher or an assistant principal.

Unusual Circumstances

Occasionally, extreme individual or family circumstances may necessitate an exception to Conestoga's scheduling requirements to enable a student to schedule only those courses required for graduation. The student would be permitted to leave school before the end of the school day or to arrive at school after the start of classes. Before an exception can be granted, a conference involving the student, parent, the student's counselor, the Academic Support teacher (if applicable), the Student Services Center Chairperson, and the Assistant Principal for the Academic Program must be scheduled to consider the potential implications of a reduced schedule on the student's present and future educational and vocational opportunities. For further information, visit the Student Services Center.



Experiential Learning Opportunities

At Conestoga, students will have a variety of opportunities to participate in experience-based learning activities that transcend classroom walls. Students interested in pursuing any of the activities described in this section should contact their counselor. Courses offered by other institutions that give grades shall be incorporated into the Conestoga record on a Pass/Fail (P/F) basis and shall not count toward GPA calculation.

Senior Internship Program

Conestoga's Senior Internship Program is an optional program for seniors in good standing. The program provides an opportunity for students to explore a potential career area and at the same time to enjoy a work place experience outside Conestoga. Interns leave school the last four weeks before Commencement to participate in a program of observation or hands-on experience guided by a faculty advisor and a community sponsor. No credit is awarded.

Service Learning

9307 Grades 9, 10, 11, 12 Semester/Year credit varies

Juniors and seniors may request special scheduling of required courses in order to free no more than half of the school day for experience-based learning experiences. Scientific research, community service, independent study, and communication projects may be guided by faculty advisors and community sponsors. The Service Learning course is governed by a signed contract stipulating the responsibilities of the student. Service Learning is evaluated on a Pass/Fail basis and has no impact on a student's grade point average (GPA) and class rank. Students interested in participating in this program should contact their counselors.

Online Coursework

Grades 9, 10, 11, 12 Sen

Semester/Year

credit varies

Only courses that are not already offered at Conestoga or are unable to run due to low subscription will be considered for this program. Parameters for Online Coursework:

- High school level courses only (no college courses)
- Parental and administrative pre-approval is required
- District funded (with a commitment from the student to complete the course)
- Will not count towards the 42 periods per cycle cap
- May only count towards elective credits
- Students may take 1 credit per year of online coursework

The courses will appear on the Conestoga transcript with a grade designation of Pass or Fail, and the amount of credit earned. Typically, 0.5 credit will be issued for a semester course and 1.0 credit will be issued for a full year course. Students will earn an official grade report from the online provider of the course, but this grade will not be included in Conestoga's GPA or honor roll calculations.

Interested students can find District-approved online courses on the Conestoga Student Services website, and may submit proposals to participate in courses not listed.

Early Admission to College

Chapter 4, Section 4.72 (General Curriculum Requirements) of the PA School Code allows for advanced students to qualify for their high school diploma while attending college on an early admission basis. Students who wish to accelerate their admission to college should contact their counselor to arrange a conference. Once certain about the desire to enter college early, the student should complete an Early Admission to College form, available in the Student Services Center or from the Assistant Principal for the Academic Program. The student should contact the counselor to arrange a conference to include the student, counselor, parents, and the Assistant Principal for the Academic Program. All costs associated with applying to and attending college are the responsibility of the student and his or her family. To qualify for a Conestoga diploma, students entering college early must take and pass courses approved in advance as being equivalent to the required courses at Conestoga, as well as pass, for graduating classes of 2020 and beyond, required Keystone Exams. A typical three-credit, one semester college course will be equated with a 0.5 credit semester course at Conestoga.

College Courses During High School

Students may elect to take college courses for credit and/or enrichment. College courses to be taken during the school day and/ or for high school graduation credit must be approved in advance, and a maximum of four of the credits required for graduation from Conestoga may be earned through this program. Grades and credits earned outside of Conestoga High School have no impact on the student's grade point average (GPA) and are not recorded on the Conestoga transcript. College transcripts and/ or grade reports provided to the District by a student or parent may be attached to the Conestoga transcript at the request of the student or parent. While Conestoga High School may, on occasion and where expressly stated in writing, grant credit for student-elected college or university courses, such courses are taken at the expense of students and their families, not the T/E School District. Therefore, the T/E School District is not responsible for any student tuition or online charges for any such course. All costs and transportation associated with taking college courses during high school are the responsibility of the student and the parent(s)/guardian(s). Each year Conestoga may elect to enter formal dual enrollment agreements with colleges or universities that offer additional program options.

Drexel University Visiting Scholars Program

Grades 10, 11, 12 (For the 2016-2017 academic year, Drexel University required students to be 16 years of age in order to enroll in the Visiting Scholars Program).

The Visiting Scholars Program is a highly selective program that allows high school sophomores, juniors and seniors to register for college courses on a space-available basis at Drexel University's main campus. There are no tuition charges for students enrolled as Visiting Scholars. Students attend regular university courses with Drexel students and must meet the same course requirements as college students enrolled in the class. Visiting Scholars receive high school and college credit. Grades earned outside have no impact on the student's Conestoga grade point average (GPA).

There is an application process involved with this course that requires students to meet essential criteria, as dictated by the university. Students interested in the Visiting Scholars Program should see counselors for additional information.

Student Aide Program

Grades 9, 10, 11, 12 Semester 3-6 pds/cycle credit varies

Participation in the Student Aide Program is initiated by the student and approved by the appropriate high school faculty/ staff member, counselor, and parent(s)/guardian(s), and Assistant Principal for the Academic Program. Supervised by Conestoga personnel, student aides are given the opportunity to participate in a variety of learning experiences while at the same time help their peers and their school. Students typically participate in the program during three to six of their unassigned/study periods per cycle. Registration forms may be obtained from the teacher or Department Chairperson at the beginning of each semester. In addition to working as an aide for academic departments, students may work as an aide for Student Services, Attendance, Athletics, the Media Center, or the Communications Center.

Independent Study

Grades 10, 11, 12 Semester/Year credit varies

Students who wish to pursue focused study within an academic discipline may wish to design an independent study with a teacher. Students interested in participating in this program should contact a counselor, teacher, department chairperson, or the Assistant Principal for the Academic Program to ensure an appropriate faculty member is assigned to supervise the work. The Independent Study course is governed by a signed contract stipulating the responsibilities of the student, which must be approved by a faculty member, department chairperson, counselor, parent or guardian, and the Assistant Principal for the Academic Program. Independent Study credit is not available for any course offered as part of the Program of Studies. Completed Independent Study courses will be listed on transcripts as modeled below.

0597	English I.S	1297	Social St I.S.
2297	Math I.S.	2597	Computer Prog. I.S
3197	Biology I.S.	3297	Chem I.S.
3397	Physics I.S.	4097	French I.S.
4197	German I.S.	4297	Latin I.S.
4397	Spanish I.S.	4597	Italian I.S.
4697	Chinese I.S.	9507	Art I.S.
9517	Computer Science I.S.	9547	Health I.S.
9537	Family Studies I.S.	9567	Phys Ed I.S.
9557	Music I.S.	9587	Theatre I.S.
9577	Technology Ed. I.S.	9597	TV Production I.S.



Chester County Intermediate Unit

The Chester County Technical College High School (TCHS) is operated by the Chester County Intermediate Unit on behalf of Chester County's 12 public school districts. The TCHS Pickering Campus is a comprehensive public high school specializing in Career and Technical Education (CTE). Students in grades 9-12 attend on a full or part-time basis. CTE programs prepare students for success in college, the workplace and life. All CTE programs at TCHS are designated as High Priority Occupations (HPO) by the Pennsylvania Department of Labor and Industry, and are aligned with the Pennsylvania State Academic Standards and national industry certifications. TCHS Pickering offers a complete selection of academic, college prep classes, including Advanced Placement.

CTE programs lead seamlessly to postsecondary education through the Pennsylvania Department of Education's (PDE) SOAR Programs of Study. The mission of SOAR is to prepare Students (who are) Occupationally and Academically Ready for college and careers in an increasingly diverse, high performing workforce. Graduates of TCHS Pickering's approved SOAR programs who meet challenging academic and technical criteria qualify for several free credits at over twenty-five participating colleges across Pennsylvania. These include the Pennsylvania College of Technology, Delaware County Community College, Montgomery County Community College, Clarion University, Thaddeus Stevens College of Technology and Harcum College. For more information about SOAR and the complete list of participating colleges and postsecondary programs visit: http://www.education.pa.gov/K-12/Career%20 and%20Technical%20Education/Programs%20of%20Study/ Pages/default.aspx#tab-1

For more information about all of the rigorous Career and Technical Education programs, please visit: www.tchspickering.org.

Chester County Technical College High School

Grades 9, 10, 11, 12

Students in grades 9-12 have the opportunity to pursue a vocational/technical course of study at the Technical College High School on either a half-time or a full-time basis. Students attending on a half-day basis will be required to meet all Conestoga graduation requirements. Full-time students take both their academic and technology courses at TCHS-Pickering, and may continue to participate in Conestoga athletics and activities. TCHS issues its own report cards and credits to students as they advance through the program. These credits will appear on the Conestoga transcript as transfer credits. Upon satisfactory completion of their program, students are awarded a Conestoga High School diploma. Transportation is provided by the Tredyffrin/Easttown School District. Interested students should see their counselors.

TCHS offers a rich variety of technical education programs including Animal Science, Auto Collision, Auto Service, Carpentry, Commercial & Graphic Arts, Computer Information Systems, Cosmetology, Criminal Justice, Culinary Arts, Early Childhood Care and Education, Electronics and Robotics, Engine Technology, Pre-Nursing, Health Occupations, and Sustainable Energy Engineering.

Allied Health Science Technology

Grade 12 Year 2 credits Available through Paoli Memorial and Phoenixville Hospitals, this program exposes academically talented students to the numerous health careers available today. It includes 7.5 hours per week of clinical and classroom experience in a health care facility. Students' clinical experiences are supervised by the program instructor in collaboration with hospital staff, who serve as mentors. Enrollment at each location is limited. Transportation is not provided by the District. The two credits earned through this program will be documented on a Pass/Fail basis on the students' transcripts under the Experiential Learning Opportunities section.

Clinical experience: The clinical segment of the program provides students with a wide variety of experiences in the various departments of a health care facility, including therapeutic, diagnostic, informational and environmental services. Mentors in specialty areas provide an overview of the following: scope and nature of practice, career opportunities, post-secondary education requirements, practical experience, integration of health care systems, and professional development. Mentors evaluate student learning experiences, including knowledge development, attitude toward learning and applicable skill development.

Classroom experience: The classroom component of the Allied Health Program includes instruction in anatomy and physiology, medical terminology, safe practices, medical ethics, legal requirements, interpersonal dynamics and communication, history, current trends and the future of health care. In addition, advance preparation for clinical rotations, maintenance of a daily log, and a written report of clinical experiences are required.

Teacher Academy

Grade 12 Year 2 credits

Teacher Academy: Offered by the Chester County Intermediate Unit, is a two-credit college preparatory program for high school seniors interested in pursuing a career in the field of education. In addition to earning two high school credits for the program, students have the option to enroll in a dual enrollment program with Delaware County Community College (DCCC). This dual enrollment program consists of 9 college credits, awarded for the completion of the following courses: EDU 110 Introduction to Teaching; EDU 215 Theory and Field; and ENG 100 English Composition. The Academy provides an introduction to the knowledge and skills required to work in the teaching profession in the 21st Century.

The course consists of 7.5 hours/week (90 minutes/day, either morning or afternoon) divided between classroom instruction and internships with certified, tenured teachers at all grade levels, resulting in approximately 180 hours of instruction and 90 hours of internship experience. In addition, guest speakers from the educational field will present throughout the year; students will also participate in relevant field trips. As a culminating project, students complete a portfolio. The two credits earned through this program will be documented on a Pass/Fail basis on the students' transcripts under the Experiential Learning Opportunities section.

To apply online, or for more information, please go to: http://www.cciu.org/page/956

Driver Education Behind-the-Wheel Training Prerequisite: Completion of Highway Safety

The Chester County Intermediate Unit (CCIU) provides behind-the-wheel training programs for students in the Tredyffrin/East-town School District on the weekend and after school. (Students may be able to complete all or some of the required six (6) hours during study hall or free periods.) All students must be 16 years of age and have obtained a license or learner's permit before they can begin behind-the-wheel training. Eligible students may enroll by completing a registration form, available in the Main Office, in the Student Services Center or from the Highway Safety instructor, and mailing it to the Chester County Intermediate Unit with the required fee. The fee for 2017-18 was \$453.00 and is subject to change for the 2018-19 school year. Payment can be made by personal check or by VISA or MasterCard. Parents will be contacted by telephone to confirm appointment times. No school credits are offered for Behind-the-Wheel Training.



Standardized Testing Programs

SAT Strategies

Grades 9, 10, 11, 12 Semester 2 periods/cycle No credit 9375 (Course Fee - \$150)

This elective offering is designed to give students a basic foundation of knowledge and strategies regarding the SAT. This test is developed and administered by the College Board and is commonly taken by high school students to assess their academic readiness for college. This course will expose students to the format of the SAT and provide opportunities for practicing testtaking strategies on common problems and questions found on the test. While the course will not specifically teach all of the material covered on the SAT, students will be exposed to the range of content and resources for learning and preparing for the test. Conestoga does not guarantee that this course will result in a better experience with the SAT or improved performance over past attempts. Success and improvement on this test is a personal achievement based on an individual student's aptitude, effort, test-taking skills and commitment to academics. This course will assist students in preparing for the SAT in a group setting and give them tools for developing their own personal preparation plan. Students may take this course more than once. No grade is given and no credit is awarded.

English Seminar / Mathematics Seminar / Science Seminar

These courses are mandatory for students in the graduating classes of 2020 and beyond whose most recent Keystone Exam scores did not reach the proficient level. Small group instruction will emphasize specific Pennsylvania academic standards in the subject area in preparation to demonstrate proficiency through a retake of the keystone exam or the completion of a Project Based Assessment. Enrollment in the course(s) is mandatory for any eligible student. No grade is given and no credit is awarded.



Individualized Learning

Kate McGranaghan, Department Chairperson

Individualized programs are designed to meet the unique educational needs of eligible students and are approved by both a parent or guardian and the student's staff. Prerequisites and credit values vary. **Note:** Some individualized programs require interested students to enter a course name and number under "Individualized Program" on the Course Selection Card and to obtain the signature of the appropriate faculty member.

Academic Seminar**

Grades 9, 10, 11, 12 Semester 1-6 periods/cycle .25-.5 credit

Eligible students work under the direction of a faculty member in the academic seminar program to access the general education curriculum. Instruction is in accordance with the student's Individualized Educational Program (IEP) goals and objectives. Instruction will occur in areas identified by the IEP team. These areas often include writing, reading, mathematics, study skills, organizational skills, social skills, resiliency and post-secondary school transition. Student progress is monitored in alignment with their identified IEP goals. Seniors will participate in lessons aimed at post-secondary transition skills in order to help prepare them for success after high school.

Academic Reading

Grades 9, 10, 11, 12 Semester 3 periods/cycle

Eligible students receive supplemental instruction in reading skills as identified in the student's IEP. Reading instruction may encompass any or all of the following: decoding, fluency, comprehension, vocabulary. Students are taught using evidence-based materials and instructional practices. Students are assessed using accepted practices of progress monitoring as described in their IEP.

Academic Skills**

Grades 9, 10 Semester 3 periods/cycle .25 credit

Eligible students receive instruction in accordance with their IEP goals in the areas of written expression, organization, and study skills. Instruction in this course is intended to supplement the regular offerings of the English department, and is individualized by the student's IEP team. In the organization and study skills strands, students are taught explicit strategies to improve their skills in the areas of time management, note-taking, creating a study plan, preparing for tests and planning long-term projects. In the written expression strand, students are provided explicit instruction and practice in writing narrative, expository, persuasive and literary pieces of writing.

Post-Secondary Transition Courses**

Grades 9, 10, 11, 12 Semester 1-6 periods/cycle .25-.5 credit

Eligible students receive instruction and practice in skills related to their post-secondary transition needs as identified in their IEP. Post-secondary transition encompasses three primary areas: preparation for education/training, employment skills, and independent living skills. Student skills in each of these areas are assessed through the IEP team process and appropriate goals and specially designed instruction are identified in the student's IEP. Programming may consist of experiences off-campus in coordination with the Chester County Intermediate Unit or other relevant agencies. Individual courses include: (1) Transition Math Skills; (2) Transition Reading Skills; (3) Transition English Skills; (4) Pre-Vocational Skills; and (5) Independent Living Skills.



Student Services

Jennifer Kratsa, Department Chairperson

The mission of the Student Services Department is to promote a comprehensive developmental guidance program that provides services to students in grades nine through twelve and supports students' individual academic, social, and personal goals. Students are assigned to their counselor alphabetically in ninth grade and remain with the same counselor throughout their time at Conestoga.

With an appreciation for individual differences, our goal is to encourage a positive and healthy learning community for all students. The ultimate desire is that students take responsibility for their education and understand their role as lifelong learners and contributing community citizens.

Counselors provide assistance with raising students' self-awareness, self-advocacy, educational and post-high school planning, career awareness, standardized testing, and social/emotional concerns. In addition to meeting with students individually, they deliver programs and services during the day and several evenings throughout the school year. Information can be found on the Student Services website regarding dates and times of programs. Once a month counselors join the group of speakers at the "PTO" parent meetings to discuss student topics for that month, answer parent questions and engage in open dialogue.

Mental Health Specialists are also available resources to students and families. These licensed counselors assist with students who demonstrate a higher need for care, are experiencing crisis, or are eligible for additional support services through an IEP or 504 Plan. Students may be referred to a Mental Health Specialist to assess personal safety, family concerns, and/or substance abuse.

Hours of operation: 7:00 am - 3:30 pm, Monday through Friday. Students wishing to confer with a counselor may come to the center during a study hall, free period, or before / after school. Appointments are not required but are recommended. Evening hours are offered once each month beginning in January by appointment to supplement counselor availability for Junior College Planning meetings.

The Daytime School Counseling Program Series includes:

November	College Fair	(Grades 10-12)
January	Midterm Preparation Lessons	(Grade 9)
February	Course Selection Lessons	(Grades 9-11)
March	Career Week	(Grades 10-12)
March	Naviance/Career Assessment	(Grade 10)
April	Senior Transition to College	(Grade 12)

The Evening School Counseling Program Series includes:

August	The Freshman Picnic	(Grade 9)
September	College Application Evening	g (Grade 12)
November	Financial Aid Evening	(Grades 9-12)
January	College Admissions Night	(Grades 10-12)
April	College Interview Evening	(Grade 11)

Resources for Students and Parents:

Naviance – A college and career internet-based tool students use to research colleges, compare their academic standing and admissibility, complete career assessments, and ultimately facilitate the college application process. In the sophomore year, students obtain training and established their accounts. Parents are given information on setting up a parent account.

Student Services Website – www.tesd.net/page/657 - A comprehensive guide to services, dates and times of programs, contact information for counselors, junior and senior "to-do" lists and timelines, college and career resources.

Junior Post-High School Planning Meeting – Parents are invited in the month of December to schedule an appointment to join their child to discuss post-high school and college planning. Junior planning meetings are conducted from December to June based on student readiness.

College Visits – Over 200 colleges and universities are represented through individual visits and the annual college fair. This is an opportunity for juniors and seniors to attend an information session, meet the college representative, ask questions about the admission process and learn about the campus. It is also an excellent way to gain information about a college when a trip to the campus itself is not possible. This resource is for students only.

College and Career Transition

Grades 11 Semester 2 periods/cycle .2 credit 9372 CC

This required course for 11th grade students will enhance college and career readiness skills. College and Career Transition (CCT) will increase students' capacity to navigate different environments with renewed self-awareness and further explore post-secondary options such as 2-or 4-year college, Career/Technical Institute, Military Service, Employment, Apprenticeship, Year of Service. Students will build essential skills in resiliency, decision-making, and effective communication. Topics will include but are not limited to: digital citizenship, healthy relationships, substance misuse, cultural competencies, financial literacy, goal setting, and time management. CCT will culminate with a digital portfolio for use with the post-secondary transition.

APSTONE

The AP Capstone program is a two-course sequence of AP Seminar and AP Research that equips students with the independent research, collaborative teamwork and communication skills that colleges look for in an applicant. AP Capstone is built on the foundation of two AP courses: AP Seminar and AP Research. Both AP Seminar and AP Research are designed to complement and enhance the in-depth, disciplinary specific study experience offered in other AP Courses. Students who earn scores of 3 or higher in the AP Seminar and AP Research course along with four additional AP Exams of their choosing with receive an AP Capstone Diploma. Alternatively, students who earn scores of 3 or higher on the AP Seminar and Research Exams only will receive the AP Seminar and Research Certificate.

AP Seminar

Grades 10, 11, 12 Year 6 periods/cycle 1 credit 9000

What is truth? What does it mean that something is moral? What role does 'play' have in society? What are the problems and solutions in education today? What makes something beautiful? These are just some of the many questions that students in AP Seminar consider in a course that prioritizes curiosity, inquiry, argument, personal interest, choice, and discussion.

AP Seminar is an interdisciplinary course that takes students

beyond the boundaries of single discipline subject courses, engaging students in academic and real-world topics of inquiry. In the first semester, students will focus their study on the topics: Truth, Ethics, Play, Education Redesign, and Aesthetics. Throughout these units, students will work individually and in teams to dive deep into these issues, present their findings, and propose creative solutions.

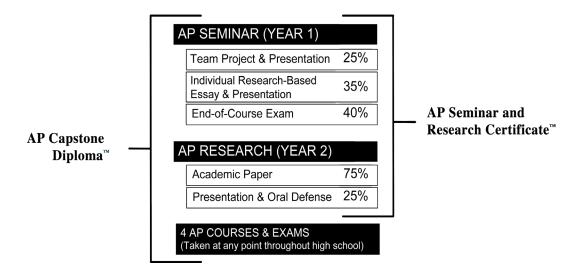
In the second half of the year, students are given autonomy to complete College Board performance tasks, formulating their own lines of inquiry, designing their own projects, and sharing their research with broader audiences. These Performance Tasks become part of students' AP scores. College Board assesses the students based on the following components: Team Project & Presentation - 25%, Individual Research-Based Essay & Presentation - 35%, and End-of-Course Exam - 40%. Beyond the AP designation and the classroom experience, Seminar provides students with meaningful experiences that mirror the self-directed and collaborative skills students will need in college and beyond.

AP Research

Grade 11, 12 Year 6 periods/cycle 1 credit 9100

Prerequisite: AP Seminar

The second course in the AP Capstone experience allows students to design, plan, and conduct a yearlong research-based investigation on a topic of individual interest. Through this inquiry and investigation, students demonstrate the ability to apply scholarly understanding to real-world problems and issues. Students further the skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information to build, present, and defend an argument.





English

Trevor Drake, Department Chairperson

The purpose of Conestoga's English curriculum is to provide continued, concentrated instruction in written composition and oral communication, and to focus on the literature of America and the world.

Department Requirements: During their four years at Conestoga, students are expected to earn at least 4.0 credits in English by taking World Literature in 9th grade, American Literature in 10th grade and two more year-long courses in subsequent years.

Written Communication: The goal of instruction in composition is to help students develop confidence in their ability to express ideas effectively in writing. They are shown how to use writing processes, from exploring ideas about what to write to revising and refining expression of thought. A research component is part of year-long courses.

Oral Communication: Every student engages in a number of speech activities during each course. Continuing objectives are to help students develop a sense of confidence when addressing an audience and to practice listening skills.

Literature: In addition to thoughtful, critical analysis of literature, a major goal of the literature program is to acquaint students with their global literary heritage. Whether organized by chronology, by theme, or by literary genre, the study of literature emphasizes the relationships among literary works, the cultures in which they have been produced, and the reader.

Advanced Placement Courses, Grades 11 and 12: Designed to be aligned with the Advanced Placement examinations of The College Board, the English Department's AP courses enable students to study in depth works of fiction, nonfiction, and rhetoric. Entering students should exhibit a willingness to accept the challenge of a rigorous academic curriculum which demands a high level of writing skill, an ability to read major works independently and thoughtfully, and an expectation to contribute critically and creatively to a seminar-type class. AP English Literature and Composition prepares students for the *Advanced Placement Literature and Composition* exam, and AP English Language and Composition prepares students for the *Advanced Placement Language and Composition* exam. Prior to taking AP English courses, students are encouraged to take one or more Honors English courses.

Honors Courses: Courses at the Honors level provide strong students the opportunity to develop maturity of thought and expression in a challenging program of literature, writing, and discussion. A considerable amount of outside reading and research is expected of students who receive honors credit. American Literature, British Literature, Comparative Literature and/or The Writer's Craft at the honors level are appropriate preparation for the Advanced Placement English classes.

Accelerated Courses: The accelerated level of English is designed for college-bound students who desire a comprehensive program of literature, writing and speech. In literature classes students are expected to read core novels and plays with the class, participate in class discussion, and respond to literature and topical issues through writing.

Academic Courses: The academic level of English prepares students for college. The pace of instruction is adjusted to meet the needs of the students. Thinking skills are emphasized as is the application of skills and strategies in reading and writing about literary works and current issues.

Writing Support: Staff members located in the Achievement Center and library provide help with writing assignments for course work, college application essays and scholarship applications.

AP Capstone Program: For students interested in pursuing advanced and interdisciplinary study related to English during their 10th, 11th, or 12th grade years, please see the AP Capstone Program information found on page 15.

English Courses

World Literature

Grade 9 Year 6 periods/cycle 1 credit **0000 (H) 0001 (X) 0001r (X) 0002r (A)** WT

In this course, students will examine literature from the everexpanding world canon. Through this global exposure, students will explore the human condition as presented in epics, short stories, novels, drama, poetry, and graphic novels. Students will acquire an understanding of how to read and analyze a variety of texts at the high school level through this close analysis of genre. Reading instruction will expand students' literary vocabulary and provide them with a framework for close reading, critical analysis, and written work. Course readings will also include informational and persuasive texts such that students will learn to read for diverse purposes. These texts will serve as the catalyst for students to practice writing in the informational, persuasive, and narrative modes. Writing instruction will emphasize integrating appropriate textual evidence in literary analysis. Finally, students will develop an understanding of reading and writing as a recursive process.

Courses 0001r (X) and 0002r (A) are designed for students who require extra support or instruction in reading, as recommended by middle school reading specialists, counselors, or learning support teachers. Students will read the same core texts as students enrolled in the Accelerated course. However, students enrolled in the 0001r and 0002r courses will receive additional instruction regarding reading comprehension strategies that will help them navigate the challenging texts in the curriculum successfully. Students will practice writing in the informational, persuasive, and narrative modes with additional scaffolding and individual support. Grammar and usage will be taught in the context of student writing.

American Literature

1 credit

Grade 10 Year 6 periods/cycle 0010 (H) 0011 (X) 0011r (x) 0012r (A)

American Literature is a year-long exploration of the American character as reflected in literature. Students read extensively in American novels, plays, essays, short stories and poetry; written responses include journals, quizzes, tests, research projects and analytical essays. The course content is designed to prepare students for the Keystone Exam in Literature.

Honors students begin the year with a month-long exploration of the summer reading followed by a chronological look at Puritan, Revolutionary, Transcendentalist, Romantic, Realistic and 20th Century writers, including Arthur Miller, Nathanial Hawthorne, Mark Twain, F. Scott Fitzgerald, Richard Wright and Tennessee Williams. Critical reading and analytical writing are the main focus of the course. Students write a lengthy critical analysis paper using primary and secondary sources.

Accelerated students complete a chronological and thematic exploration of American literature beginning with Native American literature and culminating with 20th century drama. Offerings are focused on both classic and modern American novels, as well as a variety of relevant plays, poems and short stories. Authors include Arthur Miller, J. D. Salinger, F. Scott Fitzgerald and others. Focusing on analytical writing throughout the year, students in the accelerated course also complete a research project on an American author and the associated literary movement.

Courses 0011r (X) and 0012r (A) are designed for students who require extra support or instruction in reading, as recommended by high school reading specialists, counselors or learning support teachers. Students will read the same core texts as students enrolled in the Accelerated level. However, students enrolled in 0011r and 0012r will receive additional instruction regarding reading comprehension strategies that will help them navigate the challenging texts in the curriculum successfully. This course includes a variety of reading and writing tasks designed to broaden vocabulary and improve the facility and clarity of student writing. Grammar and usage will be taught in the context of student writing.

British Literature

Grade 11, 12 Year 6 periods/cycle 1 credit **0030 (H) 0031 (X) EN**

This course is a year-long, chronological survey of British Literature. It includes literary works beginning with Beowulf through Chaucer, Shakespeare, Donne, Milton, Blake, Wordsworth, Shelley, Austen and Shaw with companion films. Honors and Accelerated British Literature include most of the same major plays, novels, poems and research and writing tasks. At the Honors level, students have a significant outside reading requirement; reading and writing assignments in the Honors course are longer and more frequent than those in the Accelerated course.

AP Literature and Composition

Grade 11, 12 Year 6 periods/cycle 1 credit **0040 (AP) EN**

AP Literature and Composition is an enriched reading and writing course that encourages students to explore a wide variety of literature from many cultures and many genres. Beginning with three major novels for summer reading and progressing through a series of plays, short stories, and novels, the course covers such writers as Shakespeare, Bronte, Morrison, Atwood, Huxley, Joyce and O'Connor. In addition, the students explore a wide range of verse, including the work of Renaissance, Metaphysical and 17th Century poets. The course includes a lengthy literary research paper. Students are encouraged to sit for The College Board's AP *English Literature and Composition Examination*.

The Writer's Craft

Grade 11, 12 Year 6 periods/cycle 1 credit **0060 (H) 0061 (X) EN**

This writing intensive course is designed for students with an authentic interest in creative writing. It examines the craft of writing through workshop and seminar formats. Students enrolled in this course should expect to complete daily informal or formal writing. Expectations for volume of writing will be commensurate with the level of the course.

Students will also keep a Writer's Notebook which will be checked weekly and will consist of reader response entries and crafting exercises. While the readings for the course are short, they are numerous. Students will examine specific crafting strategies within them in the genres of nonfiction, fiction and poetry. In addition to writing, quizzes and tests will be used to assess students' understanding of crafting terms and demands of the genre under study.

AP Language and Composition Language and Composition

Grade 11, 12 Year 6 periods/cycle 1 credit **0050 (AP) 0070 (H) 0071(X) 0072(A)*** EN

AP English Language & Composition focuses primarily on the reading and writing of the best nonfiction from both contemporary and classical sources. Students read critically to discover the rhetorical strategies of good writers and to apply those strategies to their own writing. Students analyze audience and purpose as well as mechanics, diction and style in the readings and in their own writing. Revision, editing and polishing skills are applied as students attempt to write for publication. The course includes research projects based on both primary and secondary sources. The course also explores rhetorical techniques shared with fiction, including major works by Shakespeare, Faulkner, Orwell and Joyce. Students who take the course are prepared to sit for The College Board's AP English Language and Composition Examination.

Honors English Language & Composition focuses on non-fiction. Students will read and analyze works of non-fiction and fiction written on a variety of subjects. These writings will serve as models for student writing and help prepare students for the demands of college and the world of work. The reading and writing assignments are selected to develop an awareness of mechanics and style as they contribute to a writer's content and purpose. In addition to frequent short writing assignments, students will be expected to conduct research on a subject of their choice and compose a paper describing their findings. This course will also include the study of diction, syntax, grammar and usage.

Accelerated readings will focus on short nonfiction selections that use various modes of argument. Regular writing assignments, which will be brief but frequent, emphasize clear use of language in practical applications such as business letters, proposals, resumes, personal/college essays and editorials. Students will conduct a sustained research project leading to a paper that explores opposing viewpoints on a current world or national issue of their choice. Focused study of grammar and usage as well as some preparation for SAT testing.

Academic reading and writing will focus on practical, real-world applications such as business letters, proposals, resumes, personal/college essays and directions. Clear, correct grammar and usage, especially as applied to such standardized tests as the SAT will be central to the course. Reading assignments will include news periodicals and other practical documents. *This course does not currently meet NCAA eligibility standards for English credit.

Comparative Literature

Grades 11, 12 Year 6 periods/cycle 1 credit **0080 (H) 0081 (X) EN**

Comparative Literature celebrates the great stories of classic literature by pairing today's modern works with the texts that inspired them. Students will investigate the ways that great works of literature inform other notable genres: writing, visual art, cinema, music, philosophy, politics, history, and linguistics. By finding new perspectives on classic stories, students will become experienced in recognizing patterns of storytelling, symbols, and other cross-references. A variety of writing and research tasks will allow students to compare texts across multiple genre and time periods, and ultimately, to gain a more complete understanding of how an author's decisions about setting, character, and theme are made and transmitted. Themes are explored through core texts: for example, The Odyssey, The House on Mango Street, The Absolutely True Diary of a Part-Time Indian, The Sun Also Rises, The Importance of Being Earnest, and A Midsummer Night's Dream.

English as a Second Language**

Grades 9, 10, 11, 12

0289 EN, EL Semester 1 6 periods/cycle .5 credit **0299** EN, EL Semester 2 6 periods/cycle .5 credit

English as a Second Language is open only to students whose native language is not English and who have met the entry criteria as stated in the school district's ESL policy. The course is designed to provide instruction in listening, speaking, reading and writing English. The course curriculum is designed to develop English language skills including grammar, usage, vocabulary, idioms and American customs. Language structure and form will be learned in authentic contexts. Weekly journals include informal entries and reader responses, ranging from 10-20 pages per week. Juniors will conclude the year with an independent writing project. ESL courses do not currently meet NCAA eligibility standards for English credit.

Co-Curricular English Electives

Co-curricular electives do not satisfy the English requirement for graduation, but provide valuable experience in communication. Admission is by application only with selections recommended by a student editorial board.

Newspaper (The Spoke)**

Grades 9, 10, 11, 12 Year 3 periods/cycle .5 credit **0405 BT. EL**

The Spoke is Conestoga's student newspaper. Published seven times during the school year, The Spoke offers students the opportunity to write news, features, columns, sports and editorials of interest to the school and community. Students gain experience in graphic arts, photography, editing, advertising, design and layout. Selection is by application and recommendation. The application and teacher recommendation forms can be obtained, during Course Selection Week, from English teachers, the newspaper advisor(s) or a counselor (in the case of 8th graders). Forms must be returned to The Spoke by the announced deadline. Prior to the close of the course selection period, applicants will be notified by the advisor whether they have been selected. The signature of the newspaper advisor (or 8th grade counselor) is required on the Course Selection Card.

News Editors' Seminar (The Spoke)**

Grades 10, 11, 12 Year 3 periods/cycle .5 credit **0415 BT, EL**

Experienced staff members of *The Spoke* may apply for editorial and management positions on the following year's Editorial Board which oversees production of *The Spoke*. These leaders are required to schedule News Editors' Seminar in addition to Newspaper. Prior to the close of the course selection period, applicants will be notified by the advisor whether they have been selected. Signature of the newspaper advisor is required on the Course Selection Card.

Yearbook (Pioneer)**

Grades 9,10,11,12 Semester 1 3 periods/cycle .25 credit **0425 BT, EL**

Yearbook is a course for students who wish to be a part of the production of The Pioneer, the school's yearbook. Involved students' responsibilities include: writing, photography, design, and budgeting. Interested students should be able to interview and work with others, maintain journalistic principles in writing and design and work independently under tight deadlines. Yearbook staff members should be interested in design, with a keen eye for detail. Members of the staff are selected by application. Application and teacher recommendation forms may be obtained during Course Selection Week from an English teacher, the yearbook advisor, or a counselor (in the case of eighth graders), and must be returned by the designated deadline. Before the conclusion of the course selection process, applicants for the yearbook staff will be notified by the faculty advisor if they have been selected. Only successful candidates may enter "Yearbook" on the Course Selection Card. Signature of the yearbook advisor (or eighth grade counselor) is required on the Course Selection Card.

Yearbook Editors' Seminar (Pioneer)**

Grades 10, 11,12 Year 3 periods/cycle .5 credit **0435 BT, EL**

This course is for current and future Pioneer editors, who will be responsible for bringing closure to the publication of the current yearbook and for carrying out training, planning, and leadership activities for the next year. The signature of the yearbook advisor is required on the Course Selection Card. Prior to the close of the course selection period, applicants will be notified by the advisor whether they have been selected.

Literary Magazine**

Grades 9, 10, 11, 12 Year 3 periods/cycle .5 credit **0445 BT, EL**

Literary Magazine is an activity for students who wish to produce the school literary magazine. An editor, chosen by the faculty advisor, directs students in the selection of format, theme, material, and artwork. Students are involved in budgeting, publicity, layout and marketing. The requirements are that students be interested in writing, able to critique submissions and willing to fulfill designated duties. Students are required to submit at least two literary or artistic submissions per marking period. Inkwell, a coffee-house and open mic night, serves as the magazine's major fund raising activity. Application and teacher recommendation forms may be obtained during course selection week from an English teacher, the magazine advisor, or a counselor (in the case of 8th graders). If selected, students may enter "Literary Magazine" on their course selection card. Prior to the close of the course selection period, applicants will be notified by the advisor whether they have been selected.

Multi-Media Magazine (*Frame & Canvas*)** Grades 9, 10, 11, 12 Year 3 periods/cycle .5 credit **0455 BT, EL**

Multi-Media for Publications is a co-curricular course incorporating elements of the school's three publications: The Spoke, The Pioneer, and Literary Magazine. The course helps students develop skills needed to join these staffs in subsequent years if interested. Students will explore the distinguishing characteristics of each publication and model them in their own work and their own contributions to the publications. They will gain experience in journalism via writing, editing, interviewing, researching, photography image capture and modification and graphic arts using layout and design.



Social Studies

David Zimmerman, Department Chairperson

The Social Studies program is designed to help students understand their American heritage as it developed and evolved in western and non-western civilizations. In addition, the American systems of government and economics are emphasized so that students will be able to function as responsible, informed citizens, tolerant and understanding of individuals living in a diverse, multicultural society.

To achieve the curricular objectives, courses are offered at varied levels of difficulty. The required course sequence is: World History; United States History; United States Government and Politics / Economics.

Social Studies classes may be instructed in blended level environments. In these classes, teachers will differentiate instruction to meet the needs of individual learners.

AP Capstone Program: For students interested in pursuing advanced and interdisciplinary study related to Social Studies during their 10th, 11th, or 12th grade years, please see the AP Capstone Program information found on page 15.

AP World History World History

Grade 9 Year 6 periods/cycle 1 credit 1000 (AP) 1010 (H) 1011 (X) 1012 (A) WH

Using a chronological approach, students survey the political, economic, social and cultural development of Africa, the Americas, Asia and Europe. Major areas of study include early world civilizations, exploration, the Renaissance, Reformation and Enlightenment in Europe, political and industrial revolutions, 19th century nationalism and imperialism, 20th Century wars, decolonization and globalization. The period from 1450 to the present is emphasized in all levels except at the AP level which begins with early human civilization. Upon successful completion of this course, students should be able to:

- understand the relationship of chronology and cause and effect on the development of the region
- describe major historical thoughts, trends, and events
- recognize the contributions of each region in art, literature, science, religion, and music
- evaluate regional status and involvement in world affairs.

AP United States History United States History

Grade 10 Year 6 periods/cycle 1 credit 1200 (AP) 1210 (H) 1211 (X) 1212 (A) UH

Using a chronological approach, students survey the political, economic, social, and multicultural forces present in United States History. Major areas of study include imperialism and expansion, progressivism and reform, prosperity and depression, war and foreign policy, civil rights, immigration and population growth, and present-day issues associated with a post-industrial society. The period from 1850 to the present is emphasized in all levels of this course, except at the AP level which begins with colonial times. Upon successful completion of this course, students should be able to:

- identify dominant themes and values in American society
- describe the transition of an agrarian to a postindustrial society
- discuss and evaluate the evolution of U.S. foreign policy
- discuss and evaluate various reform movements
- understand America's political philosophies as delineated by our two party-system
- recognize that America's future is interwoven into a global mosaic

AP United States Government and Politics United States Government and Politics/ Economics

Grade 11 Year 6 periods/cycle 1 credit 1700 (AP) 1710 (H) 1711 (X) 1712 (A) GV

AP US Government and Politics and United States Government and Politics/Economics requires students to analyze United States government and politics and explore economic theory and practice. After examining the underpinnings of the U.S. Constitution, students will begin to interpret and apply the Constitution to governmental policy. Students will develop an understanding of the principles and processes of formal institutions (Congress, the Presidency, the Bureaucracy, and the Judiciary) and informal institutions (interest groups, political parties, the media). The course will examine the basic values influencing U.S. politics and how these values affect the political behavior of institutions and the American electorate. The course will introduce students to the economic perspective, and students will develop an understanding of economic indicators and the role of government in economic decision-making. The course will emphasize the importance of civic life and the rights and responsibilities of citizenship. Finally, students will examine civil liberties and public policy from both a legal/theoretical and a practical perspective.

Elective Courses

AP European History

Grades 11, 12 Year 6 periods/cycle 1 credit 1100 (AP) EL

Using a chronological approach, students survey the political, economic, social, and cultural development of Europe.

Major areas of study include the birth of western ideas, the transition to modern times, the emergence of modern nations, the development of industrial society, the patterns of western art and music, and the evolution of Europe in the nineteenth and twentieth centuries.

AP European History begins with the Italian Renaissance and progresses through the modern era. Upon successful completion of this course, students should be able to:

- explain the significance of the Renaissance and Reformation on the evolution of Western culture
- analyze the impact of the Industrial Revolution
- discuss the importance of revolutionary movements on the socio-political development of Europe
- analyze the causes and effects of the major twentieth century military conflicts.

AP Comparative Government & Politics

Grades 11, 12 Semester 6 periods/cycle .5 credit 1320 (AP) EL

Comparative Politics is designed for students with an avid interest in international politics and the study of various political systems. The course gives students the opportunity to explore crucial political and economic issues facing our world today, such as globalization, democratization, public policy, and citizen-state relations. Students will explore systems of six countries: Great Britain, China, Iran, Mexico, Nigeria, and Russia. By studying these countries, students will be able to examine and assess the strengths and unique challenges presented in widely differing political systems, such as a parliamentary democracy, a communist state, an Islamic theocratic republic, a newly-industrializing federal republic, an African federal republic transitioning from military to civilian rule, and a federation transitioning from communism to capitalism. The focus will be on modern events and recent developments in the international political arena. Students will be prepared to take the AP examination in May.

Criminal Justice

Grades 11, 12 Semester 6 periods/cycle .5 credit 1330 (H) 1331 (X) 1332 (A) EL

Students will examine the U.S. criminal justice system, which includes law enforcement, prosecution, the courts, and corrections. The course emphasizes criminal law, trends in criminal activity, criminological theory, criminal defenses, and special issues such as juvenile delinquency and capital punishment.

African-American Studies

Grades 11, 12 Semester 6 periods/cycle .5 credit **1340 (H) 1341 (X) 1342 (A)** EL

This course will challenge students to explore the African-American experience through the lenses of history and culture. It will be both teacher-directed and student-directed. The curriculum will be organized into themes which include the following: race and identity; resistance and resilience of African Americans; leadership in the African American community; influence of African cultures and traditions in African American history and culture; influence of African American culture on American culture; the fight for freedom, equality, individual rights; current issues and future challenges in areas such as education, socio-economic status, cultural impact, and the persistence of discrimination.

AP Microeconomics/AP Macroeconomics

Grades 11,12 Year 6 periods/cycle 1 credit 1500 (AP) EL

This course is designed to provide students with the fundamental tools for economic thinking. The course includes a study of microeconomics, which examines decision making by individual consumers and producers using concepts such as supply and demand analysis to determine pricing and production of goods and services. Business decisions of companies are analyzed by scrutinizing wages, material costs and sales revenue in order to make the most informed choices for that firm. These tools will be applied to macroeconomics in which the entire economy is studied. Inflation, interest rates, employment levels, and total production of goods and services are all influenced by governments (national and international), industries, and consumers. Students will understand the interrelationships among these sectors and interpret current economic trends and predict future ones. Students will be prepared to take both AP Microeconomics and the AP Macroeconomics examinations in May.

AP Psychology

Psychology

Grades 11, 12 Year 6 periods/cycle 1 credit **1600 (AP)** EL

Grades 11, 12 Semester 6 periods/cycle .5 credit **1610 (H) 1611 (X) 1612 (A) EL**

Psychology is the study of mental processes and behavior. This course includes the following topics: the history of psychology, research methods, biological bases of behavior, sensation and perception, states of consciousness, learning, cognition, motivation and emotion, development, personality, testing and individual differences, abnormal behavior, treatment of psychological disorders, and social behavior. An opportunity is given for student research and class discussion. Demonstrations and experiments are emphasized, and extensive use of video supplements the text. Upon successful completion of this course, students should be able to:

- understand major concepts & theories in psychology
- devise simple experiments, interpret and generalize from results, evaluate the general validity of research studies
- build on critical thinking skills & synthesize concepts
- describe major psychological disorders & treatments
- apply psychological concepts to their own lives, engage in inductive reasoning and broaden self-awareness.

Sociology

Grades 11, 12 Semester 6 periods/cycle .5 credit **1400 (H) 1401 (X) 1402 (A)** EL

Sociology is the study of society and human behavior. After gaining an understanding of the theories and methods that guide sociological study, students will explore core concepts such as socialization, social networks, and social control. Students will also learn how sociologists conduct research and use core sociological concepts to help them understand current issues. Potential topics for study include gender roles, drug addiction, deviance, crime, gang activity, cults, conformity, prejudice, racism, self-fulfillment, social responsibility, and other issues pertinent to understanding the adolescent social experience.

Philosophy

Grades 11, 12 Semester 6 periods/cycle .5 credit **1800 (H)** EL

Philosophy is a discussion-based course that introduces the essential questions that have confronted people through the ages and the philosophers who have tried to answer them. The course takes an interactive, multi-media approach to learning through the use of films, the internet, podcasts, and other audio and visual sources with the goal of stimulating dialogue through philosophical investigation.

Throughout the semester, the following topics will be covered: the Theory of Knowledge, Human Nature, Metaphysics, Ethics, the Philosophy of Religion, and the Philosophy of Art. The class provides a forum to explore philosophical concepts such as identity, humor, certainty, human nature, religion, beauty, morality, and happiness.

Additional Social Studies electives:

Art History AP Art History

Complete course descriptions can be found in the Visual and Performing Arts Section of this program.

*At this time, Art History and APArt History do not meet NCAA requirements for social studies credit.



Mathematics

Paul Poiesz, Department Chairperson

In all courses, students learn concepts and applications of mathematics through the integration of graphical, numerical, analytical and verbal processes. It is the recommendation and hope of the math department that all students successfully complete 4 credits of mathematics while at the high school. The department sets high expectations and expands access and opportunities for all students, while building the groundwork for future, more specific mathematical study. By emphasizing higher-order thinking skills (or mathematical habits of mind), the math curriculum is designed to prepare students for both college and career. At the core of this is a focus on problem solving skills that can be transferred to applications in other academic fields. Recognizing the important link between mathematics and technology, all math courses utilize and are taught in conjunction with the TI-84 graphing calculator.

AP Capstone Program: For students interested in pursuing advanced and interdisciplinary study related to Math during their 10th, 11th, or 12th grade years, please see the AP Capstone Program information found on page 15.

Algebra 1

Grades 9,10

2011 (X) MA Year 6 periods/cycle 1 credit 2092 (A) MA Year 12 periods/cycle 2 credits





This course is intended for students who are ready to begin the formal study of algebra. The course content is designed to prepare students for the Keystone Exam in Algebra 1. The academic level of Algebra 1 is an intensive course, meeting two periods per day for the full school year. This is designed for students who need extra support and practice for the mastery of the Algebra 1 curriculum. Students who successfully complete Algebra 1 should be able to:

- solve and graph linear equations and inequalities in one or two variables
- add, subtract, multiply, & divide signed numbers, polynomials, and rational expressions
- solve systems of linear equations and inequalities graphically and algebraically
- factor algebraic expressions involving common monomials, common binomials, difference of two squares, trinomials, & combinations of the types mentioned
- solve simple quadratic equations with rational roots by factoring
- add, subtract, multiply, divide, and simplify algebraic fractions and square root radicals
- solve fractional equations
- apply the techniques of algebra to solve application problems.
- determine how a change in 1 variable relates to a change in a second variable
- analyze and/or use patterns and relations
- analyze and interpret data on a scatter plot & use data to make predictions
- apply probability theorems to practical situations
- write & solve non-linear equations using various methods
- use measures of dispersion to describe a set of data

Please note that on page 29 of this Program of Studies, you will find possible Mathematics Course Sequences available to students. This page will help determine the order in which courses are taken.

Geometry and Finite Math

Grades 9, 10, 11 Year 6 periods/cycle 1 credit **2080 (H) 2081 (X)** MA

Prerequisite: Algebra 1

All of the geometrically significant topics and theorems typically found in a year-long geometry course will be presented during this course. The course is structured to also introduce algebra-based application in statistics, probability, trigonometry, and sequences and series. The rigor of the material covered will vary with the level of the course. Students who have successfully completed this course should be able to:

- apply geometric concepts to solve problems
- use two-column and paragraph proofs to establish relationships among triangles and parts of triangles
- apply similarity theorems to solve for unknown parts of polygons
- relate knowledge of parallel and perpendicular lines to solve practical problems
- combine algebraic and geometric skills to solve perimeter, area, and volume problems
- determine the pattern and general term of a sequence, generate terms of a recursively defined sequence, and write an expression and the sum of basic series
- apply combinations and permutations in discrete situations
- apply elementary probability theorems and postulates in discrete situations
- analyze sets of data by calculating measures of central tendency and measures of spread
- apply basic trigonometric definitions to find angles and sides of right triangles
- apply linear and quadratic models to various topics of this course

Geometry

Grades 9, 10, 11 Year 6 periods/cycle 1 credit **2082 (A)** MA

Prerequisite: Algebra 1

All of the significant topics and theorems typically found in a high school geometry course will be presented during this course. Students who have successfully completed this course should be able to:

- apply geometric concepts to solve problems
- apply similarity theorems to solve for unknown parts of polygons
- relate knowledge of parallel and perpendicular lines to solve practical problems
- combine algebraic and geometric skills to solve perimeter, area and volume problems
- apply distance and midpoint formulas
- relate slope to parallel and perpendicular lines
- apply basic trigonometric definitions to find angles and side lengths of right triangles
- apply the Laws of Sines and Cosines to find angles and side lengths of triangles
- identify corresponding parts in congruent polygons to solve problems
- solve problems involving inscribed and circumscribed polygons
- use the properties of angles, arcs, chords, tangents and secants to solve problems involving circles
- write, analyze and complete geometric proofs
- use coordinates to prove simple geometric theorems algebraically
- perform geometric transformations in the plane
- perform geometric constructions
- understand similarity in terms of similarity transformations

Algebra 2 (Pre-BC Calculus)

Grades 9, 10 Year 6 periods/cycle 1 credit

2050 (H*) MA

Prerequisite: Geometry or Geometry & Finite Math

Algebra 2 (Pre-AB Calculus)

Grades 9, 10 Year 6 periods/cycle 1 credit

2150 (H) MA

Prerequisite: Geometry or Geometry & Finite Math

Algebra 2

Grades 10, 11, 12 Year 6 periods/cycle 1 credit

2051 (X) MA

Prerequisite: Geometry or Geometry & Finite Math

Algebra 2

Grades 11, 12 Year 6 periods/cycle 1 credit

2052 (A) MA

Prerequisite: Geometry or Geometry & Finite Math

All of the traditional topics will be addressed in these Algebra 2 courses. The rigor of the material covered will vary with the level of the course. This course extends the concepts learned in Algebra 1 to include the complex number system and functional notation. Students who have successfully completed this course should be able to:

- graph, analyze, solve, and factor first and second-degree equations and inequalities in one or more variables
- simplify, evaluate, and perform the four basic operations on polynomials and rational expressions
- solve quadratic equations and related problems by factoring and by using the quadratic formula
- solve fractional equations in one and two variables and solve related problems
- simplify and perform the four basic operations on radicals
- solve radical equations
- apply knowledge of the conic sections to the solution of practical problems
- apply Cramer's Rule to solve a system of linear equations
- apply knowledge of basic trigonometric functions to solve right triangle problems

Math Analysis (Pre-BC Calculus)

Grade 9, 10, 11 Year 6 periods/cycle 1 credit

2100 (H*) MA

Prerequisite: Algebra 2

Math Analysis (Pre-AB Calculus)

Grade 9, 10, 11 Year 6 periods/cycle 1 credit

2110 (H) MA

Prerequisite: Algebra 2

Math Analysis (Pre-Calculus)

Grades 11, 12 Year 6 periods/cycle 1 credit

2111 (X) MA

Prerequisite: Algebra 2

These Math Analysis courses are designed to prepare students for high school or college Calculus. The rigor of the material covered will vary with the level of the course. A functional approach is used throughout to provide an extensive treatment of topics from algebra, trigonometry, and analytic geometry. The topics include polynomial and rational functions, graphing techniques, conic sections, exponential and logarithmic functions, sequences and series, limits, and all of the topics covered in a semester course in trigonometry. Students who have completed a course in Trigonometry / Algebra 3 or its equivalent are not eligible to earn additional math credits through Math Analysis. Students who have successfully completed this course should be able to:

- demonstrate a working knowledge of elementary functions including linear, quadratic, trigonometric, exponential, logarithmic, as well as other basic functions
- demonstrate an understanding of functional notation, functional operations including composition and inverse
- graph a wide variety of functions including exponential, logarithmic, and trigonometric functions, and the conic sections
- apply the concepts of transformation to predict changes in given graphs that result from these applications
- apply the Fundamental Theorem of Algebra, the Rational Root Theorem, and synthetic division to solve higher-order polynomial equations and inequalities
- solve a wide variety of problems drawn from related disciplines

Mathematics .

Trigonometry and Algebra 3

Grade 12 Year 6 periods/cycle

1 credit

2141 (X) MA

Prerequisite: Algebra 2

This course emphasizes the inter-relationships of algebraic and trigonometric functions. A functional approach is used throughout to provide extensive treatment of topics from algebra and trigonometry. Topics in algebra are extended to make connections and identify similarities to trigonometry. Topics include, but are not limited to: solving quadratic and linear equations, graphing quadratic and linear functions, graphing trigonometric functions, solving trigonometric equations, sketching polynomial functions, and application problems. Students who have completed a course in Math Analysis or its equivalent are not eligible to earn additional math credits through Trigonometry and Algebra 3. Students who have successfully completed this course should be able to:

- define the trigonometric functions and demonstrate relationships among them
- demonstrate techniques of graph sketching of functions
- solve equations involving the trigonometric functions and their inverses
- apply algebraic concepts to the solution of equations and application problems

Statistics

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit 2230 (H) 2231 (X) MA, EL

This course is designed to give students an introduction to the concepts of statistics. Descriptive and inferential statistics involving normal distributions are examined in detail. Analysis of variance, regression and correlation are introduced and examined. The course stresses the practical application of statistics to various disciplines and scenarios. Students who have successfully completed this course should be able to:

- calculate mean, median, mode, and variance of a set of data
- apply sampling techniques to estimate population statistics including the mean and standard deviation
- construct confidence intervals and test hypotheses
- analyze and present data represented both numerically and graphically for the study of patterns
- make statistical inferences using appropriate modeling techniques
- apply the science of statistical analysis to interpret data for informed decision-making in the social and scientific realms
- understand the value and application of technology in statistical analysis through calculators and software

AP Statistics

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit

2240 (AP) MA, EL Prerequisite: Algebra 2

This is a college level course that covers material equal to 1 semester of college work. This course is activity driven, with applications in gaming scenarios, population growth, and sports. Students who have successfully completed this course should be able to:

- perform exploratory analysis of data, making use of graphical and numerical techniques to study patterns
- apply sampling techniques to estimate population statistics
- design and carry out experiments and observational studies as well as assess the validity of those designed by others
- utilize statistical software for analyzing univariate and bivariate data, as well as performing statistical inference for sample data
- anticipate patterns by producing models using probability and simulation
- make statistical inferences using appropriate models.

AP Calculus BC

Grade 10, 11, 12 Year 6 periods/cycle 1 credit

2200 (AP) MA

Prerequisite: Math Analysis

This is a college level course that covers material equal to 2 semesters of college work. Although this is a rigorous course, and all definitions and theorems are precisely stated, many of the proofs are deferred to later courses. Students are required to have and use a graphing calculator which is considered an integral part of the course. Students who successfully complete this course will also be proficient in the topics of AP Calculus AB. In addition, all students should be able to:

- apply integration techniques to length of curves
- use trigonometric substitutions of basic identities, algebraic and trigonometric substitution, partial fractions, integration by parts, and improper integration techniques as appropriate for integration
- solve differential equations (including logistic differential equations) by separating the variables and observing solutions by using slope fields and Euler's Method
- differentiate and integrate parametrically defined relations and vector relations and apply these to applications of the derivative and the integral
- differentiate and integrate polar relations and apply these to applications of the derivative and the integral
- show the convergence and divergence of infinite sequences and series using a variety of tests
- use Taylor series to represent transcendental functions, find radius of convergence, and estimate remainder terms

AP Calculus BC

Grade 12 Spring semester 6 periods/cycle .5 credit

2250 (AP) MA

Prerequisite: AP Calculus AB

This course is designed to prepare students, who have successfully completed AP Calculus AB, for the BC level Advanced Placement Examination of the College Board. It is a college level course that covers material equivalent to a 2nd course in college calculus. This is a rigorous course which requires mastery and recall of all AP Calculus AB topics. Students who successfully complete this course should be proficient in the topics listed for AP Calculus BC 2200.

AP Calculus AB

Grade 11, 12 Year 6 periods/cycle 1 credit

2210 (AP) MA

Prerequisite: Math Analysis

This is a college level course that covers material equal to 1 semester of college work. Students are required to have and use a graphing calculator, considered an integral part of the course. Students who successfully complete this course should be able to:

- work with functions represented in a variety of ways: graphical, numerical, analytical, or verbal
- determine limits of expressions and apply L'Hopital's Rule to calculate the limit of indeterminate forms
- understand the meaning of a derivative in terms of a rate of change and local linear approximation
- define the derivative of a function and find the derivative and integral of functions including: polynomial, rational, trigonometric, inverse trigonometric, logarithmic, and exponential functions
- apply differentiation techniques to the Theory of Extrema to sketch functions, solve related rates problems, optimization problems, and apply the Mean Value Theorem
- understand the meaning of the definite integral both as a limit of Riemann sums and as the net accumulation of a rate of change
- apply integration techniques to area between curves, volumes, length of curves and average value of function
- use trigonometric substitutions of basic identities and algebraic substitutions appropriate for integration
- solve differential equations by separating the variables and observe solutions by using slope fields

Calculus

Grade 12 Year 6 periods/cycle 1 credit **2220 (H) 2221 (X) MA**

Prerequisite: Math Analysis 2110 or 2111

This high school level calculus course is designed to provide the student with the background to use calculus in sciences, social sciences, and business applications. It also provides an excellent foundation for further work in calculus. The instructional approach emphasizes both applications and the theoretical basis of calculus. Students who successfully complete this course should be able to:

- determine the derivative of polynomial, exponential, logarithmic, and trigonometric functions
- apply problem-solving techniques to the solution of definite and indefinite integrals
- solve simple, ordinary differential equations
- apply the techniques of differentiation and integration to curve sketching, extrema problems, finding volumes of revolution and to applications in statistics, economics, business, physics, and biology

Multi-Variable Calculus with Advanced Topics

Grade 11, 12 Year 6 periods/cycle 1 credit

2300 (H*) MA

Prerequisite: AP Calculus BC

This course is a continuation of the calculus sequence and is intended for students who have successfully completed AP Calculus BC. Students who successfully complete this course will earn one Conestoga math credit and should be prepared for advanced college calculus or differential equations. The first part of the course covers vectors and multi-variable calculus including functions of several variables, multiple integration and vector analysis in 2 and 3-space. Advanced applications will also be considered and may include selected topics from number theory; matrix algebra; modeling applications used in business, science, and economics; or differential equations.

It is important to note that courses similar to this one may be offered at colleges or universities; however, it should be clearly understood that this course offers only Conestoga math credit. Please note that students and their families, and not the T/E School District, are responsible for any student tuition or online charges for any student-elected college or university courses.

Please note that computer course listings are on page 30.

Mathematics Course Sequences

To determine the most appropriate course for the upcoming school year, identify your current grade across the top, look down that column until you find the course in which you are currently enrolled (or the closest equivalent), then look to the right for the next courses in the sequence. Common course sequences are presented. Projected course and level offerings are subject to change depending on student needs, enrollment trends, and School District priorities. For further assistance, see your mathematics teacher and counselor.

Eighth	<u>Ninth</u>	Tenth	Eleventh	Twelfth
Algebra 2	Math Analysis	Calculus	Multivariable Calculus, Statistics*, Computer Science*	Multivariable Calculus, Statistics*, Computer Science*
Geometry	Algebra 2	Math Analysis	Calculus	Multivariable Calculus, Statistics*, Computer Science*
Algebra 1	Geometry & Finite Math	Algebra 2	Math Analysis	Calculus, Statistics*
Pre-Algebra	Algebra 1 **	Geometry & Finite Math, Geometry	Algebra 2	Math Analysis, or Trig/Algebra 3

Please note that many of the above courses are offered at several levels. Students should consult with their current math teachers to help determine appropriate levels. Elective courses, marked with an asterisk (*), are not sequential and may be taken by students at any time after prerequisites are filled. ** Algebra 1 at the Academic level is a two-period-per-day course offering.

COMPUTER COURSES

AP Computer Science A

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit

2400 (AP) MA, BT, EL Prerequisite: Algebra 2

This is a college-level course designed to provide college credit for those students successfully completing the Advanced Placement Examination. Students who successfully complete this course should be able to:

- design and implement computer-based solutions to problems in several application areas
- learn well-known algorithms and data structures
- develop and select appropriate algorithms and data structures to solve problems
- code fluently in a well-structured fashion
- read and understand a large program and a description of the design and development process leading to such a program
- recognize the ethical and social implications of computer use

*This course does not currently meet NCAA eligibility requirements for math.

AP Computer Science Principles

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit **2450 (AP) MA, BT, EL**

Prerequisite: Algebra 1

With a unique focus on creative problem solving and real-world applications, the AP Computer Science Principles (AP CSP) course introduces students to the fundamentals of computing and the creative aspects of programming. The course is designed to be equivalent to a first semester introductory college course in computing. Students will develop computational thinking vital for success across all disciplines, such as working with large data sets to analyze, visualize and draw conclusions from trends. Students will be encouraged to think creatively when developing computational artifacts and while using computer software and other technologies to explore questions that interest them. Additionally, they will develop effective communication and collaboration skills while problem solving. Discussing and writing about the importance of these problems and the impacts on their community, society and world will be integral to the course. Students will focus on the following major areas of study.

- Creativity Empower new methods of information processing
- Abstraction Develop models and simulations of natural and artificial phenomena
- Data and Information Facilitate the creation of knowledge
- Algorithms –Develop and express solutions to computational problems
- Programming Create computational artifacts by designing and applying computing techniques
- Analyzing problems and artifacts by evaluating their own work as well as the computational work of others
- The Internet Support communication and collaboration
- Global Impact Enable innovations through computing

Programming with Alice and Java

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **2520 (H) 2521 (X) MA, BT, EL**

In this course, students will be introduced to computer programming and computer science through the programming languages Alice and Java. An introduction to programming will involve the use of graphics to implement a set of instructions through the innovative and revolutionary program, "Alice". Students will be responsible for the design, implementation, documentation, and evaluation of their programs. Students who successfully complete this course should be able to:

- create programs using the visual programming environment Alice
- write well-documented object-oriented programs in *Java*
- define problems, write pseudocode, and evaluate solutions
- test, debug, and modify programs
- recognize the ethical and social implications of computer use.

*This course does not currently meet NCAA eligibility requirements for math.

Coding: Games, Apps and the Arts

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **2549 MA, BT, EL**

In this course, students will be introduced to computer coding and its various functions. Students who successfully complete this course should be able to produce:

- Music (producing a piece of sheet music, a performance, or a recording)
- Visual art (printed on paper or fabric, laser cut, or 3D printed)
- A board game
- A simple game app
- Minecraft mods

*This course does not currently meet NCAA eligibility requirements for math.

Additional Math Courses Accounting

The following accounting courses are offered by the Business/ Technology Department. Accounting may be used to fulfill only one of the three mathematics credits required for graduation.

Accounting 1 and **Accounting 2**. (See page 44 for full course descriptions.)

Additional Computer Courses

Computer courses are also offered by the Business/Technology and Visual and Performing Arts Departments. Please refer to departmental listings for course descriptions of the following courses:

- Computer-Aided Drafting and Design
- Graphic Design and Animation
- Mechanical & Electrical Engineering
- Structural & Environmental Engineering



Science

Dr. Scott Best, Department Chairperson

In an increasingly complex global community, the Conestoga Science Department recognizes the need to produce active, informed citizens who understand scientific issues that impact our everyday existence. Communities of learners who can access and analyze scientific and technological information will be able to make informed decisions about our future.

Science courses are activity-based, lab oriented classes that prepare students for pre-college testing (e.g., SAT subject tests, Advanced Placement (AP) tests), further study in college, and citizenship in a technical society. Emphasis is placed upon acquisition of concepts from multiple sources (electronic and print media, experimentation, real-world experience), interconnection of ideas between the sciences and other subject areas, and thinking skills (such as problem solving). A rigorous and demanding sequence of science courses will ensure that students are prepared for further school and life.

The goal of the Conestoga Science Department is to make sure that all students are exposed to the major disciplines of science before graduating. The sequence of classes available to students accomplishes that goal over the four years of high school. Students who are highly motivated and wish to continue their study of science beyond Conestoga may accelerate their program or take two science courses at once to take advantage of electives offered within the department.

In order to fulfill graduation requirements, students must successfully complete three credits of science, including 1 credit in Biology.

AP Capstone Program: For students interested in pursuing advanced and interdisciplinary study related to Science during their 10th, 11th, or 12th grade years, please see the AP Capstone Program information found on page 15.

Biology

The goal of biology courses is to establish a core of biological concepts and information that can be of value to all students. The course content is designed to prepare students for the Keystone Exam in Biology.

AP Biology
Biology
Grades 9 Year 6 periods/cycle 1 credit
3100 (AP) 3110 (H) 3111 (X) 3112 (A) BI

Biology at the AP level prepares students for success on the Advanced Placement (AP) Biology examination. The pace of the AP course requires strong motivation along with strong work and study habits. Students enrolled in the AP level will read a college text which will examine more content and address more detail than that covered in the H level course.

Honors Biology (H) includes all of the content of the accelerated level with more breadth and depth. In addition, the course is supplemented with readings in technical writing of laboratory projects and additional laboratory work.

The Accelerated (X) level features the study of the genetic continuity of life, cell structure and function, cell growth and reproduction, population characteristics, bioenergetics, interaction of organisms and their environment, and the chemistry of life. The class is a laboratory based course where students perform a variety of laboratory experiments.

At the academic level (A), Biology is a laboratory-centered, college preparatory course in the life sciences and is paced to emphasize a thorough understanding of basic biological concepts. This course includes the study of plants, animals, genetics, cell composition, human physiology, microbiology, and ecology.

Topics in Life Sciences

Grades 10, 11 Year 6 periods/cycle 1 credit 3122 (A) SC

Topics in Life Sciences focuses on patterns, processes and relationships of living organisms. Students will use the tools of scientists, including observations, experiments, hypotheses, tests, models, theory and technology to explore how life works. This course includes the study of topics in ecology, genetics, microbiology, evolution, energy sources, oceanography and sustainability. *This course does not currently meet NCAA eligibility standards for science credit.

AP Environmental Science Environmental Science

Grades 10, 11, 12 Year 6 periods/cycle 1 credit 3130 (AP) 3140 (H) 3141 (X) SC, EL

Environmental Science is a course designed for students who have an interest in biology/environmental themes. The class is an extension of environmental/ecology topics that were covered in the student's first year Biology class. This is a multi-disciplinary science course that applies scientific concepts to real world problems and dilemmas. The course focuses on both background and laboratory studies of the environment. Course topics include traditional and experimental ecology, types of pollution, energy sources, oceanography, global trends, economics, ethics, and sustainability.

Chemistry

In Chemistry a logical sequence of chemical principles is presented via an activity-centered approach. An important part of the Chemistry Program is its relevance for both science and non-science oriented students. Thinking skills and problem solving techniques, along with the increased use of technology in science courses are valuable for all students, regardless of their career goals. Because Chemistry 1 is offered at various instructional levels, students are encouraged to select the one most appropriate for them, based on the current science teacher's recommendation.

AP Chemistry [1] Chemistry 1

Grades 10, 11, 12 Year 7 periods/cycle 1.2 credits 3200 (AP) 3210 (H) 3211 (X) 3212 (A) SC, EL

Chemistry 1 is a classroom/laboratory course which covers basic first-year chemistry topics at all levels: qualitative and quantitative analysis, safe conduct in a laboratory setting, stoichiometry, bonding and structure, representation of chemical changes, basic atomic theory, thermochemistry, kinetics, acids and bases, basic problem solving, and the relationships between science, technology and society. Laboratory experiences and technology are integrated within the course structure. Written laboratory reports are required for all levels.

AP Chemistry 1 is the first course, of a two year sequence, that prepares students for the AP Chemistry test. It is a rigorous, mathematics-based course utilizing an Advanced Placement approved college textbook. Success in this level of chemistry requires a high level of motivation and interest in chemistry, excellent study skills, sophisticated problem solving skills, and a commitment to working outside of the classroom.

Chemistry at the Honors (H) level is a mathematics-based treatment of chemistry for the highly motivated student and is taught using a college text. This rigorous course differs from the AP level in the depth of mathematical treatment and coverage of one or two fewer topics per semester. Success in this course will depend on high motivation, good work and study skills, and understanding of basic mathematical concepts.

Chemistry at the Accelerated (X) level is a college preparatory class for students who wish to obtain a thorough introduction to the major topics of a first year chemistry course. It is taught with a high school text and is less mathematically oriented than either the Honors or AP course. Students who take this course will be well prepared for an entry-level college science class. Laboratory activities and written lab reports are an integral part of this course.

Academic (A) Chemistry is a college preparatory course for students. It is taught from a high school text and focuses on laboratory based activities that relate to chemistry in everyday applications.

AP Chemistry [2]

Grades 11, 12 Year 6 periods/cycle 1 credit

3220 (AP) SC, EL Prerequisite: Chemistry 1

Enrollment in AP Chemistry 2 allows students to continue the study of certain concepts from Chemistry 1 in greater depth. Considerable emphasis is placed on individual laboratory activities. This course provides a more complete background for those students interested in a science career. Students are encouraged to take the AP Chemistry Examination at the conclusion of this course. Upon successful completion of this course, students will be able to:

- demonstrate proficiency in the chemistry laboratory, especially involving titration, qualitative, gravimetric, and instrumental analysis techniques
- understand and solve more sophisticated mathematical calculations related to the basic concepts in chemistry
- work independently in the chemistry laboratory, particularly with unknown determinations
- appreciate the subtle relationship which exists between such concepts as thermodynamics, equilibrium, acidbase, and oxidation-reduction chemistry

Physics

Physics is an important, relevant, and enjoyable discipline which includes the topics of mechanics, electricity and magnetism, and optics. In the various levels of this science course, students learn by doing, experiencing practical applications as well as theoretical aspects of the discipline. Students gain an understanding of how Physics applies to everyday life while preparing for the challenges of science at the college level.

Upon successful completion of Physics, the student should be able to:

- read, understand, and interpret physical information verbally, mathematically, and graphically
- describe and explain the sequence of steps in the analysis of a particular physical phenomenon or problem
- use mathematical reasoning to solve a physical problem
- perform experiments, interpret results of observations, and assess experimental uncertainties
- think critically and deductively as a member of a team
- analyze data and recognize relationships between variables in data analysis
- demonstrate proper use of laboratory equipment including a wide variety of measuring devices
- demonstrate an understanding of basic physical principles and their applications in modern society

AP Physics C: Mechanics Physics

Grade 11, 12 Year 7 periods/cycle 1.2 credits 3300 (AP) 3310 (H) 3311 (X) 3312 (A) SC, EL

The calculus-based Advanced Placement (AP) Physics course is approximately equivalent to a one-year, college-level course in general physics for scientists and engineers. Topics include motion, forces, vectors, momentum, and energy. This course is designed to prepare students for the calculus-based AP Physics C: Mechanics test administered annually in May.

Honors (H) Physics is a non-calculus based college level laboratory course in mechanics. Topically, Honors Physics is similar to AP physics with less emphasis on the application of calculus. Group problem solving and hands-on activities are incorporated. Honors Physics is a mathematics intensive course.

Accelerated (X) Physics is a college preparatory class for students who wish to obtain a thorough introduction to several major topics typically covered in a first-year college physics course. This course is taught using an algebra-based text and is less mathematically oriented than either the Honors or AP courses. The topics of motion, forces, vectors, and momentum are included.

Academic (A) Physics is a college preparatory course for students. The class uses a high school text and focuses on laboratory-based activities that relate physics to everyday applications.

AP Physics C: Electricity and Magnetism

Grade 12 Year 7 periods/cycle 1.2 credits

3320 (AP) SC, EL

Prerequisite: AP Physics C: Mechanics

This calculus-based course is a continuation of AP Physics C: Mechanics. Topics include electrostatics, electricity and circuits, field theory and electric fields, magnetism and magnetic fields, electromagnetic waves and optics. Recommended for students pursuing college majors in the physical sciences, engineering, mathematics, or computer science, the course is designed to prepare students for Part 2 (Electricity and Magnetism) of the calculus-based AP examination administered annually in May.

Topics in Physical Science

Grades 11, 12 Year 6 periods/cycle 1 credit 3332 (A) SC

Prerequisite: Biology and Topics in Life Sciences

Topics in Physical Science is a laboratory-based course that focuses on topics that pertain primarily to chemistry and physics. The class will be taught from a high school text with emphasis placed on hands-on laboratory based activities. Students will use the tools of science to relate both chemistry and physics topics to everyday applications. Topics of discussion from chemistry include density, balancing chemical reactions, the mole, calorimetry, and acid/base chemistry. Physics topics include forces, study of motion (acceleration, velocity, displacement), and real world applications for energy use (solar, wind, electricity).

Science Electives

Microbiology

Grades 10, 11, 12 Semester 6 periods/cycle .5 credit **3160 (H) 3161 (X) SC, EL**

Prerequisite: Biology

Microbiology is a laboratory-oriented course in which students learn about the largest group of living organisms on Earth. Students gain an appreciation for the great diversity of microorganisms through an overview of various organisms in Kingdoms Fungi and Protista. Laboratory activities will include the safe handling of microorganisms, soil microbiology, the genetics of microorganisms, and industrial uses of microorganisms.

Anatomy and Physiology

Grades 10, 11, 12 Year 6 periods/cycle 1 credit **3190 (H) 3191 (X)** SC, EL

Prerequisite: Biology

This laboratory-based course is intended for students who are interested in pursuing a science/health-related career. The class will provide an in-depth study of both anatomy – the parts of the human body, and physiology – the function of the organs within the body. Upon completion, students should be able to demonstrate a more complete understanding of organ systems and how they contribute to normal body functions. NOTE: This course will include labs that examine computer models as well as the dissection of preserved mammalian specimens.

Genetics

Grades 10, 11, 12 Semester 6 periods/cycle .5 credit 3180 (H) 3181 (X) SC, EL Prerequisite: Biology

Genetics is a laboratory based course designed for students who have an interest in furthering their knowledge in the field of genetics and inheritance. This course focuses on the role of chromosomes, genes, and DNA in the inheritance of human traits and disorders. Topics will include detailed study of DNA structure, function, and replication, cell reproduction, Mendelian genetics, human inheritance, and genetic engineering. Current genetic issues and technologies will also be investigated.

Astronomy

Grades 10, 11, 12 Semester 6 periods/cycle .5 credit 3420 (H) 3421 (X) SC, EL Prerequisite: Biology

Astronomy is a laboratory based course designed for students who have an interest in furthering their knowledge of astronomy. The course focuses on the history of astronomy, the solar system, the sun and life cycles of stars, galaxies and cosmology. Laboratory activities will include Kepler's Laws, planetary motion, Doppler Effect, optics. This course is excellent preparation for any college course in introductory astronomy.

Co-Curricular Science Electives

	\mathbf{EL}
.2	25 or .5 credit
3 periods per cycle	(.25 credit)
3 periods per cycle	(.25 credit)
6 periods per cycle	(.5 credit)
6 periods per cycle	(.5 credit)
	3 periods per cycle 3 periods per cycle 6 periods per cycle

This class is designed for students who are interested in enhancing their knowledge base and understanding through practical applications of science. The course consists of technology, engineering, and theoretical aspects of science. The course activities include but are not limited to the design and construction of devices such as trebuchets, robots, balsa wood structures, and cars. Extended experiences pertaining to laboratory activities such as forensic identification, experimental design, and chemistry/physics labs will also be emphasized. Finally students will have the opportunities to examine the finer domains of science that are not currently being offered in the science curriculum such as geology, fossils, and health sciences. Students may register for this course in one or both semesters. This class will support participation in the interscholastic Science Olympiad program.



World Languages

Ann Karcewski & Stacy Katz, Department Chairpersons

Modern and classical language courses are designed to meet the needs, interests, and abilities of all students. The goals of the world language course offerings are to enable the student to use the chosen language for communication and to develop insights into the literature and culture of the various countries concerned. Languages offered include Chinese, French, German, Italian, Latin and Spanish.

As a requirement for graduation, students must demonstrate proficiency in a second language. Students entering the high school having completed two years of a language must complete at least a third year of that same language or complete two years of another language.

Whenever necessary, courses and levels may be blended with differentiated curriculum and instruction, which may include alternating topics from year to year.

Teachers, in all years and at all levels, conduct language classes in the target language. Students are expected to interact in class in the target language.

Language study may:

- increase global awareness through study and appreciation of other cultures
- strengthen grammar in one's own language
- prepare students for a growing number of careers and give them an advantage when applying for employment
- enhance the pleasure of travel and social interaction
- enable the student to meet college entrance requirements.

The Department recommends the study of a minimum of four years of the same language at the high school. This recommendation is strongly supported by the admission boards of major colleges and universities. In addition, the student is encouraged to study a second world language whenever possible.

AP Capstone Program: For students interested in pursuing advanced and interdisciplinary study related to World Languages during their 10th, 11th, or 12th grade years, please see the AP Capstone Program information found on page 15.

FRENCH

French 1

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit **4010 (H) 4011 (X) 4012 (A)** WL, EL

French 1 is a course in which students are introduced to the four basic language skills of listening, speaking, reading and writing with a focus on interpersonal and presentational communication. Students are exposed to Francophone culture through thematic units which include greetings, leisure activities, school, food, family, professions, clothing and weather. There is an emphasis on cultural comparisons between francophone countries and the United States. Authentic resources are used to enhance language learning through video, advertisements, articles, short stories, music and teacher-produced materials.

French 2

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit 4020 (H) 4021 (X) 4022 (A) WL, EL Prerequisite: French 1

The second year of French continues to refine and expand the skills acquired in French 1 with the goal of authentic language use. Vocabulary expansion and exposure to francophone culture includes thematic units on holidays/vacationing, art, travel, food, health, environment and daily routine with an emphasis on Parisian life. Students will progress through exposure to authentic resources such as videos, advertisements, articles, short stories, music and teacher-produced materials.

French 3

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit 4030 (H) 4031 (X) 4032 (A) WL, EL Prerequisite: French 2

Through discussions of cultural readings and analysis of short literary pieces, this course continues to develop the ability of the student to function in all French language skills.

The student will:

- · respond appropriately to questions
- read directly in the language
- write paragraphs, compositions, and journals demonstrating an understanding of grammatical principles.

Students who successfully complete this course may have the option of enrolling in AP French the following year.

French 4

Grades 10, 11, 12 Year 6 periods/cycle 1 credit 4040 (H) 4041 (X) WL, EL

Prerequisite: French 3

This course refines and expands the four language skills. Emphasis is placed on culture, conversation, grammar review and short literary selections. The student will:

- read directly in the language
- write coherent paragraphs and compositions
- increase his or her knowledge of Francophone culture

The curriculum at this level will include literature, contemporary topics and advanced conversational situations.

French 5

Grades 11, 12 Year 6 periods/cycle 1 credit 4090 (H) 4091 (X) WL, EL Prerequisite: French 4

This course is designed for students who desire to speak the French language more naturally and effectively. Lessons are structured through cooperative learning to provide students practice in conversing about popular current event topics. In discussing contemporary issues, students gain a better understanding of French-speaking people, culture, and language. The themes studied include: free time activities, school life, health, technology, cooking, travel and the year wraps up with the reading and study of the classic, le Petit Prince. Authentic materials such as newscasts, podcasts, advertisements, infographics, articles, short stories, poems, Internet activities and teacher produced materials replace a formal textbook. Grammar such as the past, conditional, pronouns and the subjunctive will be reviewed and infused in context in order to increase speaking ability. Students should be able to express feelings and opinions, agree and disagree and carry out a conversation about wide variety of topics while increasing their vocabulary in each unit.

AP French Language 4 - 5

Grades 10, 11, 12 Year 6 periods/cycle 1 credit 4070 - 4 (AP) 4080 - 5 (AP) WL, EL

Prerequisite: French 3 or French 4

This nonsequential, two-year course is intended for students who wish to develop their proficiency in modern spoken French. Students who choose this course should have attained reasonable proficiency in reading, listening, speaking, and writing in their previous study of French. While students may take the AP exam after taking this course for one year, they will be best prepared after two years. The student will be able to:

- speak in French at a conversational pace
- read and discuss newspaper and magazine articles as well as contemporary French novels
- write insightful essays on current issues

French 6

Grade 12 Year 6 periods/cycle 1 credit **4000 (H) 4001 (X) WL, EL**

Pre-requisite: French 5 or AP French Language 5

This course offers a culminating experience for students studying the French language. Students will learn to utilize advanced elements of the language by further developing fluency through more complex speaking, reading, writing and listening activities. Through a variety of modalities, e.g., texts, authentic literature, film, pod-casts and music, students will gain a deeper appreciation for French communication and culture. Additionally, students will be exposed to contemporary trends in different French-speaking countries to foster understanding of our growing global society.

GERMAN

German 1

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit 4110 (H) 4111 (X) WL, EL

Through the fusion of authentic materials from contemporary German media sources and emerging technologies such as cloud-based voice mail and online videos, students will immerse themselves in the German language. Students who take this course during their freshmen year will be able to reach the AP level by their senior year. Listening, speaking, writing, and reading skills, as well as grammar proficiency, will be developed within an ongoing cultural context. Unit themes will include, but are not limited to, personal identification, education, the household, community and physical environment, free time activities, mealtime, clothing/ shopping, travel and careers.

German 2

Grades 10, 11, 12 Year 6 periods/cycle 1 credit 4120 (H) 4121 (X) WL, EL

Prerequisite: German 1

German 2 continues to refine and expand the listening, speaking, reading, and writing skills with the goal of authentic language use. The student will be able to:

- respond in written and/or spoken German
- read familiar written German aloud in a manner acceptable to a fluent speaker
- demonstrate increased command of vocabulary and elements of grammar
- briefly express ideas in German on a given topic, either orally or in writing
- read dialogues, essays, and compositions in German without translating word for word

German 3

Grade 11, 12 Year 6 periods/week 1 credit **4130 (H) 4131 (X)** WL, EL

Prerequisite: German 2

German 3 is an active review of German pronunciation and fundamental elements of grammar as well as oral, reading, and writing skills. Emphasis is on basic conversation and discussion skills and on improving the comprehension of German spoken at normal conversational speeds. Readings include transcribed discussions and short stories written for German young people by modern authors. Students who successfully complete this course may have the opportunity of enrolling in AP German the following year.

German 4

Grades 11, 12 Year 6 periods/cycle 1 credit 4140 (H) 4141 (X) WL, EL
Prerequisite: German 3

German 4 emphasizes speaking and understanding German through a variety of texts including essays, short stories, poetry, and modern media. The study of grammar in context and a general grammar review refine the students' skills. Discussion in German of such current topics as social life, customs, and the environment is a major aspect of the course.

AP German Language 4

Grades 11, 12 Year 6 periods/cycle 1 credit 4160 (AP) WL, EL Prerequisite: German 3

This course is intended for students who wish to develop their proficiency in modern spoken German without the specific emphasis on literary analysis. Students who choose this course should have attained reasonable proficiency in reading, listening, speaking, and writing in their previous study of German. The student will be able to:

- speak in German at a conversational pace
- read and discuss newspaper and magazine articles as well as German short stories and novels
- write insightful essays on current issues

ITALIAN

Italian 1

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit **4510 (H) 4511 (X)** WL, EL

In Italian 1, students will be introduced to the Italian Language through the exploration of popular songs, works of art, culture and videos of native Italian speakers. Students will begin building their ability to speak and develop skills for navigating real-world situations. Students will read authentic materials and practice attentive reading strategies: using cognates and context to decipher meaning. Thematic units include: personal description, daily life, activities, family, food and fashion. In addition, there are opportunities for students to advance their knowledge beyond the scope of the course and prepare for advanced Italian.

Italian 2

Grades 10, 11, 12 Year 6 periods/cycle 1 credit 4520 (H) 4521 (X) WL, EL

Prerequisite: Italian 1

Students in Italian 2 will further develop communication skills through the exploration of authentic Italian culture. Thematic units include: talking about the past, holidays and festivals, school and youth culture, health and wellness, house and home, and the cities of Italy. Italian cultural traditions are compared with those of the United States. In addition, there are opportunities for students to advance their knowledge beyond the scope of the course and prepare for advanced Italian.

Italian 3

Grades 11, 12 Year 6 periods/cycle 1 credit 4530 (H) 4531 (X) WL, EL Prerequisite: Italian 2

Development of oral proficiency continues in Italian 3. The course emphasizes speaking and understanding through a variety of texts, short stories, music and movies. Through carefully selected classic Italian movies, students will acquire an authentic understanding of Italian culture, language, dialects and history. Italian 3 focuses on travel vocabulary, the geography of Italy, and various aspects of the Italian culture. Students will learn to demonstrate their understanding of grammatical principles to writing paragraphs and short stories. Students will interact in real-life language situations and learn useful vocabulary. Students who successfully complete this course have the opportunity of enrolling AP Italian the following year.

AP Italian 4

Italian 4

Grades 12 Year 6 periods/cycle 1 credit 4570 (AP) 4540 (H) 4541 (X) WL, EL

Prerequisite: Italian 3

This course is designed for both advanced placement candidates and students interested in the advanced study of Italian. Through discussions of cultural readings analysis of short literary pieces, presentations, role-play, and collaborations with classmates, this course continues to develop communication skills and cultural awareness. Students explore themes within a variety of contexts, including global challenges, science and technology, art, daily life, personal identity and relationships, and will be able to draw comparisons to other cultures including their own. The study of grammar in context and a general grammar review are also covered. Students who choose the AP level of this course should have attained advanced proficiency in reading, writing, speaking and listening in their previous study of Italian.

CHINESE

Chinese Language and Culture 1

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit **4610 (H) 4611 (X) WL, EL**

Chinese 1 emphasizes the communication skills related to topics such as home, family, school and Chinese written language. The students will:

- learn spoken Chinese and the phonetic system
- read aloud in Chinese with attention to pronunciation
- become familiar with Chinese characters

Chinese Language and Culture 2

Grades 10, 11, 12 Year 6 periods/cycle 1 credit **4620 (H) 4621 (X)** WL, EL

Chinese 2 continues to emphasize and develop oral proficiency. Vocabulary expansion and exposure to Chinese culture are accomplished by studying the Chinese calendar, cuisine, shopping and sports. The students will:

- respond in written and/or spoken Chinese
- read aloud in a manner acceptable to the fluent speaker
- demonstrate command of vocabulary and basic structure
- learn more characters and develop character recognition skills

Chinese Language and Culture 3-4

Grades 11, 12 Year 6 periods/cycle 1 credit 4630 - 3 (H) 4631 - 3 (X) WL, EL 4640 - 4 (H) 4641 - 4 (X) WL, EL Prerequisite: Chinese 2

Chinese 3 and Chinese 4 continue to develop the ability of the students to function in all Chinese language skills based on everyday situations, leisure activities and festivals. Awareness of Chinese life, culture and philosophy will be emphasized. The students will:

- respond appropriately to questions
- briefly express ideas on a given topic, either orally or in writing
- read directly in the language to develop the ability of character recognition
- write paragraphs, compositions, and journals demonstrating an understanding of sentence structures

LATIN

Latin 1

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit **4210 (H) 4211 (X)** WL, EL

Latin I introduces students to the culture, language and history of Ancient Roman Civilization. Grammar, structure, linguistic roots, and vocabulary are strongly emphasized. This introduction stresses comprehension of the Latin language by reading stories centered on the town of Pompeii during the first century AD. Students will also study the relationship and enduring influence of antiquity to the modern world. Students who take this course during their freshman year will be able to reach the AP level by their senior year.

Latin 2

Grades 10, 11, 12 Year 6 periods/cycle 1 credit 4220 (H) 4221 (X) WL, EL
Prerequisite: Latin 1

The development of communication skills and cultural awareness begun in Latin 1 will continue in Latin 2. Emphasis will be on translation strategies that prepare students to read and understand adapted Latin texts. Language skills are presented in the context of reading comprehension, rather than as isolated concepts. Toward this end, students will encounter a wide variety of materials, including authentic Latin literature, letters, graffiti, inscriptions, mottoes, and coins. The goal is student discovery of linguistic principles through inductive and deductive reasoning, rather than rote memorization. Through a knowledge of the language, ideas, and culture of ancient Rome, students will be able to communicate more effectively in English as well. A focus on words, their parts and histories will foster student curiosity and knowledge about the origins of the student's own language. Proficiency in reading, writing, listening, and speaking will support the acquisition of critical thinking skills.

Latin 3

Grades 11, 12 1 credit Year 6 periods/cycle 4230 (H) 4231 (X) WL, EL

Prerequisite: Latin 2

Designed for advanced students demonstrating a commitment to a third year of language study and an interest in literature, this course expands proficiency in reading, speaking, and writing, as well as culture awareness. Direct emphasis will be on reading as a focus on communication with the past, using Latin texts that progress from an "adapted" format to original materials, as students gain confidence and skill. Students will encounter new syntax and vocabulary within the context of reading, while practicing skills already mastered. The course will explore the impact of philosophy and biography on Latin literature, and discussion will introduce rudiments of an author's style. The setting of the Late Republic and Early Empire will be pivotal resource topics as students discover connections between culture and literature. Students who successfully complete this course will have the opportunity to enroll in AP Latin the following year.

Latin 4

Grades 11, 12 Year 6 periods/cycle 1 credit WL, EL 4240 (H) 4241 (X) 4230 or 4231 Prerequisite: Latin 3

In Latin 4, students prepare for reading and analysis of authentic Latin prose and poetry. Students expand and refine the skills developed in Latin 3 by reading a variety of authors such as Vergil and Caesar. Recognizing grammatical structures, analyzing poetic style, extracting meaning from passages of poetry and prose, and tracing the influences of authors on later literature are main components of the course. An understanding of the social and historical context which spawned the literature will foster development of critical thinking skills.

AP Latin 4

Grade 12 Year 6 periods/cycle 1 credit

4250 (AP)

Prerequisite: Latin 3

This course is designed for both Advanced Placement candidates and students interested in the advanced study of Latin literature. It places major emphasis on writing critical analyses of texts selected from the AP syllabus. Students apply the broad linguistic skills mastered in earlier courses to read critically texts of a deeper, richer complexity. Study includes the influence on the texts of Roman culture, politics, history, mythology, social structure and literary tradition. A major component is preparation for the AP test which includes scansion of Latin dactylic hexameter, recognition and discussion of a wide variety of rhetorical devices, and the ability to translate at sight.

SPANISH

Spanish 1

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit 4310 (H) 4311 (X) 4312 (A) WL, EL

Spanish 1 is a course in which the student is introduced to the four basic skills: listening, speaking, reading, and writing. Exposure to Spanish and Latin American cultures includes lessons on sports, pastimes, Spanish-speaking people in the United States, and careers. The student will be able to:

- recognize the essential differences between the Spanish and English sound systems
- read aloud in Spanish with attention to pronunciation
- give appropriate oral and written responses
- understand spoken Spanish
- recall familiar facts of Spanish and Latin American civilizations from reading assignments and study differences between the cultures of Spanish-speaking countries and that of the United States

Spanish 2

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit 4320 (H) 4321 (X) 4322 (A) WL, EL Prerequisite: Spanish 1

The second year of Spanish continues to refine and expand the skills acquired in Spanish 1. Vocabulary expansion and exposure to Spanish and Latin American culture are accomplished by studying the family, leisure activities, holidays, and vacations. After completing this course the student will demonstrate the ability to:

- read aloud in a manner acceptable to the fluent Spanish speaker
- briefly express ideas in Spanish on a given topic orally and in writing
- compare cultures of Spanish-speaking countries to that of the United States

Spanish 3

Grades 9,10, 11, 12 Year 6 periods/cycle 1 credit 4330 (H) 4331 (X) 4332 (A) WL, EL Prerequisite: Spanish 2

This course continues to develop the ability of the student to function in all language skills based on everyday situations such as asking and giving directions, ordering in a restaurant, and purchasing clothes. Awareness of Spanish and Latin American life, culture, and philosophy will be emphasized. The Honors level will emphasize advanced grammatical structures. After completing this course, the student will be able to:

- Respond appropriately to questions
- Communicate everyday needs
- Write paragraphs, compositions, and brief summaries demonstrating an understanding of grammatical principles
- Comment in Spanish on cultural contrasts and similarities

Students who successfully complete this course may have the opportunity of enrolling in AP Spanish the following year.

Spanish 4

Grades 10, 11, 12 Year 6 periods/cycle 1 credit 4340 (H) 4341 (X) WL, EL

Prerequisite: Spanish 3

This course continues the expansion and refinement of the four basic language skills developed in Spanish 3, enhanced and supplemented by the study of spanish art, literature, and culture. Students will participate in cooperative activities to become more proficient in the use of the Spanish language and the understanding of Spanish culture.

Students who complete this course will be able to:

- Respond appropriately to questions
- Communicate everyday needs
- Express ideas both orally and in writing
- Demonstrate an understanding of more complex grammatical principles
- Comment on the artistic style of several famous artists
- Comment on the historical and cultural events in Spanish
- Comprehend and analyze short stories and essays in Spanish

Spanish 5

Grades 11, 12 Year 6 periods/cycle 1 credit 4390 (H) 4391 (X) WL, EL

Prerequisite: Spanish 4

This course is conducted in Spanish and engages students in conversation in a variety of formats toward the goal of further developing oral proficiency. Students will strengthen linguistic skills by increasing vocabulary and spontaneity, improving pronunciation and fluency and acquiring confidence in speaking Spanish. The different types of discourse will include narration, description, critical commentary, debate, simulations and role-playing. During this course, students will demonstrate the ability to:

- Understand a lecture in Spanish on a given topic
- Initiate and maintain conversations in Spanish
- Speak spontaneously on a given topic
- Read and discuss newspaper articles and selected readings from Spanish and Latin American literature
- Analyze and discuss Spanish and Latin American films related to our unit of study

AP Spanish Language 4 - 5

Grades 10, 11, 12 Year 6 periods/cycle 1 credit 4370 - 4 (AP) 4380 - 5 (AP) WL, EL

Prerequisite: Spanish 3 or Spanish 4

This non-sequential, two-year course is intended for students who wish to develop proficiency in modern spoken Spanish. Students who choose this course should have attained an advanced proficiency in reading, listening, writing, and speaking in their previous study of Spanish. Preparation for the Advanced Placement exam will be a key component. While students may take the AP exam after taking this course for one year, they will be best prepared after two years. Students in this course will be able to:

- Synthesize information from a variety of authentic written and print resources
- Synthesize information from a variety of authentic audio, visual, and audiovisual resources
- Engage in written interpersonal communications
- Plan and produce written presentational communications
- Engage in spoken interpersonal communications
- Plan, produce, and present spoken presentational communications

Spanish 6

Grades 12 Year 6 periods/cycle 1 credit **4300 (H) 4301 (X) WL, EL**

Prerequisite: Spanish 5 or AP Spanish Language 4-5

This course offers a culminating experience for students studying the Spanish language. Students will learn to utilize advanced elements of the language by further developing fluency through more complex speaking, reading, writing and listening activities. Through a variety of modalities, e.g., texts, authentic literature, film, podcasts and music, students will gain a deeper appreciation for Spanish communication and culture. Additionally, students will be exposed to contemporary trends in different Spanish-speaking countries to foster understanding of our growing global society.



Wellness/Fitness/Family and Consumer Sciences

John Jones, Department Chairperson

The relationships between individuals, families, and communities are as complex as they are demanding. The Wellness/Fitness/FCS Department offers all Conestoga students the opportunity to develop skills necessary to live and work in a global society.

All students must complete the Health and Fitness course (0.5 credit) designed for ninth grade students. Health and Fitness 9 includes required instruction in Health and Physical Education (PE). All students must be enrolled in a PE course for the other seven semesters of attendance for a total of 1.4 PE credits, not including the Health and Fitness course. Up to six semesters of PE (1.2 credits) may be satisfied through the Team Sport or Extended Experience programs. Students must complete the Health requirement during the regular academic calendar. Summer Health Programs will not be considered acceptable for satisfying the Conestoga Health credit requirement.

Students who are no longer enrolled at Conestoga but who are pursuing a diploma through the Early College program will not be required to take PE if they have met PA state requirements. They will need to provide 24 credits in total and meet all other specific requirements.

Physical Education Grading Policy

Grades in physical education are based upon the following objective and subjective criteria: student preparedness, participation, demonstrated skill improvement, testing, and attitude. The grades will be posted as follows: "O" for outstanding, "S" for satisfactory, "N" for passing but needs improvement, and "U" for unsatisfactory. A student with two illegal absences will receive a "U" for the marking period. A student who receives a "U" grade is disqualified from honor roll status.

A final semester grade will be given. Failed courses may be retaken. However, students are not permitted to take more than two physical education courses, or four periods per cycle, during a semester. Extended PE will be graded on a P/F basis.

Each semester, students will register for one physical education course. All ninth graders will be enrolled in 5009 one semester and in 5105 the other.

Health & Fitness 9

Grades 9 Semester 6 periods/cycle .5 credit 5009 HF

Health & Fitness is a one-semester course with a focus on mastery of health concepts and participation in a variety of activities that lead to a lifelong healthy lifestyle. Within the six period cycle, four periods are devoted to classroom instruction about Health-related topics and two periods engage students in physical education. Health & Fitness emphasizes the integration of health education and physical education; the subjects of health and physical education are combined into one course that meets daily with the same teacher. The purpose of this format is to reinforce the information learned in the classroom setting with activities experienced in the physical education environment. This course provides an opportunity for students to improve their fitness level and to experience how fitness concepts can support healthful living.

The aim of the curriculum is to provide students with planned and balanced programming to develop the knowledge, skills, and attitudes for physically active and healthy lifestyles. Curricular topics or units of study are arranged and sequenced to coincide with one another. Similar ideas are taught in concert, and overlapping concepts or ideas emerge as organizing elements. For balanced programming in physical education, a variety of activities ranging from non-competitive to highly competitive, across a variety of categories are provided. For balanced programming in health education, healthy decision-making is emphasized in relation to nutrition, stress, drugs, and alcohol, and family life.

Physical Education Core 9

Grades 9 Semester 2 periods/cycle .2 credit 5105 PE

The ninth grade Physical Education course focuses on the physical development of each student. In addition, emphasis is placed on developing integral social skills through various physical activities. Students have an opportunity to develop social skills including: problem solving, cooperation, communication, sportsmanship, leadership, teamwork, responsibility, and respect for the diverse abilities of their peers. Areas of concentration include competitive games, recreational games, and physical fitness activities. Activities may include, but are not limited to, weight training, soccer, pickleball, badminton, volleyball, touch football, ultimate frisbee, track events, and floor hockey. Also, students participate in the Presidential Youth Fitness Challenge.

Physical Education Core 10, 11, 12

Grades 10, 11, 12 Semester 2 periods/cycle .2 credit

5615 Semester 1 PE 5625 Semester 2 PE

Students will learn the concepts of a sound body and a sound mind through the physical education program. The program helps students to gain an understanding of themselves and their potential through activities that can be enjoyed throughout life. Physical Education Core 10, 11, 12 will be organized into centers-based activities with varying levels of intensity to advance student goals of fitness, recreation, and/or competition. Possible activities, which shall be offered on a rotating basis, are listed below.

Basketball Aerobics Floor Hockey
Soccer Kick-boxing Cooperative Games
Tae bo Badminton Frisbee Games

Weight Training Rock Climbing Yoga Fitness Program Team Handball Volleyball

Design Indoor/Outdoor Games

Adaptive Physical Education

Grades 9, 10, 11, 12 Semester 2 periods/cycle .2 credit **5655 PE**

This course is a program alternative that is available to meet the needs of students who are temporarily or permanently unable, for physical or medical reasons, to participate in the regularly scheduled physical education program. This program's flexibility permits a student to be changed from one activity to another during the regularly scheduled class. Students will receive a grade(s) and credit for participation in this program. No student will be excused from attending his or her regularly scheduled physical education classes. Should the attending physician reject all the activity options of the Adaptive Program, the student will be given appropriate alternative assignments for the recommended time period. When a student is released by the attending physician, he or she will return to the regular physical education program.

Floor Hockey

Grades 10, 11, 12 semester 2 periods/cycle .2 credit 5175 semester 1 PE 5275 semester 2 PE

Hockey, hockey and more hockey! This course is designed for the floor hockey enthusiast who enjoys a high level of competition. Teams will be established for class tournaments. Opportunities for officiating this fast-paced sport will also be provided.

Alternative Physical Education

Grades 10, 11, 12

5145 Team Sport (Fall) 5245 (Spring) .2 credit 5155 Extended Experience PE (Fall) 5255 (Spring) .2 credit

Students may satisfy up to 1.2 credits of required physical education through involvement in inter-scholastic athletics or other approved alternative PE programs (including club sports: Ice Hockey, Rugby, Squash, and/or Crew). Students intending to take part in Extended Experience PE or club sport must complete an application, available on-line at http://www.tesd.net/page/640 or in the Main Office. Students intending to take part in a CHS team sport and receive PE credit should visit the Athletics Office for information. Students who do not continue on an athletic team, are not selected for a team, or otherwise discontinue their involvement in a school or community-based alternative PE program will be required to recover the lost PE credits in a subsequent semester. Second-semester seniors faced with recovering PE credits must do so through CHS physical education classes to improve the likelihood of graduating on time.

Family and Consumer Sciences

Child Development & Parenting/Preschool**

Grades 11, 12 Semester 6 periods/cycle .5 credit **8049** FC, EL

Three days a week (Monday, Wednesday & Friday), students in this course will investigate theories relating to the cognitive, social, emotional and physical development of children ages birth through six years. Then, two days a week (Tuesday & Thursday), students use the Preschool Lab as a kinesthetic setting to make observations and demonstrate their understanding of theories by presenting age-appropriate lessons to children.

Sports Nutrition

Grades 9, 10, 11, 12 Semester 3 periods/cycle .25 credit **8005 FC, EL** (Lab Fee: \$20)

Designed for students with a keen interest in nutrition, fitness, and sports, this course introduces students to basic nutritional concepts and the application of these concepts through food preparation. Students will plan and analyze their diets based on their activity levels and use a laboratory problem-solving approach to research meal planning, food preparation techniques, and various meal patterns, including vegetarianism.

Culinary Arts 1

Grades 9, 10, 11, 12 Semester 3 periods/cycle .25 credit **8015 FC, EL** (Lab Fee: \$20)

The objectives of this course include the planning and preparation of meals with an emphasis on nutritive value, budgeting, comparative shopping, timesaving techniques, and procedures and methods related to food preparation. Nutritional analysis will be used by students as they become proficient at meal preparation.

Culinary Arts 2

Grades 9, 10, 11, 12 Semester 3 periods/cycle .25 credit **8035 FC, EL** (Lab Fee: \$20)

The objectives of this course include the nutritionally-based study and investigation of advanced principles and culinary techniques of creative meal planning, service, and food preparation. This course is particularly valuable for students planning careers in nutrition, food service, or the culinary arts.

Regional Cuisine

Grades 10, 11, 12 Semester 3 periods/cycle .25 credit **8045** FC, EL (Lab Fee: \$20)

This course offers students the opportunity to plan and prepare meals focusing on regional and ethnic influences. Students will learn the classic cooking styles of each region of the country as well as the origin and background of various cooking traditions. Multicultural food patterns will be explored.

The Pastry Chef

Grades 11, 12 Semester 3 periods/cycle .25 credit 8025 FC, EL (Lab Fee: \$20)

A primary objective of this course is the application of chemistry in classic baking principles and techniques. Students use a team-based approach to prepare professional-grade specialty breads, desserts, pastries, and confections. Additionally, students learn food safety principles that prevent food-borne illnesses in commercial and home food preparation areas.

Fashion & Design Construction

Grades 9, 10, 11, 12 Semester 3 periods/cycle .25 credit **8095** FC, EL

This course integrates all facets of the fashion and garment industry with a focus on careers. Students will explore fashion cycles, apparel design, textile fibers, and garment construction. Professionals will be invited into the classroom to share their expertise in these areas. An innovative sewing project will be completed.

Safety Education Courses

Highway Safety

 Grades 10, 11, 12
 Semester 1
 3 pds/cycle
 .25 credit

 5505
 EL
 (Course fee \$100)

 Grades 10, 11, 12
 Semester 2
 3 pds/cycle
 .25 credit

 5515
 EL
 (Course fee \$100)

All Conestoga sophomores are eligible to take this course. Highway Safety provides students with classroom instruction necessary to complete a PA state-approved driver education program. Classroom instruction is designed to equip students with the knowledge and skills to enable them to make sound decisions in driving. This course will prepare students to enter the highway transportation system with knowledge of safe driving practices and an awareness of at-risk behaviors of young drivers. Students who have completed or are enrolled in Highway Safety class are eligible to take an approved Behind-the-Wheel (BTW) training course to complete the two-part state-approved driver education program. BTW training courses are available at student expense through the Chester County Intermediate Unit (CCIU) or other state-approved private driver training schools.



Business/Technology

Noah Austin, Department Chairperson

In the third millennium, businesses are global, technological change is constant, and information is the most valuable commodity. The individuals and nations who design and control information will determine our future.

The focus of the Business/Technology Department at Conestoga is to teach students to understand and use contemporary technology and the information it generates, organizes, transmits and receives. Teachers of business, technology, television, computer assisted design, and computer-generated graphics work together to offer courses that prepare students for leadership roles in the global community. Courses offered by the department provide exposure to software applications and include: personal and business finance and accounting, television production, digital graphics, digital and traditional photography, Mechanical & Electrical Engineering, and Structural and Environmental Engineering.

Note: A double asterisk (**) next to a course name indicates that a student may take the course more than one time for credit. Course content and instruction will be individualized to meet student and class needs.

Accounting 1

Grades 10, 11, 12 Semester 6 periods/cycle .5 credit 6009 BT, EL, MA* Software: MS Excel

This course provides an introductory understanding of financial accounting concepts and practices. It is a great first step that can lead to success in a variety of careers and is especially valuable for anyone planning to enter accounting or other business fields, including finance, economics, management and international business. Emphasis is placed on the accounting cycle, including analyzing business transactions, managing receivables and payables and preparing financial reports. GAAP (Generally Accepted Accounting Principles) and ethics are examined throughout the course as they relate to each area. In class, students will develop strong technology skills using MS Excel. The Personal Finance course is a recommended prerequisite. Students using personal computers will need access to the required software. This course does not currently meet NCAA eligibility standards for math.

Accounting 2

Grades 10, 11, 12 Semester 6 periods/cycle .5 credit 6019 BT, EL, MA* Software: MS Excel

Prerequisite: Accounting 1

Students continue to build on the accounting foundation in this advanced course. They will explore the role of accounting information in evaluating corporate financial performance and the importance of this information in executive decisions. Through accounting simulations and case studies, students will develop skills in analytical thinking and apply their knowledge of accounting to real-world situations. This course also focuses on applying ethics and integrity to accounting decisions to demonstrate that a business decision is not just about the numbers. Students using personal computers will need access to the required software. This course does not currently meet NCAA eligibility standards for math.

Personal Finance

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit 6109 BT, EL Software: MS Excel, Word, Power Point

Learning by trial and error is not the way to develop good financial management habits. This course offers the fundamental tools students need to manage the money flowing through their wallets. Using Microsoft Excel software, students learn the day-to-day financial skills needed to live well in our free enterprise system. They use spreadsheets and various Internet sites to prepare personal budgets, reconcile bank statements, shop for loans, manage credit card debt, calculate insurance costs and prepare a state and federal tax return. Students also explore various investment strategies, including risk management and tracking a stock portfolio. This course is beneficial for all students in grades 9 - 12 and is recommended before taking any other business course. Students using personal computers will need access to the required software.

Business Law and Ethics

Grades 11, 12 Semester 6 periods/cycle .5 credit 6049 BT, EL

This course approaches business from an ethics-related perspective, providing practical information and problem solving opportunities that develop in students the knowledge and skills necessary for survival in our law-saturated society. The curriculum includes case studies, role plays, small group exercises, and visual analysis activities. Topics covered include torts, negligence, strict liability, contracts, warranties and consumer responsibility with auto and housing laws. Particular attention will be paid to ethical standards and their influence on law and overall business practices. Ethical issues we will investigate include acceptable risk, intellectual property, worker's rights, whistle-blowing, outsourcing, and ethical issues in marketing.

Entrepreneurship

Grades 11, 12 Semester 6 periods/cycle .5 credit 6129 BT, EL Software: MS Word, Excel, Power Point and Internet Access

In today's world economy there is an unparalleled rise in entrepreneurship. This course will help students understand what it is like to be an entrepreneur and the risks involved in starting and operating a business enterprise. Students will learn strategies of business management, marketing and raising capital for launch and growth. Emphasis is placed on the development of a comprehensive business plan which incorporates all of the financial, organizational and operational aspects of the business. It is recommended that students complete the accounting course before taking Entrepreneurship.

Business Promotion & Marketing

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit 6139 BT, EL

Students in Business Promotion & Marketing learn the fundamentals of Business marketing, Product Promotion, and advertisement in today's fast-paced business environment. Examining case studies of real-world examples, students will grasp the theory behind advertising and consumer behavior. This course will span, traditional brand marketing, celebrity endorsements, Sports marketing, online analytics, and social media strategies. Students will create and deliver a marketing plan and pitch for a fictional business, including but not limited to, a website, business card, company logo, and a brief commercial. This course is recommended for students pursuing a career in business and marketing.

Digital Photography

Grades 9, 10, 11, 12 Semester 3 periods/cycle .25 credit **8505 BT, VP, EL** (Lab Fee-\$20.00)

This course explores visual and technical aspects of digital photography. The curriculum includes camera operation, lighting, elements and principles of design, composition and layout. Students will learn to download, organize, edit, manipulate and prepare photos for print and digital communication. Software includes Adobe Photoshop, iPhoto and others. This course is also offered for core elective credit in VPA. Access to a digital camera is highly recommended.

Advanced Digital Photography**

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **8519 BT, VP, EL** (Lab Fee - \$20.00)

Prerequisite: Photography 8505

This course provides students with the opportunity to effectively communicate ideas and information via digital photography. Students completing this course successfully will be able to demonstrate proficiency using a digital camera and manipulating images using Adobe Photoshop. Students will demonstrate advanced darkroom techniques through the use of personal imagery. Students wishing to repeat advanced photography are encouraged to enroll in Studio Art 1. This course is also offered for core elective credit in Visual & Performing Arts. Access to a digital camera is highly recomended.

Additional Courses

3D Sculpture and Mixed Media Advanced 3D Sculpture and Mixed Media Graphic Design and Animation

Please refer to the Visual & Performing Arts Department section of this publication for course descriptions and prerequisites for these elective courses.

Computer Aided Drafting and Design**

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **8529 BT, EL Software: Vectorworks**

Students in Computer Aided Drafting and Design will learn to use drafting and design computer software programs for a variety of drawing and design problems. After a computer hardware/software orientation, students will learn to read and render several types of technical drawings. That which is learned will then be applied in the design process. Students will work individually and in small groups on a number of architectural and engineering design activities. Working in both 2D and 3D programs, students will create mock-ups, prototypes and scale models using 3D printers, a 3D scanner and a laser engraver. This course is recommended for students interested in a career in engineering.

Mechanical & Electrical Engineering

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **8629 BT, EL** (Lab Fee - \$20.00)

This advanced course is designed for students with interests in technology, science, or engineering. Students will apply a problems-based approach to authentic situations in robotic technology, Mechatronic technology, communications, electronics, and transportation. Solutions will be designed on computers and built in the fabrication lab using a CNC milling machine, a laser engraver, 3D printing machines and traditional tools. Students will work in teams to learn research and development procedures, testing and analysis techniques and applied technology. Topics include robotic engineering, mechanical engineering, electrical engineering, and transportation engineering.

Structural and Environmental Engineering

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **8639 BT. EL** (Lab Fee - \$20.00)

This advanced course is designed for students with interests in technology, science, or engineering. Students will apply a problems-based approach to authentic situations in structural design, construction technology, communications, product design, manufacturing, and environmental engineering. Solutions will be designed on computers and built in the fabrication lab using a CNC milling machine, a laser engraver, 3D printing machines and traditional tools. Students will work in teams to learn research and development procedures, testing and analysis techniques and applied technology. Topics include structural engineering, design engineering, manufacturing systems engineering, and environmental engineering.

Beginning Television

Grades 9, 10, 11, 12 Semester 3 periods/cycle .25 credit 8585 BT, EL

Students will the basic principles of journalism, newsgathering, and video editing using Final Cut software. They will gain an appreciation of the television medium and develop standards of judgment that apply both to their work and to the commercial media. Students will complete hands-on video projects using live production, field production and post-production editing techniques. They will function as writers, talent, directors, camera operators and video editors. Both interpersonal and on-air communication skills will be stressed. This course is the prerequisite for other television courses and is recommended for those interested in careers in communications.

Intermediate Television

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **8579 BT, EL**

Prerequisite: Beginning TV

Students will produce video and learn elements of advanced journalistic style and the standards involved in producing for the cable network. Students will function as writers, talent, directors, camera operators and video editors. Both interpersonal and on-air communication skills will be stressed. This course is designed as a bridge between the basic skills presented in Beginning Television and the demands of production required in the advanced classes. Intermediate Television is the prerequisite for Advanced Television Production and is recommended for those interested in careers in communications.

Advanced Television Production/Broadcast Journalism**

Grades 10, 11, 12 Year 6 periods/cycle 1 credit **8595 BT**, **E**L

Prerequisite: Intermediate TV

This class will meet first period so students can produce and broadcast the morning announcements program, *Good Morning 'Stoga*, during homeroom. In addition, students enrolled in this class will produce packages that will air on both *Good Morning 'Stoga* and T/E News. This course will require commitment and responsibility on the part of the student. A strong background in control room procedure and/or journalistic writing, producing, shooting and editing will be necessary.

Advanced Screen Writing & Video Production**

Grades 10, 11, 12 Year 6 periods/cycle 1 credit **8599 BT, EL**

Prerequisite: Intermediate TV

Students will produce narrative, experimental, music video, documentary and other types of short films for T/E TV programming and other outlets. They will script, pitch, storyboard, shoot and edit each project. This course will require substantial group collaboration, commitment and planning, directing, editing and lighting/sound. Students should have an interest in publishing and sharing their work.



Visual and Performing Arts

Amy Cruz, Department Chairperson

The course offerings in the Visual and Performing Arts Department provide all students opportunities to grow aesthetically, to develop and expand a critical awareness of cultures both past and present, and to acquire the sensitivity needed to distinguish the fine from the mundane. Our intent is to help students to increase their perception and awareness of the environment, to encourage an imaginative and creative approach to problem solving, and to develop self-discipline and confidence to achieve higher levels of performance and appreciation.

Note: Nonsequential courses provide a continuing experience which permits a student to elect a particular course for credit more than once during his/her years at Conestoga. These courses are identified with a double asterisk (**) after the name.

AP Art History & Art History

Grades 11, 12 Year 6 periods/cycle 1 credit 7000 (AP) 7010 (H) 7001 (X) VP, EL

AP Art History is designed for students wishing to earn college credit for an introductory level course in art history. Students gain an understanding of history and aesthetics through the examination and discussion of painting, sculpture and architecture. Strong reading, writing, and work/study skills are required. Students are encouraged to take the APArt History Examination. Students who have not taken AP courses in the past or feel that they are not prepared for that level of difficulty may take Art History at the Honors or Accelerated levels. Testing and assessment of writing will be differentiated to meet the needs of students at the various levels. Course is also listed in Social Studies as an elective course. *This course does not currently meet NCAA eligibility

*This course does not currently meet NCAA eligibility standards for Social Studies.

Drawing and Painting**

Grades 9, 10, 11, 12 Semester 3 periods/cycle .25 credit **7025 VP, EL** (Lab Fee - \$10.00)

Drawing and Painting is designed to familiarize students with basic visual concepts and terms. Students will make artworks involving introductory drawing, design and painting skills. Works by a few famous artists will be introduced for inspiration. Students will learn techniques for marker, pencil, crayon, charcoal, chalk and oil pastel, tempera paint and watercolor.

Ceramics

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **7029 VP, EL** (Lab Fee - \$10.00)

Students who successfully complete this course will have learned how to design and create three dimensional forms using clay and ceramic processes. Students will learn how to work in a studio environment to produce pottery and sculpture using the basic clay construction techniques of pinch, coil, and slab. Students will be introduced to throwing on the potter's wheel and to clay figure modeling. Relief sculpture, carving, basic mold making, glazing, and firing techniques will also be addressed.

Advanced Ceramics**

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit 7059 VP, EL (Lab Fee - \$10.00)

Prerequisite: Ceramics OR Studio Art 2, 3-D Design

This course is designed for students who wish to continue to build on the skills learned in Ceramics. Slab building, coiling, wheel throwing and modeling techniques will be used to solve functional and three dimensional design problems in creative ways. Sketching and drawing skills will be taught as important tools for sculpture design. Experimentation with construction methods, texture, surface decoration, and glazing will be encouraged.

3 D Sculpture and Mixed Media

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **7239 VP, BT, EL** (Lab Fee - \$20.00)

In this course students will explore the techniques and materials used to create 3D art through various mediums and artistic styles. Students are encouraged to explore the concept of 3D art through materials such as balsa wood, stone, plaster, chipboard, fabric, wire, and found objects. The focus will be on the elements and principles of art, color schemes, composition, design, and art history. The major concepts that will be emphasized through this course are craftmanship, conceptual thinking and observation. **This course is also offered for core elective credit in Business/Technology.**

Advanced 3D Sculpture and Mixed Media

Grades 9,10,11, 12 Semester 6 periods/ cycle .5 credit 7249 VP, EL (Lab Fee - 20.00) Prerequisite: 3D Sculpture and Mixed Media or Studio Art 2, 3D Design

This course is designed for students who wish to continue to build on the skills learned in 3D Sculpture and Mixed Media. Students will create individual sculptural works from various materials such as paper, wood, metal, stone, and found objects. Students will have the opportunity work in groups to create larger works and installations, and learn how laser engraving and 3D printing technology can be used to create and alter sculpture. Emphasis will be on further development of technical skill, experimentation, and creative problem solving.

Graphic Design and Animation

Grades 9,10,11, 12 Semester 6 periods/ cycle .5 credit 7259 VP, BT, EL (Lab Fee - 20.00)

Students in Graphic Design and Animation learn the fundamentals of visual design and animation through still and motion visual communication tools. As our world becomes increasingly visual, graphics are impacting how information is delivered. This course provides experiences for students to use image, type, color, illustration, photography, 3D modeling and animation to create dynamic media. Terminology, design elements and principles of composition are explored through hands on practice and production. Still assignments include branding and identity, logo design, poster design, advertisement and package design. Motion assignments may include logo, character and advertisement animations for visual presentations, television and product illustration. 2D and 3D software includes Adobe Illustrator, In-Design Photoshop, Animate and Maxon Cinema 4d. Projects may be printed on paper or fabric, 3D printed, CNC engraved or laser engraved on various surfaces. This course is also offered for core elective credit in Business/Technology.

Digital Photography

Grades 9, 10, 11, 12 Semester 3 periods/cycle .25 credit **8505 BT, VP, EL** (Lab Fee-\$20.00)

This course explores visual and technical aspects of digital photography. The curriculum includes camera operation, lighting, elements and principles of design, composition and layout. Students will learn to download, organize, edit manipulate and prepare photos for print and digital communication. Software includes Adobe Photoshop, Photos and others. This course is also offered for core elective credit in Business/Technology. Access to a digital camera is highly recommended.

Advanced Digital Photography**

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **8519 BT, VP, EL** (Lab Fee - \$20.00) **Prerequisite: Photography 8505**

This course provides students with the opportunity to effectively communicate ideas and information via digital photography. Students completing this course successfully will be able to demonstrate proficiency using a digital camera and manipulating images using Adobe Photoshop. Students will demonstrate advanced darkroom techniques through the use of personal imagery. Students wishing to repeat advanced photography are encouraged to enroll in Studio Art 1. This course is also offered for core elective credit in Business/Technology. Access to a digital camera is highly recomended.

Studio Art Program

The Studio Art Program is a rigorous, sequential course of study for students with a serious interest in the visual arts. Those who meet the prerequisite standards may choose to participate in the four year program which includes exposure to studio, art history, criticism, and aesthetics. The program includes guest speakers, exhibition opportunities, portfolio development, and help with college and career decisions. Students are permitted to schedule only one Studio Art course per semester.

Studio Art 1

Grades 9, 10, 11, 12 Year 6 periods/cycle 1 credit 7109 VP, EL (Lab Fee - \$20.00 per year)

It is recommended that eighth grade students wishing to elect the Studio Art Program have a serious interest and above average grades in their art courses. A recommendation from their middle school art teacher is helpful. Students new to the Tredyffrin/East-town Schools must submit samples of their work to the Conestoga Visual and Performing Arts Department Chairperson.

Studio Art 1 is a year-long course divided into two semesters with different instructors.

Drawing and Design Foundations

First Semester

Students who complete this course successfully will have a thorough understanding of contour, gesture, shading and other drawing alternatives. Students should understand basic perspective and the fundamentals of design organization, elements and principles. The two-dimensional design aspect of the course utilizes computers for image creation and alteration. All students must submit a major project. Daily sketch book drawings constitute a significant part of the grade in this course. Class work will be graded by critiques. **This course is also offered for core elective credit in Business/Technology.**

Painting and Color Theory Foundations Second Semester

Students will explore color relationships and composition based on direct observation of geometric and organic forms. Through drawing and painting, students should gain an understanding of the effects of light, spatial illusions, value, saturation, and hue. Required sketching will serve as a resource and inspiration for work in the studio. Art historical sources will enhance students' basic visual vocabulary. Class critiques will be an important part of the grading process.

Studio Art 2 and Studio Art 3 * are divided into two semesters with different instructors and course concentrations on alternate semesters. Students may elect to take one or two semester courses each year.

Studio Art 2

Grades 10, 11, 12 1st Semester 6 periods/cycle .5 credit 7129 VP, EL (Lab Fee - \$10.00) 2nd Semester 6 periods/cycle .5 credit 7139 VP, EL (Lab Fee - \$10.00)

Prerequisite: 3D Design: Successful completion of Studio Art 1 OR Advanced Sculpture and Advanced Ceramics.

Prerequisite: 2D Design: Successful completion of Studio Art 1

3-D Design

First Semester

Students who complete this course will have a thorough understanding of the basic concepts of 3D design and construction. These concepts will be explored through the use of various materials including wire, plaster, cardboard, found objects, and clay. Art historical and multicultural references will enhance student understanding of 3D concepts. Experimentation with form, texture, and surface decoration will be encouraged. Sketchbook and at-home sculpture assignments will be required. Class critiques will be an important part of the grading process. An independent term project will be due at the end of each marking period.

2D Printmaking

Second Semester

The focus of this course will be the production of multiple images through printmaking. Advanced drawing and composition skills are required. Still-life, landscape, portraits and experimental abstractions will serve as the basis for exploration of found art printing, styro-printing, embossing, collagraph, linoleum and drypoint/intaglio. Art historical and multicultural references will be used to enhance students' understanding of design and composition. Class critiques will be an important part of the grading process. An independent term project will be required.

Studio Art 3

Grades 11, 12 1st Semester 6 periods/cycle .5 credit

7159 VP, EL (Lab Fee - \$10.00)

Grades 11, 12 2nd Semester 6 periods/cycle .5 credit

7169 VP, BT, EL (Lab Fee - \$10.00)

Prerequisite: successful completion of Studio Art 1 and at least one semester of Studio Art 2

Advanced 2D Drawing, Painting

First Semester

Students in this class will continue to refine their drawing and painting skills. Subject matter will include still life, figure and portrait. Colored pencil, charcoal, pastel, watercolor and acrylic paint will be the media used to visually express ideas. Art historical references will enhance students' understanding of color and form. Class critiques will be an important part of the grading process. An independent term project will be required.

2D Design Portfolio Development

Second Semester

Students will explore visual expression in traditional and digital mediums, including projects in pencil, digital photography, and digital graphics. Additional emphasis will be placed on the development of traditional and/or web-based portfolios. Daily sketching will continue to be a requirement with sketches serving as a resource and inspiration for the works done in class. Class critiques will be an important part of the grading process. An independent term project will be due at the end of the semester. This course is also offered for core elective credit in Business/ Technology.

Studio Art 4

Grade 12 Year 6 periods/cycle 1 credit 7179 VP, EL (Lab Fee - \$20.00)

Prerequisite: at least four successful semesters of Art Studio

The Studio Art 4 course is a culmination of the art studio experience at Conestoga. Students in this class will continue to develop personal visual imagery through intensive work in drawing, painting and design. In addition to general portfolio development, students will select a particular visual topic of interest. This will lead to a related body of work focusing on a process of investigation, growth and discovery. A major objective of the course is to help students produce the art portfolio required for admission to university art programs, art schools or to augment supplemental admission materials for college. Work outside the studio class is required.

AP Studio Art

Grade 12 Year 6 periods/cycle 1 credit **7180 (AP) VP, EL** (Lab Fee - \$20.00)

Prerequisite: at least four successful semesters of Art Studio

AP Studio Art is open to any senior who has completed four semesters of Studio Art. The course will follow the College Board's AP Studio format. Students may submit one portfolio for AP and college credit in either 2D Design or Drawing media. In addition to extensive in-class studio work in drawing, painting, mixed media design, and photography, students will select a particular visual topic of interest. This will lead to a related body of work focusing on a process of investigation, growth and discovery. A significant amount of outside work is required. A major objective of the course is to help students produce the art portfolio required for admission to university art programs or art schools, or to augment supplemental admission materials for college. The rigorous AP requirement is 24 pieces of work.

Students who have not taken AP courses in the past and feel they are not prepared for the level of difficulty may take Studio Art 4 instead of AP Studio Art.

Theater Courses

Theater Arts

Grades 9, 10, 11, 12 Semester 3 periods/cycle .25 credit **7205 VP, EL**

Students in this course will become involved in a variety of theater experiences that may include improvisations, puppetry, mime, scene design, costumes and makeup, stage design, theater, and story telling. Students will complete projects by performing for a live audience, and will be encouraged to participate in Conestoga's dramatic and musical productions.

Advanced Theater Arts**

Grades 10, 11, 12 Year 6 periods/cycle 1 credit 7219 VP, EL

This course is for students who have completed the general theater arts class or who have participated in outside acting classes. It will focus on voice training for the stage, methods of acting, and scene projects. Students must be self-motivated and have ideas for individual projects. This course may be taken more than once with teacher recommendation.

Instrumental Courses*

Music co-curricular courses may be used to satisfy VPA credit requirements.

Concert Band**

Grades 9, 10, 11, 12 Year 3 periods/cycle .5 credit 7505 VP, EL Audition Required for Percussion

This ensemble is open to all Brass and Woodwind instrumentalists without an audition. Percussionists must audition to be considered for this group. Members of Concert Band will explore a variety of musical styles from the Renaissance, Baroque, Classical, Romantic, and Contemporary periods as well as new and traditional band repertoire. This group performs two concerts each year. Participation in this instrumentalist organization affords its members an opportunity to be considered for additional advanced performing groups such as Jazz Band, Jazz Ensemble, and Pennsylvania Music Educators Association (PMEA) Festivals. All Concert Band members are strongly encouraged to participate in Marching Band, an extra-curricular band activity that meets outside of the regular school day throughout the late summer and fall seasons.

Wind Ensemble**

Grades 9, 10, 11, 12 Year 3 periods/cycle .5 credit 7515 VP, EL Audition Required

Brass, woodwind and percussion instrumentalists are given an opportunity to audition in early January, prior to course selection.* Each instrumentalist is expected to demonstrate an advanced level of proficiency, consistent with District 12 Pennsylvania Music Educators Association (PMEA) requirements made available to interested students prior to audition. The group performs at least twice a year, while exploring Renaissance, Baroque, Classical, Romantic, and Contemporary periods as well as new and traditional band repertoire. Participation in this instrumentalist organization affords its members an opportunity to be considered for additional advanced performing groups such as Jazz Band, Jazz Ensemble, Symphony Orchestra and PMEA Festivals. All Wind Ensemble members are strongly encouraged to participate in Marching Band, an extra-curricular band activity that meets outside of the regular school day throughout the late summer and fall seasons.

* High School students who move into the T/E School District after the course selection period may contact the instrumental music faculty to make special arrangements for an audition.

Symphony Orchestra**

Grades 9, 10, 11, 12 Year

7525 (Strings Only) 3 periods/cycle .5 credit 7535 (Brass, Percussion, Winds) 2 periods/cycle .4 credit VP, EL Audition Required for all Brass, Woodwind, Percussion, and Strings

Musicians in the Orchestra will prepare music to be performed at various times throughout the year, including the annual Winter and Spring Concerts. Various new and traditional orchestral compositions will be explored. Members will explore Renaissance, Baroque, Classical, Romantic, and Contemporary periods as well as new and traditional string orchestra repertoire. Wind, brass, and percussion players are selected from the Wind Ensemble **through competitive audition**. String players are also auditioned.

Jazz Band**

Grades 9, 10, 11, 12 Year 3 periods/cycle .5 credit 7545 VP, EL Audition Required

Brass, woodwind, percussion instrumentalists, guitarists, and pianists are given an opportunity to audition in early January, prior to course selection.* Each musician is expected to demonstrate an advanced level of proficiency, consistent with District 12 Pennsylvania Music Educators Association (PMEA) requirements made available to interested students prior to audition. Those selected for the Jazz Band will play both contemporary and standard jazz music styles. Improvisational skills will be developed as students prepare for various performances throughout the year. Participation in this course is contingent upon participation in Marching Band, Concert Band, or Wind Ensemble (pianists, guitarists and bassists excluded).

Percussion Ensemble**

Grades 9, 10, 11, 12 Year **7895 VP, EL**

3 periods/cycle .5 credit Teacher recommendation or audition required

Students in Percussion ensemble will study many areas of percussion technique and performance. Students will have the opportunity to explore the history of the percussion ensemble, learn how to play percussion instruments from varied genres and cultures, and perform challenging repertoire utilizing these techniques. Students will also develop an in-depth understanding of rudiments, classical percussion, mallet technique, drum set styles and non-traditional percussion practices. (This class will also explore the role percussion plays in music technology through Garage Band software, performing with iPad's, synthesizers, and patches, and concluding with recording practices.) This ensemble performs on the Spring Concert each year.

Jazz Ensemble**

Grades 9, 10, 11, 12 Year 3 periods/cycle .5 credit **7555 VP, EL Audition Required**

Brass, woodwind, percussion instrumentalists, guitarists, and pianists are given an opportunity to audition in early January, prior to course selection. Each musician is expected to demonstrate an advanced level of proficiency, consistent with District 12 Pennsylvania Music Educators Association (PMEA) requirements made available to interested students prior to audition. Those selected for the Jazz Ensemble will play advanced jazz literature. Improvisational skills will be developed as students prepare for various performances throughout the year. Participation in this course is contingent upon participation in Marching Band, Concert Band, or Wind Ensemble (pianists, guitarists and bassists excluded).

String Ensemble**

Grades 9, 10, 11, 12 Year 3 periods/cycle .5 credit **7925 VP, EL**

String players will prepare music to be performed at various times throughout the year with the symphony orchestra, including the annual winter and spring concerts. An emphasis on technique, rhythm and note reading skills will assist students in improving upon fundamentals through the performance of diverse repertoire. The main goals in this ensemble focus upon the improvement of individual and ensemble skills related to each student's instrument.

Vocal Courses

Concert Choir**

7605 Grades 11,12 (Sop/Alto) Year 2 pds/cycle .4 credit **7615** Grades 9,10,11,12 (Ten/Bass) Year 2 pds/cycle .4 credit **VP, EL**

Concert Choir is a choral organization that performs at least twice a year. Students have opportunities to learn correct singing techniques while experiencing a wide variety of choral literature from the Renaissance, Baroque, Classical, Romantic, and Contemporary periods, sacred and secular, a cappella and accompanied. Concert Choir is open to male vocalists in grades 9-12 and female vocalists in grades 11-12 **after singing for the Choral Director to determine vocal range**.

Camerata**

Grades 11,12 Year 3 periods/cycle . 5 credit 7625 VP, EL Audition Required

Camerata is a select choral organization for juniors and seniors that performs at many extracurricular functions throughout the school year, in addition to the Winter and Spring Concerts. Students are chosen from the Concert Choir **through competitive audition**. They are expected to demonstrate an advanced level of proficiency, consistent with District 12 PMEA standards. Camerata is open to both male and female students, **who must also be members of the Concert Choir.**

Chanteuses**

Grades 9, 10, 11, 12 Year 2 periods/cycle .4 credit Soprano/Alto Voices Only **7616 VP, EL**

Chanteuses is a choral organization that performs at least twice a year. Students learn correct singing techniques while experiencing a wide variety of Soprano-Alto choral literature. Chanteuses is offered to all Soprano and Alto voice parts after singing for the Choral Director to determine vocal range. All freshman and sophomore females who wish to sing must participate in this choral group.

Chorale**

Grades 9, 10 Year 1 period/cycle .2 credit 7635 VP, EL Audition Required

Chorale is a select vocal organization for freshmen and sophomores that may perform at extracurricular functions, in addition to the Winter and Spring Concerts. Students are selected through audition and must also be members of Concert Choir or Chanteuses.

Combination Music Courses

Students are encouraged to participate in more than one musical organization. Use the special combination codes noted below to request multiple performing groups which cannot be scheduled separately. Please note that these courses involve shared time.

7565	Concert Band/Choir**	3 pds/cycle	.5 credit
7575	Wind Ensemble/Choir**	3 pds/cycle	.5 credit
7645	Jazz Band/Chanteuses**	3 pds/cycle	.5 credit
7685	Jazz Ens/Chanteuses**	3 pds/cycle	.5 credit
7695	Orchestra/Camerata**	3 pds/cycle	.5 credit
7965	Jazz Band/Chorale**	3 pds/cycle.	.5 credit
7885	Wind Ensemble/Perc**	3 pds/cycle	.5 credit
7975	Jazz Ens/Chant/Chorale**	3 pds/cycle	.5 credit
7985	Jazz Band/Chant/Chorale**	3 pds/cycle	.5 credit

Elective Music Courses

Applied Music Theory/Composition

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **7709 BT, VP, EL**

In this class, students apply acquired knowledge of music fundamentals to original compositions using music technology. Participants will work in a technology lab that includes iMac computers, MIDI pianos and recording software. Through the use of Sibelius notation software, students will gain an understanding of melody, rhythm, harmony, texture, form, articulation and dynamics. All work is completed in class, as projects and worksheets, with no formal homework assigned. No previous experience with music notation software or music theory is required.

AP Music Theory

Grades 10, 11, 12 Year 6 periods/cycle 1 credit 7710 (AP) VP, EL

Prerequisite: Music Theory 7709 or Teacher Recommendation

AP Music Theory is specifically designed for students wishing to gain college credit in music studies. Complex musical structure will be examined utilizing written harmony, analysis, ear training, solfege, and dictation according to traditional Western Music concepts. AP Music Theory also provides orchestration and basic arranging techniques through textbooks and computer programs. Students are encouraged to take the AP Music Theory Examination administered by The College Board.

Beginning Guitar

Grades 9, 10, 11, 12 Semester 3 periods/cycle .25 credit **7805 VP, EL**

This course is designed for students with little or no experience on the guitar. Skills such as tuning, strumming, chording, and melodic note reading will be learned at a comfortable pace. Students who enjoy a relaxing musical instrument that provides personal pleasure and social enjoyment are encouraged to select this course. Steel string guitars are provided, but students may also use their own guitars.

Advanced Guitar**

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **7819 VP, EL**

Students with at least one year of private guitar instruction or those who have already taken Beginning Guitar are eligible for this course. Individual student progress will be monitored. Music of varied styles will be played and in-depth coverage of music theory, strumming, and chording will be explored. Opportunities for developing original compositions and for solo and group performances will be provided. Students taking this course should have strong note reading skills.

Broadway Musical Theatre**

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **7855 VP**, **EL**

This course is designed for students who wish to be included in a variety of theater experiences. Students will survey the growth of American and European-influenced Broadway, Off-Broadway, and cinematic musicals. Audition experiences in acting, singing, and dance will be provided. Class members are encouraged to participate in aspects of Conestoga's major dramatic and musical productions. Students who are piano accompanists and those with previous singing and dancing experiences are welcome, in addition to those who just want to learn about musical theatre.

Songwriting**

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **7879 BT, VP, EL**

This course is an introduction to the songwriting process, guiding students from drafting song ideas through a recorded studio album. Topics covered will include the songwriting process, chord progressions, writing melodies, musical textures, lyric composition, studio recording and live performance. Students will explore unique musical elements for various genres of music and will be encouraged through composition to develop their own style and voice as songwriters and lyricist. Over the course of the semester, each individual will compile songs they have written into a production-level studio album. Students will also collaborate on group projects to compose and perform together in a rock band setting.

Music Production**

Grades 9, 10, 11, 12 Semester 6 periods/cycle .5 credit **7849 VP. BT. EL**

Music Production is a "hands on" class in which students use digital pianos with MIDI capability, noise cancelling headphones, and an Apple iMac computer with Garageband, Logic, iMovie, and Sibelius. Students also have access to audio interfaces that allow for the recording of vocals and electric guitar/bass into Garageband. In this class students write their first updated rock/techno song. Students are instructed about composing electronic music, and then work to compose 3 original electronic selections by using the tools in Garageband and Logic to record, mix and edit their projects. Students will also use Garageband to compose a movie score to accompany film.

Piano Lab**

Grades 9, 10, 11, 12 Semester 3 periods/cycle .25 credit **7815 VP**, **EL**

This course is designed for beginning students with limited or no musical background. Treble and bass clef note reading, chording, and proper hand positions will be covered and individually monitored. Intermediate pianists may also take the course to further their piano technique. Full-size electronic keyboards in a lab setting are provided for each student.

2017-2018 Student Organizations

The following clubs and activities were available to students in the 2017-2018 school year. Students are invited to initiate new clubs at any time during the school year. Visit room 130 for further information.

Academic Competition Team
ADL (Anti - Defamation League)
Adopt-A-Grandparent Club
African American Student Union
All Girls A cappella Group
Animal Abuse Awareness Club

Anime Club Anthem

Asian-American Cultural Society Astronomy Club

Athletes Educating Students

Athletes Helping Actively (AHA) Best Buddies The Book Club

Bowling Club Brighter Futures for Females (BFF)

Cappies Chemistry Club Chess Team

The Clean Water Project Comic/Graphic Novel Club Computer Science Club Computers for Kids Conestoga Fishing Club

Conestoga Investment Club (CIC)

Conkerr Cancer Craft Club Cupcakes for Casa Cycling Club Drama Club Dream Academy Envirothon Team Envision

Fellowship of Christian Athletes

Fencing Club Firefighters/EMTs

The First Tee of Conestoga FLITE Club Free to Breathe

French Club Future Business Leaders of America

Game Theory Club Gay/Straight Alliance German Culture Club Gift of Life Club

Global Citizen Club
Greek Culture Club
Greening Stoga Task Force
Habitat for Humanity
Hands to Hearts

Hero X Hip-Hop Club (Break Dance) Hispanic Culture Club Homework Club Horticulture Club

Horticulture Club Human Rights Club

Interact

Interview Club
Intramural Sports Clubs

Italian Language and Culture Club

Junior Classical League

Junior Statesmen of America (JSA)

Key Club

Kids Caring for Cancer

Lemon Club

Liberty in North Korea Locks of Love Club Math Competition Team Middle Eastern Culture Club

Military Club Model UN Mudders Club Multi-Culture Club Musicians Guild

National Art Honor Society National History Competition Club

Operation Smile
Outdoors Club
P.A.N.D.A. Club
Paddle Tennis Club
Parts for Hearts
Peer Mediation
Pen Pals
Philosophy Club

Philosophy Club Photography Club Physics Club Piodanco Pioneers for Patriots

Political Spectrum
Power Up Against Cancer
Prom Committee Club
Pulsera Project

Raising Awareness for Diabetes

REACH Robotics Club S.A.V.E.S. Club S.T.E.M. Alliance SADD/TATU Sailing Club Science Olympiad Secrets to a Long Life Club

Shine

Ski/Snowboard Club Smiles for Autism Special Futures Sports for Support Squash Club Stage Crew Stoga Connects Stoga Green Peace

Stoga Sack Stoga Study Buddies Stogabundance

Student Art For Everyone (S.A.F.E.)

Student Executive Council

Student to Student Student United Way TED X Stoga T/E Kids Care

T/E TV Production Club

The Supply

Take A Blink For Pink
Together We Stand
Underwater Robotics Team

UNICEF

Vegetarian Club Video Game Club Voice Males

VOICES (Speech & Debate)

Women in Politics Young Democrats Club Young Republicans Club

Honor Societies

National Art Honor Society National Honor Society Tri-M Music Honor Society

Co-Curricular Experiences

(Offered for credit during the school day)

Camerata Magazine (Frame & Canvas)
Chanteuses Newspaper (The Spoke)

Chorale Orchestra

Concert Band Percussion Ensemble
Concert Choir Science Olympiad
Jazz Band String Ensemble
Jazz Ensemble Wind Ensemble

Literary Magazine Yearbook (The Pioneer)

Athletic Club Programs

Athletic clubs are organized and managed outside of the school athletic program. Athletic clubs' affiliation with Conestoga is subject to approval on an annual basis by the administration. There is no guarantee that the clubs will be organized or approved in the future. Listed below are the athletic clubs for affiliated status during the 2017-2018 school year.

Ice Hockey (Boys, Girls)

Rugby (Boys, Girls)

Crew (Boys, Girls)

Squash (Boys, Girls)

COVER CREDITS

Kaitlyn Chen '19 Amy Cruz, Teacher

Visual & Performing Arts Department

Conestoga High School Four-Year Planning Sheet
Use this worksheet to develop a four-year plan for meeting promotion and graduation requirements. Use the spaces provided to list courses you have taken and will take, indicating the number of periods (Pd) and credit (Cr), If you have questions or need assistance, contact your counselor.

Courses	Grade 9	Pd Cr	Grade 10	Pd Cr	Grade 11	Pd	Cr	Grade 12	Pd Cr
English									
Social Studies									
Math									
Science									
Lang.									
Well/Fit									
P. E.									
VPA									
								٠.	
Bus/Tech									
Electives									
								2	
Total									
Cum Total									
Min Cr Req		5.5		11.0			17.0		24.0
Max Pds		42		42		42			42
Min Pds		36		36		32	_		32

Cr - Credits Pd - Periods per cycle/semester