



**Pictou Academy Course Selection 2016-2017**

**Message to Students:** This Course Selection booklet provides information regarding the possible courses that will be offered at Pictou Academy for the 2016-2017 school year. Students will complete course selection online. The information from this booklet will help students make decisions regarding the courses they should select. It is in the student's best interest to discuss these courses with a guidance counselor, parents and teachers.

Student selections will determine the courses that will be offered for the 2016-2017 school year therefore it is important for students to select courses carefully.

**Plan you're program:** Prior to completing a course selection form, you should carefully consider your post high school goals and the educational requirements necessary to achieve them. Select courses and level of difficulty that will enable you to obtain these objectives. Plan your program as far as possible into the future. A three-year plan beginning in grade 10 works best. A proposed course may be cancelled due to insufficient enrollment. The school reserves the right not to offer a course described in this booklet should unforeseen circumstances arise.

Students require 18 credits to graduate from Nova Scotia high schools (see detailed information in this booklet). Students should take time in choosing courses to ensure that entrance requirements of post secondary institutions are achieved. If you are unsure, you are encouraged to discuss this with your guidance counselor.

**Credits to Graduate:** Students registering in grade 10 for the first time in September 2016 will require a minimum of 18 credits to graduate. No more than seven of the 18 credits may be grade 10 courses, and at least five must be grade 12 courses. The following are compulsory credits for graduation:

3 English Language Arts, one at each grade level

1 Fine Art: Art or Drama

2 Mathematics, each at a different level: Math 10, Math 10 at Work, Math 10 Essentials, Math 11, Precalculus Math 11, Math 11 at Work, Math 11 Essentials, Math 12, Precalculus Math 12, Calculus Math 12, Math 12 at Work or Math 12 Essentials.

2 Science: Science 10, Biology 11, Chemistry 11, Human Biology 11, Oceans 11, Physics 11, Biology 12, Chemistry 12 or Physics 12.

2 others from Mathematics, Science, or Technology: eligible technology courses include Production Technology 11, Home Trades Technology 12 or Multi Media Technology 12

1 Physical Education credit: PAL 11 or Phy Ed. 12

1 Canadian History: Canadian History 11 or African Canadian Studies 11

1 Global Studies: Global Geography 12 or Global History 12

Students will select elective courses each year to complete their program. The above are minimum requirements for graduation and may not be sufficient for a student to meet entrance requirements for some post-secondary institutions. Students are responsible to ensure they have requirements for the post-secondary education of their choice. Within the 18 course requirements for a graduation diploma, no student may receive credit for two courses in the same specific subject area at the same grade level. For example, successful completion of Math 10 Essentials and Math 10 at Work only counts as one credit towards graduation.

Credit Courses are identified by course title, grade level, credit type and credit value. One full credit is the recognition of the successful completion of a course of work that would normally be completed in a minimum of 110 hours of scheduled time.

**Credit Types:** each course is categorized as one of the following credit types:

**Academic** - these courses are designed for students who expect to enter college, university, or other post-secondary institutions.

**Advanced** - These courses are designed to meet the needs of students who have demonstrated an exceptional degree of academic ability or achievement.

**Graduation** - These courses are designed for students who wish to obtain a graduation diploma with a view to proceeding to employment or some selected area of post-secondary study.

**Open** - Although none of these open courses is designed to meet the specific entrance requirements of any post-secondary institution, individual courses may meet entrance requirements of some institutions.

## ENGLISH

The objectives of all English courses are to help students improve their ability: (1) to use language in thinking critically, listening, speaking, reading, viewing, writing and other forms of representing. (2) To value and enjoy literature. (3) To develop critical literacy skills. \*\*\*Please note: English course selection for September 2016 will be made by the recommendation of your current English teacher.

**English 10+ (academic):** The English 10+ classroom offers abundant opportunities for students to read widely, to write frequently, to explore a wide range of print and visual texts, to work independently as well as collaboratively in small groups, and to design learning tasks that are of particular interest to them. English 10+ emphasizes proficiency in using oral language for a variety of purposes. Learning experiences include the following: exploratory and informal talk, structured activities, performance of texts, formal presentations, focused listening activities to interpret and evaluate ideas and information from a range of sources, and research skills.

**English 11 (academic):** English 11 is intended for students whose goals include post-secondary study. While this course emphasizes literary texts, students are provided opportunities to select their own texts for independent study and small-group inquiry. Students are expected to extend their knowledge base, thinking processes, learning strategies, self-awareness, and insights. Students are also provided opportunities to use the curriculum outcomes to design their own learning experiences that they may undertake individually or with learning partners. Learning experiences enable students to study and give detailed accounts of complex and sophisticated texts and issues; be perceptive and analytical in making sophisticated adult judgments; be critical readers of literary texts; be critical viewers; express themselves precisely when writing for often complex purposes; be capable editors of their own and others' writing; communicate confidently and effectively in the formal style and language required by some situations; demonstrate control of language processes and conduct and present research. Students who have demonstrated good to excellent performance in relation to the expected learning outcomes of English 10 are recommended for English 11.

**English Communication 11 (graduation):** English Communication courses are intended for students who need additional support in their development as readers, writers, and language users. English Communication courses are intended to prepare students for lifelong learning by engaging them in practical and interesting learning experiences closely related to their lives and to the world they will experience as adults. These courses are based on the interests and abilities of the students and provide support to meet their individual and diverse learning needs. At the same time, English Communications courses are flexible enough to allow learners who are doing very well to move to academic courses. These courses focus on developing language skills necessary for the workplace. Learners will have many opportunities to engage in small group and whole class activities that help develop their speaking and listening skills. Learners must also read widely and create both written and visual texts to enhance their reading and writing fluency. Students, who may need additional support in high school in reading, writing, and oral language development, or have a mark under 60 in English 10, may be recommended for English Communications 11.

**English 12 (academic):** English 12 is intended for students whose goals include post-secondary study. Building on skills developed in English 11, this course emphasizes literary texts, and students are provided opportunities to select their own texts for independent study and small-group inquiry. Students are expected to extend their knowledge base, thinking processes, learning strategies, self-awareness, and insights. Students are also provided opportunities to use the curriculum outcomes to design their own learning experiences that they may undertake individually or with learning partners. Learning experiences enable students to study and give detailed accounts of complex and sophisticated texts and issues; be perceptive and analytical in making sophisticated adult judgments; be critical readers of literary texts; be critical viewers; express themselves precisely when writing for often complex purposes; be capable editors of their own and others' writing; communicate confidently and effectively in the formal style and language required by some situations; demonstrate control of language processes and conduct and present research. Students who have demonstrated good to excellent performance in relation to the expected learning outcomes of English 11 are recommended for English 12.

**English Communication 12 (graduation):** English Communication courses are intended for students who need additional support in their development as readers, writers, and language users. English Communication courses are intended to prepare students for lifelong learning by engaging them in practical and interesting learning experiences closely related to their lives and to the world they will experience as adults. These courses are based on the interests and abilities of the students and provide support to meet their individual and diverse learning needs. At the same time, English Communications courses are flexible enough to allow learners who are doing very well to move to academic courses. These courses focus on developing language skills necessary for the workplace. Learners will have many opportunities to engage in small group and whole class activities that help develop their speaking and listening skills. Learners must also read widely and create both written and visual texts to enhance their reading and writing fluency. Students who may need additional support in high school in reading, writing, and oral language development, have a mark under 60 in English 11, or are currently enrolled in English Communications 11, will be recommended for English Communications 12.

### **FINE ARTS**

All students must successfully complete one of the Fine Arts credits in order to graduate. It is recommended that grade 10 students who are planning to enter the science and math stream in grades 11 and 12 consider enrolling in a fine arts course in grade 10 (visual art or drama).

**Drama 10 (academic):** Drama 10 is an introductory course in drama focusing on the personal, intellectual, and social growth of the student. Drama 10 provides a foundation for future course work in drama and theatre. Through extensive work in improvisation, in both small and large groups, students gain confidence as they explore and communicate ideas, experiences, and feelings in a range of dramatic forms, such as dramatic movement and mime, dramatization, group drama, and monologue. Drama 10 comprises four components: foundation, movement, speech, and theatre. The foundation component, which focuses on building student confidence and trust and creating a supportive learning environment, introduces students to the essential elements of movement and speech. Experiences in movement and speech are extended in the movement and speech components and are combined in the exploration of the various dramatic forms. Opportunities for students to share and present their work are provided throughout the course, just as aspects of theatre may be shared at various points in the course. The theatre component enables students to bring together their learning in drama and theatre by developing a theatre piece or script. The course engages students in “collective creation” – through discussion, and improvisation.

**Visual Art 10 (academic):** Visual Art 10 is a first year high school art course that satisfies the compulsory fine arts credit. This introductory course focuses extensively on drawing skills as well as perspective, pen and ink, calligraphy and color. Students are urged to solve problems and to communicate imaginatively in their understanding of self, others and the environment. The first year high school art course concentrates on developing basic art skills by exploring various media. In order to help students develop their understanding of concepts in art and to prepare them for future studies in art, drawing/design and art history will be related to every aspect of the year’s work.

## FRENCH PROGRAMMING

LANGUAGES French Introduction: The fundamental goal of all senior high French programs is real life communication while enriching the acquisition of general knowledge and skills. The development of a theme in each unit of study is supported by authentic materials such as magazine and newspaper articles, documentaries, films, news clips, poems, short stories, novels etc. Language learning (i.e. vocabulary and grammar) continues to be integrated with the development of effective communication skills. The language elements covered in each unit allow students to accomplish a final project with emphasis placed on using language in a meaningful communicative context. The main goal of the Core French program is to provide a program that will enhance students' abilities to communicate both orally and in writing and consequently, increase their chance of survival in a French environment.

**Core French 10 (academic):** Core French 10 allows students to participate actively and to communicate in situations which are relevant and real to them. Students are exposed to oral and written texts on themes such as driving, part-time work, careers and travelling. They learn to describe people and events, to express their point of view, to take notes and to keep a journal.

**Core French 11 (academic):** French is the language of instruction and communication in the classroom. It is expected that students enrolling in French 11 have successfully completed French 10. Core French 11 allows students to participate actively and to communicate in situations which are relevant and real to them. Students are exposed to oral and written texts on themes such as pop culture, urban folklore, travel, and forces of nature. Students work individually and in small groups throughout the course.

**Core French 12 (academic):** The language of instruction is entirely French. Core French 12 is for students who wish to continue to develop fluency in French. Language skills are reinforced, focusing on the ability to communicate orally and in writing. The cultural richness of our country and the world is presented in thematic units. Units include: The Arts, Health & Fitness, Adolescence, Travel, and Our Future. Students work individually and in small groups to complete projects.

## MATHEMATICS

The revised Nova Scotia senior high mathematics program will include the following pathways with corresponding topics:

Four pathways will be available: Mathematics Essentials (graduation credits) Mathematics at Work (graduation credits) Mathematics (academic credits) and Pre-Calculus/Calculus (advanced credits).

**Mathematics Essentials (Grades 10, 11, 12) (graduation credits):** This pathway is designed to provide students with the development of the skills and understandings required in the workplace, as well as those required for everyday life at home and in the community. Students will become better equipped to deal with mathematics in the real world and will become more confident in their mathematical abilities. Students who enroll in these courses either do not intend to enroll in post-secondary study or plan to enter programs that do not have any mathematics pre-requisites.

**Mathematics at Work** (Grades 10, 11, 12) (graduation credits): these new courses are designed to provide students with the mathematical understandings and critical-thinking skills identified for direct entry into the work force or for entry into programs of study that do not require academic mathematics.

**Mathematics** (Grades 10, 11, 12) (academic credits): These new courses are designed to provide students with the mathematical understandings and critical-thinking skills identified for post-secondary studies in programs that do not require the study of theoretical calculus. Note: Mathematics 10 is a 220-hour, two credit course. All students following the academic or advanced pathway will need to take Mathematics 10 followed by Mathematics 11. These courses are to be taken consecutively, not concurrently.

**Pre-Calculus** (Grades 11, 12) (advanced credits) these courses are designed to provide students with the mathematical understandings and critical-thinking skills identified for entry into post-secondary programs that require the study of theoretical calculus. Pre-requisites for Pre-Calculus 11 are Mathematics 10 and Mathematics 11. Pre-Calculus 11 is pre-requisite for Pre-Calculus 12. These courses must be taken consecutively, not concurrently.

To satisfy the minimum math requirements, students must take two math courses:

1. Math 10, Math at Work 10 or Math Essentials 10
2. Math 11, Math at Work 11, Math Essentials 11.
3. Math 12, Math 12 at Work, Pre-Calculus 12, Calculus 12

### **High School Math Prerequisites**

The following are the prerequisites outlined by the Nova Scotia Department of Education:

Mathematics Essentials 10 (graduation 1 credit) Prerequisite: Successful completion of Mathematics Grade 8 and recommendation from the Mathematics Grade 9 teachers.

Mathematics at Work 10 (graduation 1 credit) Prerequisite: Successful completion of Mathematics Grade 9

Mathematics 10 (academic 2 credits) prerequisite: Successful completion of Mathematics Grade 9 and demonstrated good to excellent performance in relation to the expected learning outcomes prescribed by Mathematics Grade 9.

Mathematics Essentials 11 (graduation 1 credit) Prerequisite: Successful completion of Mathematics Essentials 10, Math at Work 10 or Math 10

Mathematics at Work 11 (graduation 1 credit) Prerequisite: Successful completion of Mathematics at Work 10 or Mathematics 10

Mathematics 11 (academic 1 credit) prerequisite: Successful completion of Mathematics 10

Pre-Calculus Mathematics 11 (advanced 1 credit) Prerequisite: Successful completion of Mathematics 11 and have demonstrated outstanding performance in relation to the learning outcomes prescribed by Mathematics 11.

Mathematics at Work 12 (graduation 1 credit) Prerequisite: Successful completion of Mathematics at Work 10 or Mathematics 10 and successful completion of Mathematics at Work 11 or Mathematics 11

Mathematics 12 (academic 1 credit) Prerequisite: Successful completion of Mathematics 10 and successful completion of Mathematics 11.

Pre-Calculus Mathematics 12 (advanced 1 credit) Prerequisite: Successful completion of Precalculus Mathematics 11 OR successful completion of Mathematics 11 and Mathematics 12 and have demonstrated very good to outstanding performance in relation to the learning outcomes prescribed for Mathematics 11 and Mathematics 12

Calculus 12 (advanced 1 credit) Prerequisite: Successful completion of Pre-Calculus Mathematics 12  
Students enrolling in grade 10 and who wish to take Calculus in their third year of high school should take Mathematics 10 (Year 1), Mathematics 11 and Pre-Calculus Mathematics 11 (Year 2), Pre-Calculus Mathematics 12 and Calculus (Year 3).

### **Grade 10 Mathematics Courses**

**Mathematics 10 Essentials (graduation):** Math Essentials 10 is an alternative math course designed to meet the needs of students who have experienced difficulty with math courses in the past. This course allows students to broaden their understanding of mathematics, as it applies to everyday life and work. Students will solve problems associated with earning money, paying taxes, making purchases, saving and operating a car and other transportation costs. This course also includes topics related to probability, measuring and estimating and transformations and design. **Mathematics Essentials 10 Prerequisite:** Successful completion of Mathematics: Grade 8 and recommendation from the Mathematics Grade 9 teachers.



**Mathematics at Work 10 (graduation):** The Math at Work 10 course is characterized by a greater focus on concrete activities, models and applications. Students in Mathematics at Work 10 will explore the following subject areas: measurement, area, Pythagorean Theorem, trigonometry, geometry, unit pricing and currency exchange, income, and basic algebra. **Mathematics at Work 10 Prerequisite:** Successful completion of Mathematics Grade 9.

**Mathematics 10 (academic):** Mathematics 10 will explore the following subject areas: measurement systems, surface area and volume, right triangle trigonometry, exponents and radicals, polynomials, linear relations and functions, linear equations and graphs, solving systems of equations, and financial mathematics. The program focuses students' skills on math applications and stresses the use of analysis and synthesis in problem solving. **Mathematics 10 Prerequisite:** Successful completion of Mathematics Grade 9 and demonstrated good to excellent performance in relation to the expected learning outcomes prescribed by Mathematics Grade 9.

### Grade 11 Mathematics Courses

Students planning to take Pre-Calculus Math 12 in their third year must take both Math 11 and Pre-Calculus Math 11 in their grade 11 year.

**Mathematics Essentials 11 (graduation):** Math Essentials 11 is a follow-up course to Math Essentials 10. This course provides students with the mathematics they will use in everyday situations at work and at home. Topics include: constructing and interpreting graphs; collecting and organizing data; housing options of renting and buying; measuring and estimating; and designing in 2-D and 3-D. **Mathematics Essentials 11 Prerequisite:** Successful completion of Mathematics Essentials 10, Math at Work 10 or Math 10.

**Mathematics at Work 11 (graduation):** Mathematics at Work 11 demonstrates the application and importance of key mathematical skills. The typical pathway for students who successfully complete Mathematics at Work 11 is Mathematics at Work 12. Some students who successfully complete Mathematics at Work 11 may choose to take Mathematics at Work 12. Students in Mathematics at Work 11 will explore the following topics: measurement systems volume, 2D and 3D geometry, scale, exploded diagrams, numerical reasoning, personal budgets, compound interest, financial institution services, and formula manipulation for various contexts. **Math at Work 11 Prerequisite:** Successful completion of Mathematics at Work 10 or Mathematics 10

**Mathematics 11 (academic):** Mathematics 11 is an academic high school mathematics course. Students who select Mathematics 11 should have a solid understanding of the Mathematics 10 curriculum. Mathematics 11 is a prerequisite for Pre-Calculus 11. These courses are to be taken consecutively, not concurrently. There are two typical pathways for students who successfully complete Mathematics 11: - For those students intending to follow the academic pathway, Mathematics 11 will be followed by Mathematics 12. - For those students intending to follow the advanced pathway, Mathematics 11 will be followed by Pre-Calculus 11 and then Precalculus 12. Students in Mathematics 11 will explore the following topics: applications of rates, scale diagrams and factors, inductive and deductive reasoning,

and introduction of proof, cosine law, sine law, spatial reasoning, statistics, systems of linear inequalities, and quadratic functions. **Math 11 Prerequisite:** Successful completion of Mathematics 10.

**Pre-Calculus Mathematics 11 (advanced):** Pre-Calculus 11 is an advanced high school mathematics course. Students who select Pre-Calculus 11 should have a solid understanding of Mathematics 11 curriculum. Pre-Calculus 11 is a prerequisite for Pre-Calculus 12. These courses are to be taken consecutively, not concurrently. The typical pathway for students who successfully complete Pre-Calculus 11 is Pre-Calculus 12 and Calculus 12 (optional). (Courses in the Pre-Calculus pathway are designed to provide students with the mathematical understandings and critical-thinking skills identified for post-secondary studies in programs that require the study of theoretical calculus.) Some students who successfully complete Pre-Calculus 11 may choose to take Mathematics 12. Alternatively, students who successfully complete Pre-Calculus 11 may choose to select a graduation credit in grade 12. Students in Pre-Calculus 11 will explore the following topics: absolute value, radical expressions and equations, rational expressions and equations, angles in standard position, analyze and solve quadratic equations, linear and quadratic equations and inequalities in two variables, arithmetic and geometric sequences, and reciprocals of linear and quadratic functions. **Pre-Calculus Math 11 Prerequisite:** Successful completion of Mathematics 11 and have demonstrated outstanding performance in relation to the learning outcomes prescribed by Mathematics 11

### **Grade 12 Mathematics Courses**

In 2016–2017, five mathematics courses will be available at the grade 12 level • Mathematics Essentials 12 (formerly called Mathematics for the Workplace 12): 110 hours, 1 graduation credit • Mathematics at Work 12: 110 hours, 1 graduation credit • Mathematics 12: 110 hours, 1 academic credit • Pre-calculus 12: 110 hours, 1 advanced credit • Calculus 12: (110 hours), 1 advanced credit.

**Mathematics Essentials 12** (graduation, 1 credit) This course will be presented as a 110-hour course. The Mathematics Essentials 12 pathway is designed to provide students with the development of the skills and understandings required in the workplace, as well as those required for everyday life at home and in the community. Students will become better equipped to deal with mathematics in their everyday life and will become more confident in their mathematical abilities. Mathematics Essentials 12 is designed for students who either do not intend to pursue post-secondary study, or plan to enter postsecondary programs that do not have any mathematics pre-requisites. The content of this course will help students work toward improving the mathematical knowledge base needed for work directly related to the trades. This course will be modular based and project oriented. Students in Mathematics Essential 12 will do the following modules. • Module 1: Measurement • Module 2: Mini-project: Mathematics and Career Exploration • Module 3: Ratio, Rate, and Proportion • Module 4: Major Project: Math Preparation for the Workplace **Math 12 Essentials prerequisite:** Successful completion of Mathematics Essentials 11 or Mathematics at Work 11. The prerequisite for Mathematics Essentials 12 must be taken and successfully completed prior to starting Mathematics Essentials 12. Therefore, these courses are to be taken consecutively, not concurrently, and the order may not be reversed.

**Mathematics at Work 12 (graduation, 1 credit):** this course will be presented as a 110-hour course. The Mathematics at Work 12 pathway is designed to provide students with the mathematical understandings and critical-thinking skills identified for direct entry into the work force or for entry into programs of study that do not require academic mathematics. Mathematics at Work 12 is the third course in this pathway. Students in Mathematics at Work 12 will study the following topics: • measurement and probability • measures of central tendency • scatter plots • linear relationships • owning and operating a vehicle • properties of polygons • transformations • trigonometry. **Math at Work 12 prerequisite:** Successful completion of Mathematics at Work 11 or Mathematics 11. The prerequisite for Mathematics at Work 12 must be taken and successfully completed prior to starting Mathematics at Work 12. Therefore, these courses are to be taken consecutively, not concurrently, and the order may not be reversed.

**Mathematics 12 (academic, 1 credit):** this course will be presented as a 110-hour course. The Mathematics 12 pathway is designed to provide students with the mathematical understandings and critical-thinking skills identified for post-secondary studies in programs that do not require the study of theoretical calculus. Mathematics 12 is the third course in this pathway. Students who select Mathematics 12 should have a solid understanding of the Mathematics 11 curriculum. Students in Mathematics 12 will study the following topics: borrowing money, investing money, set theory, logical reasoning, counting methods, probability, polynomial functions, exponential and logarithmic functions, sinusoidal functions. **Math 12 prerequisite:** Successful completion of Mathematics 11 or Pre-calculus 11. The prerequisite for Mathematics 12 must be taken and successfully completed prior to starting Mathematics 12. Therefore, these courses are to be taken consecutively, not concurrently, and the order may not be reversed.

**Pre-calculus 12 (advanced 1 credit):** this course will be presented as a 110-hour course. The Pre-calculus 12 pathway is designed to provide students with the mathematical understandings and critical-thinking skills identified for post-secondary studies in programs that require the study of theoretical calculus. Students who select Pre-calculus 12 should have a solid understanding of the Pre-calculus 11 curriculum. Students in Pre-calculus 12 will study the following topics: transformations, radical functions, polynomial functions, trigonometry, exponential and logarithmic functions, rational functions, function operations, permutations, combinations and the binomial theorem. **Pre-calculus 12 Prerequisite:** Successful completion of Pre-calculus 11. Pre-calculus 11 must be taken and successfully completed prior to starting Pre-calculus 12. Therefore, these courses are to be taken consecutively, not concurrently, and the order may not be reversed.

**Calculus 12 (advanced 1 credit):** This course will be presented as a 110-hour course. This course includes the following topics: the concept of a limit, simple derivatives, properties of derivatives, derivatives of trigonometric, exponential and logarithmic functions, applications of derivatives - tangents, rates of change, motion, curve sketching, anti-derivatives, differential equations and applications of anti-derivatives. **Calculus 12 Prerequisite:** Successful completion of Pre-calculus 12.

## **PERSONAL DEVELOPMENT and CAREER EDUCATION**

**Cooperative Education 12 (open):** Cooperative Education is a term used to describe a program that provides an educationally beneficial experience for students. Cooperative Education programs are a three-way partnership among the employer, the school and the student. The Cooperative Education program is taken in conjunction with other grade 12 level courses. It provides students with an opportunity for career exploration and occupational decision making, which will assist in the transition from high school to either post secondary training or direct entry to the work force. Students will spend 100 hours at a work placement outside of school and 25 hours of in school instruction. Students are expected to complete an application for entrance into the program with their career placement considerations. Transportation to and from the work placement will be the student's responsibility.

**Health & Human Services 12 (open) / Health & Human Services 12 Academic (academic):** The course provides student with an introduction to the skills and knowledge involved in careers related to the health and human service domain. Health and Human Services students will explore human development, ethics, helping- process, interpersonal and personal development, wellness, written and verbal communications and related computer applications. Group work, case studies, community projects and agency interaction are some of the learning strategies used to ensure practical application of the theory studied. Community Based Education\*(volunteer and/or service learning) is a required component used to enhance the knowledge and skills developed in the classroom.

**LEARNING STRATAGIES 10 (elective)**

This course will assist students receiving program support in completing the required credits for the High School Diploma. The course will be a regular credit course for program support students. The class will be individualized to accommodate students' learning abilities and instructional needs. Communication skills will be the central feature. Also addressed will be technological competence, personal development, aesthetic expression, citizenship and problem solving.

**Learning Strategies 11 (elective):** This course will assist students receiving program support in completing the required credits for the High School Diploma. The course will be a regular credit course for program support students. The class will be individualized to accommodate students' learning abilities and instructional needs. Communication skills will be the central feature. Also addressed will be technological competence, personal development, aesthetic expression, citizenship and problem solving.

**Learning Strategies 12 (elective):** This course will assist students receiving program support in completing the required credits for the High School Diploma. The course will be a regular credit course for program support students. The class will be individualized to accommodate students' learning abilities and instructional needs. Communication skills will be the central feature. Also addressed will be technological competence, personal development, aesthetic expression, citizenship and problem solving. This course continues the learning outcomes of 11 and is intended for students who have completed the Learning Strategies 11 course. The class will be individualized to accommodate students' learning abilities and instructional needs.

**PHYSICAL EDUCATION**

Physical Education is a mandatory high school credit. Students are required to obtain (1) one physical education course over (3) three years in high school. The following full courses are eligible to meet the physical education requirement: Physical Active Lifestyles 11 or Physical Education 12 All Physical Education courses have a theory component as well as a development contribution component.

**Physical Active Lifestyles 11(open):** This full credit course is designed to engage students in a wide range of physically active experiences, with an overall theme of exploring options and opportunities for being active for life, both in school and in their community. Physically Active Living 11 encompasses both an activity component and a theory component, with an emphasis on engagement in physical activity. The activity component of the course is designed to provide opportunities for students in active experiences that engage youth in traditional and nontraditional forms of physical activity. The theoretical component of the course will enhance student understanding of healthy eating, injury prevention, mental and emotional health, and addiction prevention highlighting the connection between healthy living and being physically active.

**Physical Education 12(open):** The physical Education 12 course concentrates on cooperative learning, tradition and non-traditional games, leadership development, and personal fitness. This course will include a theory component dealing with the components of physical fitness, athletic injuries, and fitness testing.

## SCIENCES

Two science credits are required for a High School Graduation Diploma. The science credits are: Science 10, Biology 11 or 12, Chemistry 11 or 12, Physics 11 or 12, Human Biology 11 or Oceans 11.

**Science 10 (academic):** The Science 10 program is sequential to the Science 9 course. Science 10 is intended to provide the student with fundamental skills, knowledge and attitudes to prepare students for traditional senior high school sciences of Physics, Chemistry and Biology. Activities, labs, group discussions and lectures are the primary methods of instruction. The textbook is specifically designed to accompany this course. There are four distinct units: Sustainability of Ecosystems Chemical Reactions Motion Weather Dynamics.

\*\*Please note: If a student intends to choose Biology 11, Chemistry 11 or Physics 11, you must have a strong mark in Science 10, and Math 10.

The Biology 11 and Biology 12 programs emphasize the unifying concepts: change, diversity, energy, equilibrium, matter, systems, and models as they relate to Biology. Unifying concepts provide connections among units of study in both courses and provide a framework to show how individual sections of these programs relate to the big ideas of science. Both programs enable students to become aware of the tremendous impact of Biology and technology upon society.

**Biology 11 (academic):** The purpose of the Biology 11 program is to explore the unity and diversity of living things. This course consists of four units of study: Matter and Energy for Life introduces cells as the basic units for life. This unit investigates the role of cell structures in matter exchange and energy flow and recognizes the impact of technology on our understanding of cell structure and processes; Biodiversity examines the necessity for an organized system for the classification and study of the vast diversity of living things. This unit provides a thorough investigation of life's unity and diversity within the Biosphere; Maintaining Dynamic Equilibrium I recognizes that all living things struggle to maintain an internal balance in response to the constant pressure of external phenomena. This unit investigates the role of various systems and the influence of behavior in the regulation of homeostasis; Interactions among Living Things examines ecosystems, which involve complex interactions between Biotic and a-biotic factor. This unit investigates the role of these factors on population dynamics and the flow of energy within ecological systems. Biology 11 involves the application and study of many diagrams, the use and application of a large vocabulary of Biological terms, and a number of detailed laboratory investigations including the dissection of animals. **Recommendation: A mark of 60% in Science 10 and strong academic math skills.**

**Biology 12 (academic):** This course consists of four units of study: Maintaining Dynamic Equilibrium II studies the nervous (electrochemical) and endocrine (chemical) systems; Reproduction and Development covers the principles of how living organisms reproduce and develop at the cellular and individual levels; Genetic Continuity includes the principles and fundamentals about DNA; Evolution, Change and Diversity focus on the history, importance and mechanisms of the process of evolution. Biology 12 involves the study of many diagrams / models and the application of a large vocabulary of Biological terms. **In order to take Biology 12, it is strongly recommended that Biology 11 be completed with a minimum mark of 60%.**

**Chemistry 11 (academic):** This first course in Chemistry encourages students to participate in lifelong learning about chemistry and to appreciate chemistry as a scientific endeavor with practical impact on their lives and on society. The chemistry 11 course is comprised of specific outcomes organized into three units: (a) From Structures to Properties, (b) Stoichiometry and (c) Organic Chemistry. The Grade 11 chemistry program builds on the fundamental attitude, skills and knowledge acquired in Science 10. **In order to take Chemistry 11 students must have a mark of 65% or better in Science 10 and academic Math 10.**

**Chemistry 12 (academic):** The Chemistry 12 is designed to provide a more in-depth exploration of various topics intended for students pursuing post secondary studies. The chemistry 12 program is comprised of specific outcomes organized in four units. The units are (a) thermo-chemistry, (b) from solutions to kinetics to equilibrium, (c) acids and bases (d) and electrochemistry. In order to be successful, students should have strong work ethic and math skills as well as regular attendance. **It is recommended that Chemistry 11 be completed with a minimum mark of 60% and be enrolled in academic Math 12.**

**Human Biology 11:** Recommended Prerequisite: Science 10. This course is an academic credit that counts as a second science credit for high school graduation. The major systems of the human body will

be covered in this course using an issues based or society and technology point of view. Lab work, projects, group activities and case study examples will be the main learning strategies in this course. This course is designed so that students gain an appreciation for and understanding of the importance of various body functions. Please note that students will not receive credit for both Human Biology 11 and Biology 11.

**Oceans 11 (academic):** The Oceans 11 course offers students the opportunity to explore aspects of global and local oceanography and current ocean-related issues. The course is designed to be flexible and meet the needs and interests of Nova Scotia students by connecting the study of oceanography with local economic and community interests. One of the priorities of the course is to increase students' knowledge of emerging new economies and opportunities in such areas as aquaculture and oceans management, which offer new career opportunities. Two modules are required – Ocean Structure & Motion and Marine Biome. The other modules include Aquaculture, Coastal Zones, Coastal Navigation and Ocean Industries. It is expected that 4 modules will be covered during the semester.

**Physics 11(academic):** This course is designed for students who wish to understand the world around them as well as to prepare for a future in science or technology. Emphasis is placed on the interconnections between the environment, science, technology and society. Physics 11 is organized into four units: (a) Kinematics, (b) Dynamics, (c) Energy and Momentum and (d) Waves. **Students considering this program should have strong work and study skills and achieved marks of at least 65% in Math 10 and Science 10.**

**Physics 12 (academic):** Physics 12 is designed for students who wish to understand the world around them, as well as to prepare for a future in science. The course has specific outcomes organized in four units. The units include a) Forces, Motion, Work and Energy, b) Fields (Magnetic, Electric, Generators, Motors), c) Waves and Modern Physics, d) Nuclear Energy. Problem solving will be a significant part of Physics 12. **Successful completion of Physics 11 with a mark of at least 60% is recommended for this course.**

## **SOCIAL STUDIES**

Global History 12 or Global Geography 12 and Canadian History 11 or African Canadian Studies 11 are graduation requirements.

**African Canadian Studies 11 (academic):** This course provides an overview of the history of African Peoples in Canada. As part of this study, students will explore the history of Africa and highlight the struggles and triumphs of Canadians (especially Nova Scotians) and Americans of African descent. Regardless of one's ethnic and cultural background, the course aims to help students appreciate the social challenges of the 21st century and, at the same time, refine the various skills of social studies. This course fills the requirement for the Canadian History credit.

**Canadian History 11 (academic):** This course is organized according to five themes: Globalization, Development, Governance, Sovereignty, and Justice. In addition to acquiring knowledge of the history of Canada, students will learn and practice the historical method, historiography, and various other skills essential to the study of history. A compulsory Independent Study is part of the course – students will be expected to engage in research and effectively communicate the findings of their research. The course begins with the arrival of our Aboriginal ancestors to North America, European contacts, the World Wars, peacekeeping, trade (both home and abroad), Canada as a distinct country onto itself and how Canadian law has influenced our society in the past, present and for the future. The major component of the course focuses on Canada's global relationships. Successful completion of Canadian History 11 fulfills the Canadian History requirement for graduation.

**Global Geography 12 (academic):** This course, which focuses on global geography, explores major themes that help us to understand the nature and origins of complex humanity/environment relationships in the contemporary world. Guided by the fundamental themes and skills of modern geography, students pursue this exploration through eight compulsory units: Our Fragile Planet: A Geographical Perspective; Perilous Processes: Our Planet at Risk; The Peopled Planet: Standing Room Only?; Feeding the Planet: Food for Thought; Global Resources: The Good Earth; Global Factory: For Whose Benefit? Urbanization: A Mixed Blessing; and The Future Planet: Under New Management. By using geographic skills and techniques, learning and applying a body of skills and techniques, learning and applying a body of geographic knowledge, and developing their own planet management awareness, students become informed global geography students. The process of becoming informed enables students to propose reasonable answers to the question upon which Nova Scotia's global studies courses are built, "How did the world arrive at its current state at the end of the twentieth century?"

**Global History 12 (academic):** This course, which focuses on global history, examines major themes in the history of the post-World War II era. Students examine these themes in five compulsory units: East-West: The Role of Super Power in the Post-World War II Era; North-South: The Origins and Consequences of Economic Disparity; the Pursuit of Justice; Societal and Technological Change; and Acknowledging Global Interdependence: The Legacy of the Twentieth Century. In their study of these units, students examine history from three perspectives: social, economic, and political, and use the research and inquiry skills of the historian. Throughout their lives, students address the focus question of the course: "Has humanity emerged into a world whose actions are governed more by interdependence at the global level than by dependence at the national or international level?" They also propose reasonable answers to the question upon which Nova Scotia's global studies courses are built: "How did the world arrive at its current state at the close of the twentieth century?"



Students must successfully complete a Global Studies 12 credit as a graduation requirement. The Global Studies 12 credit can either be Global Geography 12 or Global History 12.

**Law 12 (academic):** The Canadian law course is designed to provide students with knowledge of law and its function in society and skills and attitudes that will enable students to understand the legal process. Course content includes the Canadian legal system, crimes and crime control, injuries and wrongs, human rights, property rights, promises and agreements, business relations, family relations, and courts and trials. The main focus of the course will be criminal law. We will follow the procedures from arrest, legal rights, the court system, trial procedure and sentencing.

**Sociology 12 (academic):** The Sociology 12 course is designed to give an understanding of the basic aspects of our sociology. It allows students to examine Canadian sociological issues. Canadian sociological issues that might be considered include the family, students and schools, poverty, minority groups, women in society, labor and management, conflict, crime in Canada, punishment and rehabilitation, same sex marriages and discrimination. Current events are an important part of this course. Therefore local and national news events will be discussed on a weekly basis. \*Many Universities accept this course as an academic credit\*\*. Please check with our Guidance Department.

## TECHNOLOGY EDUCATION

**Home Trades Technology 12 (elective):** This course provides a range of experience and learning opportunities related to the carpentry, electrical and plumbing trades. Students will develop some of the skills and knowledge necessary to participate in the home construction industry including using the basic tools of each trade. Projects include drawing construction diagrams, building model homes, wiring typical household circuits and creating a basic home water supply and drainage system.

**Multimedia 12 (elective):** Communication is an active process where students learn to plan, explore and create a unique message. Multimedia is a modern vehicle that is used to communicate in a variety of different ways. The on-line classroom provides an ideal environment for a technology rich course. Learners will progress through four modules where they heighten their critical awareness about the impact of text, time-based images, and sound. Students actively deconstruct multimedia products in order to understand how to create an effective product of their own. Each student will work critically and collaboratively in real time to support their classmates in this virtual environment. Students are encouraged to use their voice, ideas and creativity as they produce a multimedia package to convey an important message.

**Production Technology 11 (open):** This introductory course in Production Technology is intended to provide students with an understanding of the skills required and opportunities available in the modern manufacturing industry. Students may form and run their own corporation within the school and become involved in planning, producing and marketing the chosen product content. Content includes machine operation and safety as well as word processing, and computer assisted drafting and design software which will be incorporated throughout the course.

