

# **ROTHESAY HIGH SCHOOL**



**Course Calendar  
2020-2021**

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## **NOTES**

The Course Calendar is used by Grade 11 and 12 students at Rothesay High School in choosing their courses for the upcoming school year. Students in Grades 9 and 10 are enrolled in a common compulsory non-credit system. Rothesay High School will be following a 5 credit semester, allowing students the opportunity for a greater variety of courses and the opportunity to study a subject in greater depth.

### ***THE CREDIT SYSTEM***

A central component of the semester high school program is the credit system which applies to all grade 11 and 12 course offerings. The term credit describes a successfully completed course in terms of instructional hours. One credit corresponds to approximately 90 instructional hours.

### ***COURSE CODES***

The first two digits indicate the grade during which this course is usually taken. This applies primarily to the core courses in English, Mathematics, French, and Social Sciences. The third digit indicates the level: 1 - enriched university preparatory; 2-regular university and community college technology preparatory; 3 - prepares a student for some one-year courses at community college, business college or to go directly to work; 0 - only available at one level. The "0" courses vary in level of difficulty. Some "0" courses qualify as university entrance courses; others do not. Students are advised to consult with the guidance counsellor regarding specific courses. Students must also be aware that high school graduation does not necessarily mean acceptance to post-secondary institutions.

### ***ELECTIVE COURSES***

The elective course selection is designed to allow students flexibility in completing their requirements for graduation. Electives may be chosen from a broad range of subjects, or students may choose to concentrate in one specialized area of the curriculum such as science or technology.

Elective course selection will often depend on counselling from parents, teachers, guidance personnel, and administrators. Students who plan careers in engineering, for example, must have the appropriate courses in their graduation transcripts which will allow them access to universities of their choice. A key consideration is to have students open as many education doors as possible. Students' programs, therefore, should be flexible and adaptable.

## **ADVANCED PLACEMENT PROGRAM**

The Advanced Placement (AP) Program is a cooperative educational endeavor between Secondary Schools, Colleges and Universities. It exposes high school students to college-level material through involvement in an AP course, and it gives them the opportunity to show that they have mastered the material by taking an AP examination. Colleges and Universities can then grant credit, placement, or both, to students who have done so.

Students can benefit from taking AP courses by learning a subject in greater depth, developing skills that will be critically important to successful study in university, and demonstrating to universities their willingness to undertake a challenging course. AP courses do make substantial academic demands on students.

AP has been accepted by many schools as a method of enrichment and it has grown steadily. The number of examinations written by Canadian students in 1991 was 3958. The number of examinations written in 1995 was 6706. Over 800,000 AP examinations were written worldwide in 1995.

AP offers high schools the opportunity to motivate their best students, enhance the quality of the curriculum and demonstrate to the community the school's commitment to strong academic standards.

AP can motivate students to attempt more challenging courses in high school and university. It can bolster their confidence that they meet college requirements. Successful completion of the AP examination taken in high school can provide college credits and exempt students from some introductory college courses, thus permitting students to move more quickly into advanced classes.

Research on the effects of AP courses and examinations has demonstrated that, when AP students reach university, they typically take additional courses and examinations in the academic areas of their AP courses, enroll in more courses than their peers, achieve higher grade point averages and graduate with double majors, and go on to graduate school at a rate double that of their non-AP peers.

# **New Brunswick High School Diploma Requirements**

## **Graduation Requirements** **17 out of 20 possible credits**

### **Compulsory Credits (7 required)**

- **3 English:** grade 11 (2 credits); plus grade 12 (1 credit)
- **1 Math** (11) Foundations or Workplace
- **1 Modern History**
- **1 Science** (Biology, Chemistry, Physics, Environmental Science, Physical Geography, Intro to Electronics)
- **1 Fine Arts/Life Role** (Visual Arts, Graphic Art & Design, Music, Performing Arts, Family Living, Co-op Ed, Leadership, Outdoor Pursuits, Entrepreneurship, Culinary tech, Skill traded courses)

### **Plus 10 Electives**

- **5 Credits must be at the grade 12 level**
- **Student must pass the English Language Proficiency Assessment**

## The Four Year High School 20 Credit System

### English Program

Grade 9 English		Grade 10 English		Grade 11 English		Grade 12 English	
<u>Term 1</u>	<u>Term 2</u>	<u>Term 1</u>	<u>Term 2</u>	<u>Term 1</u>	<u>Term 2</u>	<u>Term 1</u>	<u>Term 2</u>
English	English	English	English	English (90)	English (90)	English (90)	Elective (90)
Math	Math	Math	Math	Math (90)	Math (90)	Elective (90)	Elective (90)
Soc Studies	Physl Ed	Soc Studies	PDCP	Sc/Te (90)	FA/LR (90)	Elective (90)	Elective (90)
Science 9	French	French	Elective	History (90)	Elective (90)	Elective (90)	Elective (90)
Art/Music	Science 10	BBT	Spec	Elective (90)	Elective(90)	Elective (90)	Elective (90)

### French Immersion Program

Grade 9 Immersion		Grade 10 Immersion		<b>NOTE: For Grade 11 and 12 French Immersion Students:</b>
<u>Term 1</u>	<u>Term 2</u>	<u>Term 1</u>	<u>Term 2</u>	
English	English	English*	English*	In order to complete the French Immersion Program, students must take a minimum of three (5) French Immersion courses as part of their Grade 11 and 12 program.
Math	Math	Math	Math	
Science	FI Lang Arts	FI Lang Arts	FI Lang Arts	
Soc Studies	Science	Science	Soc Studies	
Art/Music	Phys Ed	PDCP	Spec	

### ***Personal Development:***

Visual Art 110/120	Individual & Family Dynamics 120
Music 112/122	Co-operative Education 120
Theatre Arts 120	Health and Physical Education 120
Graphic Art and Design 110	Entrepreneurship 110
Outdoor Pursuits 110	Yoga 110
Performing Arts 120	Wellness Phys Ed 110
Culinary Tech 11/120	Intro to Applied Tech 110
Mill & Cab 120	

# COURSE DESCRIPTIONS

## ART COURSES

The Art courses are designed to provide students with opportunities to develop:

- their visual awareness,
- their skills in art processes and techniques,
- their understanding of a number of art movements and theories,
- their potential to respond critically to visual and aesthetic phenomena, and
- an understanding of their art heritage

### **GRAPHIC ART AND DESIGN 110**

This course has as a main goal the development of visual communication skills that are related, not so much to personal expression, as in the case in our Visual Arts courses, but more to meeting the needs of organizations that wish to promote themselves through advertising, logos and other visual symbols. There is an increasing market for those students who are visually literate and there are a number of post-secondary institutions for which this course would be a valuable prerequisite.

### **VISUAL ART 110**

*Prerequisite Art 9/10 Program*

Visual Art 110 builds on the experience and knowledge gained in the 9/10 program. The studio work remains in the areas of drawing, painting, printmaking and 3-dimensional work and stresses personal expression and the development of individual imagery. There are further requirements in art criticism and art history.

### **VISUAL ART 120**

*Prerequisite Art 110*

Visual Art 120 is designed for students who wish to pursue art related interests or careers. Students work through an introductory review of skills and concepts and choose blocks that lead to advanced work on a particular medium. Students are required to critique, in writing, aspects of process and product. An opportunity to develop a portfolio for submission to an art college is also available.

## BUSINESS EDUCATION COURSES

### **BUSINESS ORGANIZATION AND MANAGEMENT 120**

This course is designed for university preparatory students in their last year of high school. Students should gain an understanding of how the business system is managed in Canada, emphasis being placed on business problems as seen through the eyes of management. Projects, case studies and problem solving are a major part of the course. The major topics included are: business ownership, small business management; the functions and problems of management; financial management and control; production; marketing procedures; business, government and society; and future careers in business.

*Text: Canadian Business*

### **CO-OPERATIVE EDUCATION 120**

*NOTE: In order to enroll in Co-operative Education, students entering Grade 12 must submit an application with references and are screened by an interviewing committee. Successful applicants will be those students who have achieved academically in subject areas relating to the specific field of business or industry they wish to explore. There is a limited enrollment in the course.*

Co-operative Education is a two-credit course. Students will attend regular classes for a half day and report to their respective training stations for the other half. In addition to related theory classes, students will participate in two six week work placements in the community. The purpose of this program is to provide student with exploratory experiences in a variety of work roles while also fostering personal responsibility, self-reliance, and team work.

### **ENTREPRENEURSHIP 110**

Entrepreneurship 110 is designed to help the student learn about the skills, abilities, and personal characteristics that are needed to become a successful entrepreneur, as well as develop their individual aptitudes, attitudes and interests. The student will practice the techniques involved in accurately assessing opportunities, generating ideas, selecting and evaluating ideas, and preparing carefully drawn up plans for putting these into action. Entrepreneurship 110 emphasizes the development of concepts rather than specific business skills. The course makes extensive use of case studies, and where possible, business simulations.

### **INTRODUCTION TO ACCOUNTING 120**

*NOTE: This course is designed for students in their final year who are planning to attend university or community college.*

The course includes the development and use of journals, ledgers and related books of accounts as well as a computer accounting package. Basic accounting principles and concepts are discussed at some length to help students understand the conceptual framework of accounting. The preparation and use of the financial statements of proprietorships, partnerships and corporations are studied in some detail. This course is accepted as a university entrance (elective) credit for all programs at the University of New Brunswick.

### **THE ASD-S IDEA CENTER**

The **IDEA** (Innovation, Development, Entrepreneurship and Action) Centre for Enterprise is a program designed to develop student-led businesses. Students identify, research and solve community problems through the vehicle of social enterprise and entrepreneurship. By delivering the curriculum in a dynamic community space called ConnexionWorks, the IDEA Centre provides a hub where students are able to safely interact with community partners so that their classwork grows into the community and bears the fruit of a positive community impact.

The program outcomes are designed to fill credit requirements for any two credits from the following courses: Co-op Education, Economics, Entrepreneurship, Business Management and Organization, Leadership.



## **DISTANCE LEARNING**

New Brunswick's Distance Learning program offers expanded learning opportunities to all New Brunswick students. Distance Learning allows all students access to optional or advanced level courses and it provides increased flexibility in scheduling in all schools. Students taking Distance Learning courses are also able to continue their studies without interruption when they are unable to be in school because of illness or travel. New Brunswick's Distance Learning program emphasizes a facilitated learning approach. All courses are led by distance facilitators/teachers who answer questions and engage student learning by e-mail, chat room or web cam. The current slate of courses is constantly being improved and updated and new courses are also in development to expand the Distance Learning offering.

## **ENGLISH COURSES**

### **AP ENGLISH LITERATURE 120**

The AP English Literature and Composition course is designed to build on students' analytical skills in literature students will be exploring recognized works of literary merit. Advanced Placement (AP) English Literature and Composition is designed to be an academically rigorous and challenging course which emulates college material, emphasizing writing concisely, thinking clearly and reading critically. Writing, thinking and reading skills are expected to be fostered largely *independent* of others. This course is the equivalent of an introductory English course taught at the university level. Students may be required to do readings before the semester starts. Students who choose to write the AP exam may qualify for advanced standing or credit at university. Check with individual institutions for the AP policies.

### **CANADIAN LITERATURE 120**

*Prerequisite: successful completion of English 111 or 112*

Canadian Literature 120 involves a study of Canadian plays, poetry, short stories and novels. An emphasis is placed on how the literature of the nineteenth and twentieth centuries reflects the Canadian identity and how it is unique in world literature.

### **ENGLISH 111**

English 111 is an enriched English course but it is similar to the regular college preparatory course described below. In addition, however, students are expected to cover a wider supplementary reading and writing program. This course is considered part of the AP stream.

### **ENGLISH 112**

English 112 is the regular college preparatory course. It is made up of two components, literature and writing. In the literature unit, the students will study poetry and a Shakespearean play. The writing section will concentrate on sentence and paragraph writing skills, development of essay writing skills and strategies, the précis, the paraphrase, and the business letter.

### **ENGLISH 113**

English 113 is intended for students who are planning to enter the work force after graduation or to take certain courses at community college. An emphasis is placed on the development of basic reading, writing, and speaking skills. The course contains two main components, literature and writing. In the

literature unit, the students will study the short story, the novel, poetry, drama and media. The writing unit will have continued emphasis on developing good sentence and paragraph writing skills, the long composition or report, writing summaries, spelling, punctuation, and syntax.

### **ENGLISH 121**

*Prerequisite: Successful completion of English 111*

English 121 is an enriched English course but it is similar to the regular college preparatory course described below. In addition, however, students are expected to cover a wider supplementary reading and writing program. This course is considered part of the AP stream.

### **ENGLISH 122**

*Prerequisite: successful completion of English 112*

English 122 is the regular college preparatory course. Although there is continued emphasis placed on good writing skills, particularly those related to essay writing, the English 122 course is basically a literature course. The course is made up of three units: the novel, a study of the poetry from the Eighteenth Century and Restoration period, the Romantic period, or the Victorian period and the Shakespearean play.

### **ENGLISH 123**

*Prerequisite: successful completion of English 112 or 113*

English 123 is intended for those students who plan to enter the work force after graduation or take certain courses at community college. English 123 has two main components: literature and writing. The literature section will concentrate on the short story, the novel, poetry, drama - a modern play and a Shakespearean play, and media. The writing unit will have continued emphasis on sentence and paragraph writing skills, essay writing skills, spelling, punctuation and syntax.

### **JOURNALISM 120**

*Prerequisite: Students taking this course must have passed either English 111 or 112 with a mark of 70% or better.*

Journalism 120 is a course intended for those students who have an interest in writing and, in particular, journalism. This course introduces students to basic news writing, news skills and concepts, including how news is covered and reported, what makes news, what constitutes good news writing, and how to write summary leads. Students will also learn how to distinguish between quotation and attribution and how to organize a news story, as well as interviewing techniques, writing basic stories, beat reporting, and feature writing. Instructions will also be given in the use of word processing and desktop publishing programs.

### **MEDIA STUDIES 120**

*Prerequisite: This course is open to Grade 12 students only.*

This is a hands-on course in the media. It will deal with film, television, advertising and video. The course will cover the characteristics and techniques of each medium and will involve extensive practical work in such areas as the making of videos and commercials. Although it is a hands-on course, students are expected to do a substantial amount of reading and writing dealing with the theory related to the various media.

### **READING TUTOR 120**

*Prerequisite: English 111 or 112*

This course presents a unique opportunity for grade 12 students with high academic achievement and good communications skills to become reading tutors. Under the guidance of the resource teacher, tutors work on a one-to-one basis with a grade 9, 10 or EAL student who is seeking to raise their reading level and to improve their writing skills. Tutors are first trained in basic reading theory and teaching techniques. They are then assigned one student to work with for the term. Tutors must commit to being present each and every day and to preparing daily tutoring activities for their student. This is a chance to make a positive contribution to our school, to acquire leadership skills, and to experience a real-life teaching situation. This course is recommended for those planning careers in education, guidance, or social services.

### **THEATRE ARTS 120**

*Prerequisite: Students taking this course must be either in Grade 11 or 12. It is expected that students applying for this course have an interest in theatre.*

Theatre Arts 120 covers a study of the history of theatre, set design, lighting, costume, improvisation, and acting. Time is divided between the classroom and the stage, and students are required to stage an individual performance.

### **WOMEN, MEDIA & CULTURE 120**

Women, Media & Culture 120 aims to introduce students to critical literacy practices by examining cultural constructions (in particular, media representations) that shape and inform identities. The course engages students in reflective thinking about how they have been taught to “read the word and read the world” (Freire, 1970). Students participate in class discussions and activities that focus on representations of race, gender, class, sexuality, ability, language and other identity categories found in past and present media sources. The overall goal of the course is to encourage critical thinking, critical questioning, and critical action in an effort to construct a more socially just and democratic world.

### **WRITING 110**

Writing 110 is intended for students who are serious about strengthening their basic reading and writing skills in order to have success in the college preparatory English program. The course will cover units on the sentence, the paragraph, the essay, syntax, spelling, and punctuation. Students will be expected to write on a daily basis.

## **FRENCH COURSES**

Because of the variety of levels of French courses available in the graduation years, the following guide is provided to assist students and parents in the selection of appropriate courses in the French programs.

In order to graduate, a student must take French in Grades 9 and 10.

The various French courses offered at Rothesay High School are listed according to their decreasing level of advancement in the French language.

Early Immersion  
Late Immersion

Post Intensive French 120  
Post Intensive French 110

Students in the Immersion Programs are expected to continue their program at the senior high level by taking **five** courses in French over two years in Grades 11 and 12.

The following are required course selection outlines for Immersion students:

Grade 11: French Immersion Language Arts 110 and French Immersion Modern History 110

Grade 12: French Immersion Language Arts 120

### **FI LANGUAGE ARTS 110**

*Prerequisite: successful completion of F.I. Language Arts in the 9/10 Program*

This course is a continuation of and follows the same general pattern as the Grade 10 course. The content of this course is based on five components: oral expression, literature, grammar, composition, and culture. This course is to be taken in conjunction with F.I. Modern History 110.

### **FI LANGUAGE ARTS 120**

*Prerequisite: successful completion of F.I. Language Arts 110*

This course is a continuation of the grade 11 course and emphasizes vocabulary building, writing and oral expression, literature, grammar and culture. All these aspects are examined in context using various resources, visual and audio, variety of contemporary written material, articles and novels from francophone countries. Emphasis is placed on oral proficiency and understanding, therefore group work and communicative activities and projects are of great importance. Students must take a grade 12 French course in order to do the French proficiency exam administered by the Province of New Brunswick.

### **POST-INTENSIVE FRENCH 110**

Post-Intensive French is a literacy-based, non-immersion program for students choosing to continue to learn French as a second Language. Themes at this level include: mysteries, injustices and the power of photography.

*\*Note also that if a student achieves a level of Intermediate at the end of grade 10, he or she may select to enrol in French immersion courses or Post-Intensive French courses in grades 11 and 12.*

### **POST-INTENSIVE FRENCH 120**

Post-Intensive French is a literacy-based, non-immersion program for students choosing to continue to learn French as a second Language. Themes at this level include: looking to the future, ecological challenges, similarities and differences and careers. Students must take a grade 12 French course in order to do the French proficiency exam administered by the Province of New Brunswick.

*\*Note also that if a student achieves a level of Intermediate at the end of grade 10, he or she may select to enrol in French immersion courses or Post-Intensive French courses in grades 11 and 12.*

### **TECHNIQUES DE COMMUNICATIONS 120**

This course is designed to develop effective French communication skills. It emphasizes the use of set-up phrases, idiomatic expressions, correct pronunciation and intonation, the development of useful vocabulary, and ability to communicate without hesitation in any given situation.

Learning will be done through activities such as: Games, role play, skits, debates, songs, improv and discussions on current events.

Students will be required to do oral presentations either individually or in pairs. An oral exam will be given at the end of the semester as part of the formal evaluation. This is a recommended course for those students who are in the FI program in preparation for the OPI (Provincial Oral proficiency exam).

**Prerequisite: FI Language Arts 11**

## **HEALTH AND PHYSICAL EDUCATION**

### **PHYSICAL EDUCATION LEADERSHIP 120**

This course is a "selected-elective" course for grade 12 students with special interest in utilizing physical activities to develop leadership skills which will enable them to translate these interests into dynamic personal involvement in their community. Students are required to apply for admission to the course, and applications are screened by a committee representing the physical education staff, the guidance staff and school administration.

This course requires a commitment to a minimum of 30 hours of out-of-class responsibilities in the area of leadership, which may focus on sport or recreational activities or other forms of community services.

This course consists of units in leadership theory, sports administration, teaching theory, officiating, coaching, and sports medicine.

### **OUTDOOR PURSUITS 110**

In this course students will explore the outdoor environment in and around the Kennebecasis Valley. They will partake in various activities such as hiking and camping while learning more about their outside world. Students will learn many useful skills to pursue careers in outdoor activities. They will learn survival skills that will be useful for a lifetime.

### **WELLNESS THROUGH PHYSICAL EDUCATION 110**

The goal of the *Wellness through Physical Education 110* curriculum is to promote healthy active living for life. Students will experience a variety of wellness activities and are expected to create and implement a personal healthy active living plan. The course is intended to allow a broad-based exploration of various dimensions of wellness and encourage a healthy, balanced lifestyle.

### **YOGA 110**

This course introduces students to the ancient tradition of yoga in its various forms & styles. With its vast capacity to bring vibrant health to body, mind & emotions, the intention is for students to develop a lifelong personal practice of yoga, not only to maintain exceptional physical condition, but also to develop healthy relationships with self, others and the earth.

## **HOME ECONOMICS/FAMILY LIVING**

The Home Economics/Family Living concentration of courses provides training for students:

- who seek a basis for future studies in fields of social work, teaching, psychology, foods and nutrition, fashion design and many related fields, or
- who wish to seek employment in the hospitality industry, day care, and clothing services

### **CHILD STUDIES 120**

This course is "a study of the most significant resource that we possess - children." Child Studies 120 explores how children develop physically, socially, emotionally, and intellectually. Issues are discussed regarding the "quality of life" and human development, "society's basic unit", the family plus parenting skills in our complex, consuming, and technological society. The importance of the need to provide love, continuity and stability, as well as the basic food, clothing, and shelter requirements is addressed. Child Studies 120 includes a variety of human centered experiences from conception through to the development of the school age child. Thus, ongoing observations and experiences with children is an essential part of the program.

### **CULINARY TECHNOLOGY 110 or FI CULINARY TECHNOLOGY 110**

The Culinary Technology Program is designed to prepare students for employment and/or future education in the food service industry. This technology-driven and skill-oriented program involves not only the "how and who" of food service preparation, but focuses on the development of personal skills and knowledge that can be applied to the food service industry. Laboratory experimentation, food preparation and service are an integral part of the program.

### **CULINARY TECHNOLOGY 120**

The Culinary Technology Program is designed to prepare students for employment and/or future education in the food service industry. This technology driven and skill oriented program involves not only the "how and why" of food service preparation, but focuses on the development of personal skills and knowledge that can be applied to the food service industry. Laboratory experimentation, food preparation and service are an integral part of this program.

It gives the students lifelong learning skills that may be transferable to future training and/or food services employment at an advanced level.

### **EARLY CHILD SERVICES 110**

The aim of Early Childhood Services 110 is to introduce students to the childcare profession and help them to gain experience through knowledge of social, emotional, physical and intellectual development as well as direct interaction with preschool aged children. Preparation, observation and participation with children is a compulsory component of Early Child Services 110.

### **HOSPITALITY AND TOURISM 110**

The Hospitality/Tourism industry is identified in Canada and particularly in New Brunswick, as a rapidly growing industry. This course will provide students with lifelong learning skills that are transferable to future learning and/or the hospitality and tourism industry. The student will acquire career information,

skill development and the talents for employment. This course relies on resource-based learning, practical experiences, access to resource people and information that will help the individual in his/her career choice. Topics include the four main sectors of the tourism industry, influences on the tourism industry, personal and interpersonal skills regarding career opportunities available, travel industry and marketing strategies.

This course will include a component of 10 hours service in the field of hospitality and tourism (i.e. dinner auction/dinner theatre, community events, etc.).

### **INDIVIDUAL AND FAMILY DYNAMICS 120**

This course is designed for the senior student who wants a practical day-to-day living course. The main theme is the study of human behavior and how the individual grows and matures with family and friends. Through an investigation of effective communication related to the quality of life, the course proposes to develop decision making skills in many and varied areas such as: personality development (views of Freud, Maslow, Piaget, Erickson, Kohlberg); interpersonal relationships - dating, courtship, marriage, separation, divorce; sex education - anatomy of the human reproductive system, contraception, pregnancy, genetics, child birth, abortion, and social diseases. There is particular emphasis given to those stages which include children, such as parenting and human development experiences; i.e. physical, intellectual and psycho-social development. This Family Living course is an excellent introduction to further sociology, psychology, and medical studies as well as teaching, social work, and business.

## **MATHEMATICS COURSES**

Students are required to take one math credit beyond Grade 10, either **Financial and Workplace Mathematics 110** or **Foundations of Math 110**. We recommend that students pursuing post-secondary studies enroll in the second Grade 11 Math credit which is called **Pre-Calculus 110**.

### **CALCULUS 120**

*Prerequisite: **Pre-Calculus A 120 and Pre-Calculus B 120**. This course is recommended for students interested in post-secondary programs in science, engineering and mathematics, though it may not be a required entrance requirement. Students should check entrance requirements for the specific program and institution in which they are interested*

This optional course is designed for students who wish to take further mathematics at university. This is the last course offered in the Pre-Calculus Pathway, and follows Pre-Calculus B 120. This course develops the concepts of average and instantaneous rates of change. Derivatives are determined by applying the definition of a derivative and the derivative rules including the Chain Rule, and are determined for trigonometric functions. Limits and derivatives of exponential and logarithmic functions are found. Calculus techniques are used to sketch graphs of functions, and to solve optimization problems. Problems are solved involving inverse trigonometric functions, involving related rates and involving the

application of the integral of a function from a variety of fields. The definite integral and the antiderivative of a function are determined.

### **FINANCIAL & WORKPLACE MATHEMATICS 110**

*Students have a choice of this course or **Foundations of Mathematics 11** to complete graduation requirements. This is a pre-requisite for **Financial and Workplace Mathematics 12**.*

This course is the first of two courses in the Financial and Workplace pathway designed for entry into post-secondary trades and technical programs, or for direct entry into the work force. Concepts of right triangles, trigonometry, and angles of elevation and depression are applied to contextual problems. Scale models and drawings of 2-D and 3-D objects are constructed from various views and perspectives. Students are challenged to solve problems that involve numerical reasoning. Costs and benefits of renting, leasing and buying are explored, investment portfolios analyzed and personal budgets developed. Students manipulate and apply formulas in a variety of ways and solve problems using proportional reasoning and unit analysis.

### **FINANCIAL & WORKPLACE MATHEMATICS 120**

***Financial and Workplace Mathematics 110** or **Foundations of Mathematics 110** can serve as a pre-requisite for this course. This course completes the Financial and Workplace pathway.*

This is the second of two courses in the Financial and Workplace pathway designed for entry into post-secondary trades and technical programs, or for direct entry into the work force. Students explore the limitations of measuring instruments, and solve problems using sine and cosine laws and the properties of triangles, quadrilateral, and regular polygons as they relate to construction, industrial, commercial and artistic applications. Transformations of 2-D and 3-D shapes are identified, drawn with and without technology, and used to create, analyze and describe designs and to solve contextual problems. The viability of small business options are explored including expenses, feasibility, and factors that could impact on profitability. Linear relations are studied, including patterns and trends, graphing, creating tables of values, writing equations, interpolating and extrapolating, and solving problems. Students gain an understanding of mean, weighted and trimmed mean, median and mode, and explore the impact of outliers. They also compare percent and percentile, and explore probability. Opportunity is given to research and present an historical event or an area of interest that involves mathematics.

### **FOUNDATIONS OF MATHEMATICS 110**

*Students have a choice of this course or **Financial and Workplace 11** to complete graduation requirements. This is a pre-requisite for **Foundations of Mathematics 12** and a pre-requisite or co-requisite for **Pre-Calculus 11**.*

This course is a pre-requisite for a second **Foundations of Mathematics** course in Grade 12, providing a pathway designed for entry into academic programs not requiring pre-calculus. It is also a pre-requisite for the pre-calculus pathway. Students develop spatial sense and proportional reasoning through problems that involve rates, scale diagrams and relationships among similar 2-D and 3-D shapes and objects. Students develop logical reasoning skills and apply this to proofs and problems involving angles and triangles, the sine law and the cosine law. Students model and solve problems involving systems of linear inequality in two variables and explore characteristics of quadratic functions. Costs and benefits of renting, leasing and buying are explored and investment portfolios are analyzed.

### **FOUNDATIONS OF MATHEMATICS 120**

***Foundations of Mathematics 110** is a pre-requisite for this course. This course completes the **Foundations of Mathematics** pathway.*



This is the second of two courses in the Foundations of Mathematics pathway designed for entry into post-secondary academic programs not requiring pre-calculus. In statistics, students are introduced to normal curves, and learn to interpret statistical data, using confidence intervals, confidence levels, and margins of error. To develop logical reasoning students analyze puzzles and games, and solve problems that involve application of set theory and conditional statements. The validity of odds and probability statements are assessed and problems are solved that involve probability of two events, the fundamental counting principle, permutations, and combinations. The binomial theorem is used to expand powers of a binomial. Data is represented using polynomial functions, exponential and logarithmic functions and sinusoidal functions to solve problems.

### **PRE-CALCULUS 110**

*This course is a pre-requisite for **Pre-Calculus 12A**.*

This course, followed by later courses in Pre-Calculus and Calculus is designed for entry into post-secondary programs requiring Pre-Calculus. Students demonstrate an understanding of absolute value of real numbers, and solve problems that involve radicals, radical expressions, and radical equations. Students determine equivalent forms, simplify rational expressions, and solve problems that involve rational equations. They develop an understanding of angles in standard position ( $0^\circ$  to  $360^\circ$ ) and solve problems for these angles using the three primary trigonometric ratios. Polynomial expressions are factored and absolute value functions and quadratic functions are analyzed and graphed. Students solve problems that involve quadratic equations and solve, algebraically and graphically, problems that involve systems of linear-quadratic and quadratic-quadratic equations in two variables. They also solve problems that involve linear and quadratic inequalities in two variables, and quadratic inequalities in one variable.

### **PRE-CALCULUS A 120**

***Pre-Calculus 110** is a pre-requisite for this course, and this course is a pre-requisite for **Pre-Calculus B 120**.*

This course follows **Pre-Calculus 110** and precedes **Pre-Calculus B 120**. Students demonstrate and apply an understanding of the effects of horizontal and vertical translations, horizontal and vertical stretches, and reflections on graphs of functions and their related equations. They are introduced to inverses of functions, logarithms, and the product, quotient and power laws of logarithms and use these laws and the relationship between logarithmic and exponential functions to solve problems. Students are introduced to angles in standard position, expressed in degrees and radians, and to the unit circle. The six trigonometric ratios, and the sine, cosine and tangent functions are used to solve problems. First and second degree trigonometric equations are solved algebraically and graphically with the domain expressed in degrees and radians. Trigonometric identities are proven using reciprocal, quotient, Pythagorean, sum or difference, and double-angle identities.

### **PRE-CALCULUS B 120**

***Pre-Calculus A 120** is a pre-requisite for this course, and this course is a pre-requisite for **Calculus 120***

This course follows **Pre-Calculus A 120** and precedes **Calculus 120**). Students analyze arithmetic and geometric sequences and series to solve problems. They learn to factor polynomials of degree greater than 2, and to graph and analyze polynomial functions. They also graph and analyze radical, reciprocal and rational functions, building a function toolkit. Students are introduced to the concept of limits and determine the limit of a function at a point both graphically and analytically. They explore and analyze left and right hand limits as  $x$  approaches a certain value using correct notation, analyze the continuity of a function and explore limits which involve infinity.

## MUSIC COURSES

### **MUSIC 112**

**Prerequisite:** *success in the 9/10 Music Program or permission by instructor. Those who are participating in Rothesay High School performing groups such as Band, Choral are encouraged to take this course. Private students of piano, voice and other instruments may also apply.*

Course content: Emphasis will be placed on both the practical aspect of music such as singing and playing instruments, and the academic aspect such as theory, harmony, ear training, and music history. The aim of the course is to develop a well-rounded, knowledgeable and competent musician at the high school level.

### **MUSIC 122**

**Prerequisite:** **Students taking this course must have had success in Music 112. (Teacher recommendation required)**

As in Music 112, this course places emphasis on practical and academic aspects of music. It is an excellent choice for musicians who have a solid theory background as it extends musicianship into other topics such as Canadian music history, computers in music, composition, ear training and performance. This course is designed to be fairly student directed. Independent research and study will be expected.

### **PERFORMING ARTS 120**

Students will learn all aspects of performance (including stage, tech, lighting) whether it be vocal, instrumental or dance. They will have the opportunity to participate in the performing arts series and our musical to enhance those skills taught.

### **SONG AND SOCIETY 110**

This course is designed for beginner musicians and for students who enjoyed Grade 9-10 music but do not have the theoretical or practical background to take 112. This course focuses on both the practical aspect of music through playing an instrument and on the more theoretical aspect of music reading, basic theory, song writing and history. Many students who already know how to play guitar or piano by ear and learn how to read music find this course very useful.

## SCIENCE COURSES

In order to graduate, a student must have a minimum of one science credit.

### **AP BIOLOGY 120**

**Prerequisite:** *Biology 12*

AP Biology is an intensive course designed to be the equivalent of an introductory biology course taken in college. The emphasis is on developing an understanding of biological concepts rather than an accumulation of facts. The student should understand and appreciate the science of biology as a process

and a personal experience in scientific inquiry that develops their problem solving and critical thinking skills.

### **BIOLOGY 111/112**

*Prerequisite: Grade 10 Science*

Biology 111/112 is a laboratory oriented course that emphasizes the knowledge, skill, and STS (Science, Technology and Society) connections among the following topics: structure of cells, classification of living things, flow of matter and energy in organisms and biosphere, matter and energy exchange in digestive, respiratory, excretory and circulatory systems, blood and immunity.

### **BIOLOGY 121/122**

*Prerequisite: Biology 111/112*

Biology 121/122 is a senior level college preparatory course combining theory and lab work. Students should have a strong science background. Additional science courses, especially Chemistry 122 and Physics 112 would be helpful. Topics covered include: system regulatory change in human and other organisms, reproduction and development, chromosomes, genes and DNA, and change in population, communities and species.

### **CHEMISTRY 111**

*Prerequisite: Grade 10 science*

This course covers essentially the same topics as Chemistry 112. However, most topics are covered in greater detail and some topics are covered independently.

### **CHEMISTRY 112**

*Prerequisite: Grade 10 science*

This course is a college preparation course and is an entrance requirement for science related university courses as well as community colleges and nursing programs. The course will begin with a quick review of atomic theory and the periodic table of the elements, and then will go on to cover compounds, chemical reactions, the mole, stoichiometry, and an introduction to chemical bonding. This course has a large lab component that will familiarize students with lab safety, lab apparatus and a variety of laboratory techniques.

### **CHEMISTRY 121**

*Prerequisite: Chemistry 111*

This course covers essentially the same topics as Chemistry 122. However, each topic is covered in greater detail and more independent thought is required.

### **CHEMISTRY 122**

*Prerequisite: Chemistry 112*

This is the second Chemistry course in which science oriented students should enroll. In this course, the following sections will be covered: Organic Chemistry, Thermal Chemistry, Chemical Equilibrium (kinetics), and Acids and Bases. The labs associated with this program will be considerably more challenging. In addition, there are substantial theoretical and mathematical components to this course.

### **HUMAN PHYSIOLOGY 110**

Human Physiology is a class that focuses on learning how your body works and the intricacies of each system. This is done through projects, demonstration of learning, hands on learning, and

class activities. This class allows students to deepen their understanding at their level to meet the essential outcomes. There are no formal assessment in terms of tests and exams but will be showcasing of learning throughout the semester with a formal presentation of learning during the exam week.

### **INTRODUCTION TO ENVIRONMENTAL SCIENCE 120**

This is a one year college preparatory course. The major topics covered will deal with the structure of the environment, attitude towards the environment, the ecosystem, concept, natural resources, population, sustainable development and current environmental issues. The course includes lecture demonstrations, laboratory work, and field trips (where possible). Although there is no prerequisite, students who have taken, or are presently taking either a Biology or Chemistry course will find it helpful.

### **PHYSICAL GEOGRAPHY 110 / FI PHYSICAL GEOGRAPHY 110**

Physical Geography 110 is the study of the physical features of the earth and their effects on mankind. It examines the interaction among all components of the environment and emphasizes the relationship between the land and humanity. It examines climatology and meteorology and their impact on people. It is designed to develop an understanding of the basic principle of the geographic method that will enhance transferable skills. The course is based on the 9 big ideas of earth science (<http://www.earthscienceliteracy.org>) and incorporates concepts from the Stonehammer Geopark. This course is accepted for university entrance as a science elective.

### **PHYSICS 111**

*Prerequisite: Grade 10 Science*

This course covers essentially the same topics as Physics 112. However, each topic is covered in greater detail and more independent thought is required. Students are also required to do additional independent research.

### **PHYSICS 112**

*Prerequisite: Grade 10 Science*

This course is a college preparation course and is an entrance requirement for science related university courses as well as community colleges and nursing programs. This is the first of two Physics courses and it is recommended that all science-oriented students take both courses. The course will begin with a review of scientific notation, significant digits and the metric system. The following topics will then be covered: heat, waves, sound, light, optics, electricity and magnetism. There is a lab component to this course, and students will be expected to complete regular lab reports.

### **PHYSICS 121**

*Prerequisite: Physics 111*

This course covers essentially the same topics as Physics 122. However, each topic is covered in greater detail and more independent thought is required.

### **PHYSICS 122**

*Prerequisite: Physics 112*

This course consists mainly of the mechanics of one and two-dimensional systems. Topics such as motion, momentum, torque, work and force will be covered. There is substantial mathematical

component as trigonometry and quadratic equations are used in problem solving. This course contains a fewer number of labs than the grade 11 course, but each of the labs is much longer and more detailed.

## **SOCIAL SCIENCES COURSES**

### **AP PSYCHOLOGY 120**

The AP Psychology course is designed to introduce students to the systematic and scientific study of the behaviour and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice. This course is the equivalent of an introductory psychology course taught at the university level. Students will be required to do readings before the semester starts. Students who choose to write the AP exam may qualify for advanced standing or credit at university. Check with individual institutions for the AP policies.

### **CANADIAN HISTORY 122**

*Prerequisite: Modern History 111, 112 or FI equivalent*

This course involves the history of Canada from "who might have discovered America" to modern day Canada. The course is covered by a topical approach, such as American Revolution, Acadians, Loyalists, War of 1812, Rebellion of 1837, Confederation, Canada at War, Rediscovering Canada's past, answers to our present day problems through lectures, discussions, debates and films.

### **ECONOMICS 120**

Economics is the social science that investigates problems arising out of scarcity of limited resources to satisfy unlimited human wants. One of the major roles of an economist is to give advice to business and government on how to best allocate limited resources so that they can be used in the most productive and efficient way. There are several areas of concentration that are central to the study of economics which include: direct costs/opportunity costs, production-possibilities curves, the law of diminishing returns, economic systems (resource ownership and the decision process) the operation of a market (factors affecting supply, supplier response to price changes, changes in supply, the interaction of supply and demand, the supply and demand, the stock market, the futures market, the operation of a free market system, price elasticity of demand, price elasticity of supply, the impact of government intervention (price ceilings, rent controls, price floors, and taxation), government spending, sources of government revenue, federal/provincial financial arrangements, economic indicators (unemployment, inflation, gross domestic product, international trade, money and the Canadian chartered banking systems, the Bank of Canada, the money market, money policy, fiscal policy, types of business organizations in Canada, production costs, etc.)

### **FI MODERN HISTORY 112**

This is a Modern History course that allows the individual schools considerable flexibility in their choice of topics. The following topics are studied: the French Revolution, the Industrial Revolution, the clash of Nationalism; the unification of Germany and its effects, the Totalitarianism Challenge: the Communist Left and the Fascist Right, World War II and the Holocaust, Toward a Global Society; the continuing search for security and the emergence of the developing world.

### **FI WORLD ISSUES 120**

The need for an education that promotes a global perspective has become increasingly apparent of late. There is a growing awareness that many of the problems we face are global in nature and require a global solution. The issue of acid rain, deforestation, the Chernobyl incident, the October 1987 stock market crash serves to remind us that the events in any part of the world have a reverberating effect and therefore, it is essential we adjust our perspective to acknowledge this new reality. Phrases such as the “Global Village” and Spaceship Earth help promote a mental image which underlines this new perspective – this revolution in the way we look at our world. The purpose of the unit of study is:

- to acquaint students with these forces which have combined to create the Global Village
- to promote a greater knowledge of global dynamics
- to make students aware of the human choices, confronting individuals and nations within the global system

### **Indigenous Studies 120**

“Indigenous Studies 120 is designed to promote understanding of Wabanaki perspectives of life in the Maritimes, as well as to provide a lens to better understand Indigenous history, culture, and contributions across Canada—past, present, and future.” – Indigenous Studies Grade 120 course curriculum, implementation edition 2019

The content covered in this course is nuanced and deep. Students will be encouraged to reflect on cultural biases, prejudices, and discriminatory actions. They must be willing to listen to each other and express themselves with respect and understanding. The objective is to allow students to collaborate to find innovative ways to approach the learning objectives and explore avenues and opportunities for reconciliation with indigenous communities.

### **LAW 120**

This course is open to any Grade 11 or 12 student. It provides a general introduction to legal principles and concepts, both criminal and civil. The major topics covered are: courts, civil rights, contracts, torts, consumer protection, criminal law, labour law and family law.

### **MODERN HISTORY 112**

This is a Modern History course that allows the individual schools considerable flexibility in their choice of topics. The following topics are studied: the French Revolution, the Industrial Revolution, the clash of Nationalism; the unification of Germany and its effects, the Totalitarianism Challenge: the Communist Left and the Fascist Right, World War II and the Holocaust, Toward a Global Society; the continuing search for security and the emergence of the developing world.

### **MODERN HISTORY 113**

This is a twentieth century history course which surveys the following topics: basic world Geography, Industrialization, World War I, Life in the 1920's and 30's, World War II, The Holocaust, the Cold War, China in Revolution, and The Middle East.

### **POLITICAL SCIENCE 120**

This course begins by questioning the need for government. The advantages and disadvantages of government are presented. The major works of several political leaders such as Machiavelli, Hobbes, Locke, Rousseau, Tocqueville, Marx and others are introduced. Their major concepts, assumptions and propositions about government, society and human nature are examined. The role of democratic and dictatorial political institutions associated with the ideas of these political theorists is also examined. These include: an historical perspective of the decline of absolute monarchy and the rise of parliamentary supremacy in England and France, an analysis of constitutions and constitutionalism in Canada and the United States, a comparison of the Canadian executive (Governor General, Prime Minister and Cabinet) and legislative branch (House of Commons and Senate) of government of that of the executive branch (Presidency) and legislative branch (Senate and House of Representatives) of government in the United States, and an examination of the electoral process (nomination conventions, leadership conventions and the voting process).

The course involves a field trip to the Provincial Legislature in Fredericton and the participation of a number of guest speakers. These include political scientists from the academic community (university professors) and federal and provincial politicians (Members of Parliament and Members of the Legislative Assembly).

### **SOCIOLOGY 120**

This course will increase the student's awareness of themselves and others as social beings and of the social processes that shape the world in which they live. They will develop an awareness of the problems confronting contemporary society including crime, race/ethnic relations, urbanization and the increasing complexity of social life. This course would be of interest to those students whose interest is in careers such as business, law, nursing, teaching and social work.

### **WORLD ISSUES 120**

The need for an education that promotes a global perspective has become increasingly apparent of late. There is a growing awareness that many of the problems we face are global in nature and require a global solution. The issue of acid rain, deforestation, the Chernobyl incident, the October 1987 stock market crash serves to remind us that the events in any part of the world have a reverberating effect and therefore, it is essential we adjust our perspective to acknowledge this new reality. Phrases such as the "Global Village" and Spaceship Earth help promote a mental image which underlines this new perspective – this revolution in the way we look at our world. The purpose of the unit of study is:

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- to promote a greater knowledge of global dynamics
- to make students aware of the human choices, confronting individuals and nations within the global system

## **TECHNOLOGY COURSES**

**COMPUTER AIDED DESIGN 110** is designed to give students a solid knowledge base of drafting as well as to introduce them to the actual skills necessary to visualize and graphically represent design. The nature of the activities and the use of AutoCAD LT 2004 will interest a wide range of students beyond those preparing to pursue a career in the drafting/ technology/engineering areas.

**COMPUTER SCIENCE 110** teaches the fundamentals of structured programming and the program development cycle. Students will learn to use basic programming constructs to write simple programs using the Visual Basic programming language. More advanced topics, including graphics and animation, are also introduced. Computer Science 110 is recommended, but not required, as a prerequisite for Computer Science 120.

**COMPUTER SCIENCE 120** is recommended for students with a strong interest in computer programming. Students will learn the basic syntax of the Java language, program Java Applets and write simple programs using object-oriented design principles. The course provides a good foundation for students who wish to pursue a post-secondary program in computer science.

### **INTRODUCTION TO APPLIED TECHNOLOGY 110**

Introduction to Applied Technology 110 is designed to provide students with the opportunity to explore a broad range of technology applications in a multi-activity learning environment. Working cooperatively in pairs, students will complete between seven and eight units of study in a technology related area. Students will think critically and logically to evaluate situations, solve problems and make decisions relative to the area that is being studied.

**INTRODUCTION TO ELECTRONICS 110** allows the student to explore electron behavior in simple and complex circuits and to investigate its behavior in direct current devices under laboratory conditions. This course will also explore electronics, introducing basic electronic components such as diodes transistors, integrated circuits, inductors and capacitors along with basic electronic circuitry. Introductory Electronics will be of interest to students with career objectives in the electrical occupational area as well as those who plan to continue their education at the technical or engineering level.

### **MILL AND CABINET WORK 120**

This course is designed to provide for the acquisition of knowledge and the development of skills and work habits required to construct cabinets and built-ins found in a typical residence. Emphasis is placed on using and maintaining woodworking tools and machines. Students practice planning projects and doing cost and material estimates. The course should appeal to students interested in entering



construction and woodworking occupations or with a general interest in woodworking and for those exploring options for a future career choice.

