

Course Calendar

2014-2015

**ST. MALACHY'S
MEMORIAL HIGH SCHOOL**

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HOW TO Using the Course Calendar

This course calendar is used by current Grade 9, 10, and 11 students at St. Malachy's Memorial High School in choosing their courses for the upcoming school year. Use the chart below to determine which pages are relevant to you.

Current Grade	Page References
Grade 9	Students are enrolled in a common, compulsory and non-credit system. Credit courses may be obtained in Grade 10. <ul style="list-style-type: none"> • See page 6 for details on which credit courses might be available.
Grade 10	Students entering Grade 11 at St. Malachy's Memorial High School will be following a 5-credit semester, allowing the opportunity for a greater variety of courses and the opportunity to study a subject in greater depth. <ul style="list-style-type: none"> • Details of Graduation Requirements can be found on page 23 • Course Descriptions can be found on pages 7 - 21
Grade 11	Students entering Grade 12 at St. Malachy's Memorial High School will be continuing a 5-credit semester program. <ul style="list-style-type: none"> • Details of Graduation Requirements can be found on page 23 • Course Descriptions can be found on pages 7 - 21



Credit System

“How many credits do I need?”

A central component of the semester high school program is the credit system which applies to all grade 11 & 12 course offerings.

- The term *credit* describes a successfully completed course.
- **One credit** corresponds to approximately 90 instructional hours.
- All students are required to obtain **17 credits** in order to be eligible for High School Graduation in New Brunswick.

Please Note: Students must be aware that high school graduation does not necessarily mean acceptance to post-secondary institutions. See page 22 for full details of graduation requirements.

Course Codes

“What do the numbers mean?”

- The first two digits indicate the grade during which this course is usually taken.
- The third digit indicates the level of difficulty
 - 0 Only available at one level.
 - 1 Enriched university preparatory. These courses generally move at a faster pace and cover the content to a greater depth than the Level 2 course equivalents.
 - 2 Regular university and community college preparatory.
 - 3 Prepares a student to study some one-year courses at community college, and/or business college or to go directly to work.

Please Note: 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 Counselor regarding specific courses. Students planning to go to university or to study certain community college programs must select courses ending in either 1 or 2. Students should seek advice from the Guidance Department with regard to entrance requirements for specific programs.

Elective Courses

“Students' programs should be flexible and adaptable.”

- Elective courses are 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 curriculum such as science or technology.
- Elective courses selected will often depend on counseling from parents, teachers, guidance personnel, and administrators. Students who plan careers in engineering, for example, must have courses appropriate to the course of studies offered by the post secondary institution of their choice.
- A key consideration is allowing students as many educational options as possible.

Course Offerings

“Course requests are not guaranteed”

- The number of students choosing a course will determine whether or not it will be offered.
- Some courses may only be offered in one semester and not the other.
- All students should provide at least 2 alternative course selections on their course request sheet to ensure they get a complete timetable in September

Course Requirements

“Which courses can I do?”

- **Pre-requisites:** Pre-requisites are courses which **must** be completed prior to registration in your selected course.
- **Recommended Mark:** Recommended marks are meant to be used as a **guideline** for students, parents and guardians to use in order to make informed decisions on course requests. Recommended marks refer to course marks attained in a pre-requisite course.



The Advanced Placement Program
 “Passion, Energy and Quality Thinking”
 at
St. Malachy’s Memorial High School
An AP Capstone Diploma School

What is AP?

Advanced Placement is really two things:

- a program of advanced studies intended to allow high school students to work at a university entrance level.
- an international program offering standardized exams that allow students, if successful on the exam, to obtain university credits.

The Advantages of AP include:

- the opportunity to participate in a challenging program of studies.
- placement with highly motivated students with common interests, both in terms of the subject and in their desire for excellence.
- the opportunity to write an exam that could provide a university credit and advanced standing.

We offer AP programs in:

Art, Biology, Chemistry, English, French, Mathematics, European History, Physics

AP English Program

Grade 10 English 10AP (full year)
Grade 11 English 111 (full year)
Grade 12 English 121AP
 AP English 120

AP French Program

Grade 9 FI Language Arts 9
Grade 10 FI Language Arts10
Grade 11 FI Language Arts110
Grade 12 FI Language Arts120
 AP French 120

AP Capstone Certificate

Grade 10 AP Seminar
Grade 12 AP Research

AP History Program

Grade 10 Social Studies 10/FI Social Studies 10
Grade 11 Modern History 111/FI Modern History 111
 AP European History 120

AP Math Program

Grade 10 Math 10AP
 Foundations of Math 110
Grade 11Pre-Calculus 110
 Pre-Calculus 120A/B
Grade 12 AP Calculus 120 (full year)

AP Art Program

Grade 9 Visual Art 9
Grade 10 Visual Art 10
Grade 11 Visual Art 110
Grade 12 Visual Art 120
 AP Studio Art 120

AP Biology Program

Grade 10 Chemistry 111
Grade 11 Chemistry 121
 Biology 111
Grade 12 Biology 121AP
 AP Biology 120

AP Chemistry Program

Grade 10 Chemistry 111
Grade 11 Chemistry 121AP
 AP Chemistry 120

AP Physics Program

Grade 11 Physics 111
Grade 12 Physics 121AP
 AP Physics 120

Please note:

- 1) ***The AP track begins in Grade 10.***
- 2) ***AP exams are written in grades 11/12 in the month of May.***



AP Capstone

AP Capstone Diploma Program

St. Malachy's Memorial High School is *one of only ten* Canadian high schools, and the *only school in Atlantic Canada*, who will be piloting the new AP Capstone Diploma during the 2014-2015 academic school year.

What is AP Capstone?

- AP Capstone is an innovative diploma program that provides students with an opportunity to engage in rigorous scholarly practice of the core academic skills necessary for successful university completion.
- AP Capstone is built on the foundation of two courses - **AP Seminar** and **AP Research**- and is designed to complement and enhance the in-depth, discipline-specific study provided through AP courses.
- AP Capstone cultivates curious, independent, and collaborative scholars and prepares them to make logical, evidence-based decisions.

The Advantages of AP Capstone include:

- Fosters the **critical and creative thinking, argumentation, and research skills** that are at the core of university readiness and essential for lifelong learning.
- Provides a setting to build on the knowledge and rigorous course work of AP in an **interdisciplinary** format.
- Offers students a unique opportunity to **distinguish** themselves to colleges and universities.

Option 1: **AP Capstone Diploma**

4 AP Subject Courses* (Grade 11 & 12)
 AP Seminar* (Grade 10)
 AP Research* (Grade 12)

Option 2: **AP Capstone Certificate**

AP Seminar* (Grade 10)
 AP Research* (Grade 12)

AP Seminar - Course Description

Students will examine materials such as news stories, research studies, and literary works to craft arguments to support a point of view and communicate them effectively through the use of various media. Students will consider an issue from multiple perspectives, evaluate the strength of an argument, and make logical, fact-based decisions. Students will be assessed through a combination of individual and team projects and presentations as well as through a written exam.

AP Research - Course Description

Students will work with a mentor in order to explore an academic topic, problem, or issue that interests them and design, plan, and conduct a year-long research-based investigation to address it. The course culminates in an academic thesis paper of approximately 5,000 words and a presentation, performance, or exhibition with an oral defense; where you answer 3-4 questions from a panel of trained evaluators.

****Students must attain an AP grade of 3 or higher to be eligible for the diploma/certificate.***



Course of Studies Grade 9

	English	French Immersion (F.I.)
Full Year Courses	English 9 Math 9 Science 9 & 10	English 9 F.I. Math 9 F.I. Science 9 & 10
Semester Courses	Social Studies 9 French 9	F.I. Social Studies 9 F.I. Language Arts 9
Term Courses	All Grade 9 Students study each of the four specialty subjects for ½ of a semester. <ul style="list-style-type: none"> • Music 9 • Visual Art 9 • Broad Based Technology 9 • Physical Education and Health 9 	

Course of Studies Grade 10

	English	French Immersion (F.I.)
Full Year Required Course	English 10 OR English 10 AP	English 10 OR English 10AP
Semester Required Courses	Geometry Measurement and Finance 10 AND Numbers Relations and Functions 10 OR NRF and GMF Math 10 AP AND Foundations of Math 110 Social Studies 10 French 10	F.I. Geometry Measurement and Finance 10 AND F.I. Numbers Relations and Functions 10 OR F.I. NRF and GMF Math 10 AP AND F.I. Foundations of Math 110 F.I. Social Studies 10 F.I. Language Arts 10
Electives	Grade 10 students may select up to 4 semester elective courses. Some of these courses may be for credit. Students should select from the options listed below:	
Semester Elective Courses	<input type="radio"/> Music 10 <input type="radio"/> Visual Art 10 <input type="radio"/> Broad Based Technology 10 <input type="radio"/> Physical Education and Health 10 <input type="radio"/> Personal Development & Career Planning 10	
Semester Credit Courses	<input type="radio"/> Applied Technology AND Mill & Cabinet 120 (2 Credits) <input type="radio"/> Biology 111 or 112 (1 credit) <input type="radio"/> Chem 111 or 112 (1 credit) <input type="radio"/> Information Technology 120 FTT	



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Graduation Requirements

All students are required to obtain 3 credits in this subject area. All students must take an English 11 course (2 credits) and an English 12 course (1 credit). Students planning to go to university or to study certain community college programs must select courses ending in either 1 or 2. Students should seek advice from the Guidance Department with regard to entrance requirements for specific programs.

Required Courses Grade 11

All Grade 11 English courses are year-long. Students must select one of the following:

English 113

Prerequisite: English 10

Description: 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 continues emphasis on developing good sentence and paragraph writing skills, the long composition or report, writing summaries, spelling, punctuation, and syntax.

English 112

Prerequisite: English 10

Recommended Mark: 65%

Description: It is made up of two components, literature and writing. In the literature unit, students will study poetry, prose fiction and non-fiction, and a Shakespearean play. The writing section will concentrate on sentence and paragraph writing skills, the development of essay writing skills and strategies, the précis, the paraphrase, and the business letter.

English 111

Prerequisite: English 10

Recommended Mark: 75%

Description: English 111 is an enriched English course. It follows a pattern similar to that of English 112 but greater emphasis is placed on close reading of texts and academic writing. The course will move at a faster pace and engage students in a variety of activities.

English 111AP

Prerequisite: English 10

Recommended Mark: 80%

Description: AP English 111 is designed specifically for those students who want to prepare for AP English 121. It follows a pattern similar to that of English 111 and 112 but the demands are more rigorous. Greater emphasis is placed on close reading of texts and academic writing. The course will prepare students for the challenge of AP should they opt for it in Grade 12. Texts of increasing sophistication will be considered.

Elective Courses

Students having a specific interest in this subject area can also select from the following options.

Writing 110

Description: Writing 110 is an elective, academic course, challenging in its requirements, but flexible enough to accommodate the needs and interests of a range of students. Students will have opportunities to write in a variety of forms with relevant and varied purposes for real audiences and occasionally for themselves alone. The course has a flexible, modular structure. All students must complete the Introductory Module, which focuses on process writing. Remaining modules **must** include *at least one from Creative Writing* and *at least one from Expository Writing*, with the remaining choices left to the discretion of the teacher.



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Required Courses Grade 12

All grade 12 English Courses are semester-long. Students must select from the following:

<p><u>English 123</u> <i>Prerequisite:</i> English 113 or 112 <i>Recommended Mark:</i> 60% <i>Description:</i> 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.</p>	<p><u>English 121</u> <i>Prerequisite:</i> English 111 <i>Recommended Mark:</i> 75% <i>Description:</i> English 121 is an enriched English course, which builds upon the requirements of the English 122 college preparatory course. Its focus is on literature with particular attention being paid to close reading of texts, academic writing and an overview of the historical philosophical, social and other contexts, which influence literary development.</p>
<p><u>English 122</u> <i>Prerequisite:</i> English 112 or 111 <i>Recommended Mark:</i> 65% <i>Description:</i> The English 122 course is basically a literature course continued emphasis is placed on good writing skills, particularly those related to essay writing, The course is made up of three units: the novel; a study of poetry from the Eighteenth Century, Restoration period, the Romantic period, or the Victorian period; and the Shakespearean play.</p>	<p><u>English 121AP</u> <i>Prerequisite:</i> English 111AP <i>Recommended Mark:</i> 75% <i>Description:</i> Students opting for AP English 121 will obtain two grade 12 credits in English, one for 121 and one for the second semester portion of the course. The two halves of the course are intended to provide the equivalent of a first year university course in English Language and Literature. An essential element of the course is preparation for the AP exams. Two are written in English: English Language and Composition; English Literature and Composition. Success on AP exams can lead to advanced standing (a first year credit in English) at most universities in Canada, United States and at many other institutions around the world.</p>

Elective Courses

Students having a specific interest in English can also select from the following options.

<p><u>Canadian Literature 120</u> <i>Prerequisite:</i> English 111 or 112 <i>Description:</i> 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, twentieth and twenty first centuries reflects Canadian identity and how it is unique in world literature.</p>	<p><u>Theatre Arts 120</u> <i>Prerequisite:</i> English 10 <i>Description:</i> This course deals with the major aspects of theatre performance, including acting, interpretation, stage craft, play management, & theatre history. The course offers the opportunity to deal with both practical and theoretical issues as they relate to drama and theatre.</p>
<p><u>Reading Tutor 120</u> <i>Prerequisite:</i> English 112 <i>Recommended Mark:</i> 70% <i>Description:</i> Reading Tutor 120 pairs senior student tutors with struggling readers. Tutors receive a course credit while readers receive assistance meeting the outcomes for English Language Arts. The teacher coordinates the program, provides the tutor training, oversees the activities of the partners and offers support to both the tutors and the readers. Tutors select the reading materials and plan and implement the daily one-on-one activities. Tutors obtain valuable tutoring skills and develop useful interpersonal, organizational and problem solving skills.</p>	<p><u>Journalism 120</u> <i>Prerequisite:</i> English 10 <i>Description:</i> Journalism 120 provides students with intensive practice in writing and editing. Students learn to identify or generate story ideas, to gather pertinent information and to write and edit their stories with a view to publication. The activities accompanying preparation for publication engage students in creative skills such as writing, design, layout and photography, and in practical skills such as budgeting, meeting deadlines and working with others. Examining examples of journalistic style is an element of the course but writing for publication is the focus.</p>



MATHEMATICS

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Graduation Requirements

All students are required to obtain 1 grade 11 credit in Mathematics. Students planning to go to university or to study certain community college programs must select additional courses. Students should seek advice from the Guidance Department with regard to entrance requirements for specific programs.

Required Courses Grade 10

All Grade 10 Math courses are semester-long.

All Students must select both of the following courses unless they are selecting AP Math 10.

Geometry Measurement and Finance 10

Prerequisite: Math 9

Description: Using algebra, spatial reasoning and problem-solving strategies students explore a variety of topics related to financial mathematics and mathematics of shape and space. Unit pricing, currency exchange, income and credit options are explored in relation to student experience. The Pythagorean theorem, primary trigonometric ratios, and an understanding of angles and parallel and perpendicular lines are used to solve problems. Both the metric and imperial systems of measurement are used to explore the geometry of 2D and 3D shapes.

Number Relations and Functions 10

Prerequisite: Math 9

Description: This course lays the foundation for further work with algebra, relations and functions. The concepts and skills around factoring, square and cube roots, irrational numbers, powers, and the multiplication of polynomial expressions are explored and practiced. The relationships between numbers in data and graphical form are interpreted and explained with reference to concrete situations. Linear relationships are explored in detail – slope, ways to represent linear relationships, characteristics when graphed, algebraic and functional notation, calculations of distance and midpoint, and methods of solving systems of equations.

Required Courses Grade 11

All Grade 11 Math courses are semester-long. All students must select one of the following:

Financial and Workplace Mathematics 110

Prerequisite: GMF 10 and NRF 10

Description: 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.

Foundations of Mathematics 110

Prerequisite: GMF 10 and NRF 10

Description: 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.



MATHEMATICS

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Elective Courses

Students having a specific interest in mathematics or those seeking to fulfill entrance requirements for post-secondary study can also select from the following courses:

Pre-Calculus 110

Prerequisite: Foundations of Mathematics 110

Recommended Mark: 75%

Description: 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 and solve problems for these angles using the 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.

Foundations of Mathematics 120

Prerequisite: Foundations of Mathematics 110

Description: 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.

Financial and Workplace Mathematics 120

Prerequisite: Financial and Workplace 110 or Foundations of Mathematics 110.

Description: 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.

Pre-Calculus A 120

Prerequisite: Pre-Calculus 110

Recommended Mark: 75%

Description: 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.

Mathematics Department Course Offerings



Pre-Calculus B 120

Prerequisite: Pre-Calculus A 120

Recommended Mark: 75%

Description: 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.

Calculus 120

Prerequisite: Pre-Calculus B 120

Recommended Mark: 75%

Description: 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.

Current Mathematics Pathways

	AP	Post-Secondary Pathways		Minimum Graduation Requirement
		Science, Engineering, and Business (Pre-Calculus)	Most other university and college programs (Foundations)	
Grade 10	<ul style="list-style-type: none"> Geometry Measurement and Finance 10 Numbers Relations and Functions 10 Foundations 110 	<ul style="list-style-type: none"> Geometry Measurement and Finance 10 Numbers Relations and Functions 10 	<ul style="list-style-type: none"> Geometry Measurement and Finance 10 Numbers Relations and Functions 10 	<ul style="list-style-type: none"> Geometry Measurement and Finance 10 Numbers Relations and Functions 10
Grade 11	<ul style="list-style-type: none"> Pre Calc 110 Pre Calc A120 Pre Calc B120 	<ul style="list-style-type: none"> Foundations 110 Pre Calc 110 	<ul style="list-style-type: none"> Foundations 110 Pre Calc 110 (elective) 	<ul style="list-style-type: none"> Financial and Workplace 110
Grade 12	<ul style="list-style-type: none"> AP Calculus 120 	<ul style="list-style-type: none"> Pre Calc A 120 Pre Calc B 120 Calculus 120 (elective) 	<ul style="list-style-type: none"> Foundations 120 (elective) 	<ul style="list-style-type: none"> Financial and Workplace 120 (elective)



Advanced Placement Mathematics Pathway

Upon completion of Calculus 120 AP students have the option of writing the Advanced Placement Calculus AB exam.

AP Math 10

Prerequisite: Math 9

Recommended Mark: 80% and teacher recommendation.

Description: This course covers all content from Geometry, Measurement and Finance 10 and Algebra, Relations and Functions 10. Students will go on to study the Foundations of Math 11 course in Semester 2.

Foundations of Mathematics 110 – See description Pg. 9

The following 3 courses are specifically designed for Grade 11 students preparing for the Calculus 120 AP courses in grade 12.

Pre-Calculus 110 – See description Pg. 10

Pre-Calculus A 120 – See description Pg. 10

Pre-Calculus B 120 – See description Pg. 11

Calculus 120 AP

Prerequisite: Advanced Math with Calculus AP 120

Description: This is a full-year course 2-credit course.

Semester 1 topics include functions, limits, tangent and normal lines, derivatives, linear approximations, curve sketching, related rates, applied extrema problems, and other derivative applications. Semester 2 topics include slope fields, differential equations, integrals, area between curves, volumes of solids, and other integration applications.



<h1 style="margin: 0;">SCIENCE</h1>	SPR: Mr. Ryan Connors Ryan.Connors@nbed.nb.ca
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Graduation Requirements
 All students are required to obtain 1 credit in Science. Students may choose from the following courses:

- | | |
|--|--|
| <ul style="list-style-type: none"> • Physics 11 • Biology 11 • Chemistry 11 | <ul style="list-style-type: none"> • Introduction to Environmental Science 120 • Robotics & Automated Tech 110 (See page 20) • Physical Geography 110 (See page 15) |
|--|--|

Science Courses

All Science courses are semester-long. Students having a specific interest in Science or those seeking to fulfill entrance requirements for post secondary study can also select additional courses. Students may select from the following courses:

<p><u>Biology 113</u> <i>Prerequisite:</i> Science 10 <i>Description:</i> Biology 113 is intended for students who are interested in Biology, but do not require the rigour of Biology 112/111. Biology 113 is a blend of topics from grades 11 and 12 Biology and covers such topics as the study of life, simple organisms, human biology and human health. This course offers the opportunity to gain a more complete picture of the living world, its structure and how it functions. This course should offer a positive experience in which students develop a better understanding of themselves, appreciate the role science plays in their lives, and are encouraged to apply scientific skills and knowledge in the future.</p>	<p><u>Chemistry 112</u> <i>Prerequisite:</i> Science 10 <i>Recommended Mark:</i> 65% <i>Description:</i> In Chemistry 112 students 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, gas laws, stoichiometry, and an introduction to chemical bonding. This course has a large lab component, which will familiarize students with lab safety, lab apparatus and a variety of laboratory techniques.</p>	<p><u>Physics 112</u> <i>Prerequisite:</i> Science 10 <i>Recommended Mark:</i> 65% <i>Description:</i> Through lecture and lab components an introduction to Mechanics, Momentum, Energy and Waves will be explored. Describing the motion of objects requires understanding of position, displacement, velocity, and acceleration and the connection between them.</p>
<p><u>Biology 112 / F.I. Biology 112</u> <i>Prerequisite:</i> Science 10 <i>Recommended Mark:</i> 65% <i>Description:</i> In Biology 112 students study the cell as the basic unit of life, the diversity of organisms that make up the world's ecosystems, and several systems that allow multi-cellular organisms to maintain equilibrium with the outside environment. Through the lecture and lab components of this course the goal is to make students more aware of the tremendous impact of biology and technology upon society.</p>	<p><u>Chemistry 111</u> <i>Prerequisite:</i> Science 10 <i>Recommended Mark:</i> 75% <i>Description:</i> The Chemistry 111 curriculum is the same as the Chemistry 112 curriculum but the course is enriched which requires an increased depth of understanding and a greater development of investigative techniques rather than an increase in factual knowledge.</p>	<p><u>Physics 111</u> <i>Prerequisite:</i> Math and Science 10 <i>Recommended Mark:</i> 75% <i>Description:</i> The Physics 111 curriculum is the same as the Physics 112 curriculum but the topics of Kinematics, Dynamics, Energy and Waves will be explored in greater detail and require increased independent thinking and investigation. Students will be expected to have a strong mathematical background.</p>

Psychology 120
Prerequisite: Chemistry 11/ Biology 11: recommended mark of 75% or higher.
Description: Psychology 120 is a life-orientated course designed to give students the factual foundation in techniques, the vocabulary of psychology and a general understanding of human behaviour. This is a survey course which addresses the history of psychology, research methods and the application of psychology in the areas of sensation/perception, consciousness, learning, memory, cognition, motivation/emotion, development, and psychological disorders.



SCIENCE

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Introduction to Environmental Science 120

Prerequisite: Science 10

Description: Environmental Science is a one semester 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 lectures, demonstrations, laboratory work, and field trips.

Advanced Environmental Science 120

Prerequisite: Chemistry 11/ Biology 11: recommended mark of 75% or higher

Description: This course will allow for an exploration and better understanding of the history, science, context and methods inherent to the field, including research and experimental methods, in comparison to the introductory course. Using terrestrial, aquatic & human community systems as our background, issues relating to not only the human interaction with a given ecosystem will be covered, but the economic, social, cultural, & environmental impacts will be examined. Students will be required to complete a student-driven inquiry project in this advanced course.

Biology 122

Prerequisite: Biology 112

Description: In Biology 122, students focus on Biology at the molecular level. They study how organisms grow and pass along characteristics to future generations, and how this impacts living things at the species and population level. Additional systems are also studied that allow multi-cellular organisms to maintain equilibrium internally and with their environment. There is more emphasis placed on the study of biochemistry and the goal is to make students more aware of the tremendous impact of biology and technology upon society.

Biology 121(AP Option Available)

Prerequisite: Bio 111

Description: The Biology 121 curriculum is the same as the Biology 122 curriculum but is enriched which requires an increased depth of understanding and a greater development of investigative techniques rather than an increase in factual knowledge.

Chemistry 122

Prerequisite: Chemistry 112

Description: 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, acids and bases. The labs associated with this program will be considerably more challenging as students will be involved in the preparation and setting up of the labs. In addition there are substantial theoretical and mathematical components to this course, so students require a strong mathematics background to complete this course.

Chemistry 121(AP Option Available)

Prerequisite: Chem 111

Description: The Chemistry 121 course is enriched with further lab work. The labs associated with this program will be considerably more challenging as students will be involved in the preparation and setting up of the labs.

Physics 122

Prerequisite: Physics 112

Description: In Physics 122 students extend the study of mechanics from Physics 11 to include two dimensional motion. This extension requires a substantial mathematical component including a solid understanding of trigonometry and quadratics. The course will include the extension of dynamics to two dimensions, projectile motion, simple harmonic motion, universal gravitation and fields (electrical, magnetic, gravitation).
 * Both Physics 122 and 121 will provide a level of preparation for students entering post-secondary institutions specializing in engineering or science.

Physics 121(AP Option Available)

Prerequisite: Phys 111

Description: The enrichment of Physics 121 will include a deeper understanding and investigation into the concepts of dynamics in two dimensions, projectile motion, simple harmonic motion, universal gravitation and fields (electrical, magnetic, gravitation).

Biology 120AP

Prerequisite: Biology 121AP

Recommended Mark: 75%

Description: AP Courses are designed to be equivalent to a two semester college introductory science course. The class is conducted at the college level and students are expected to work accordingly. AP Science courses differ significantly from a traditional high school science course due to the content, depth of material covered, lab work, and time and effort required to achieve mastery in this subject area. Upon completion of Biology120AP, Chemistry 120AP or Physics 120AP students have the option of writing the Advanced Placement exam in May.

Chemistry 120AP

Prerequisite: Chemistry 121AP

Recommended Mark: 75%

Physics 120AP

Prerequisite: Physics 121AP

Recommended Mark: 75%



HUMANITIES

Graduation Requirements

All students are required to obtain 1 credit in Modern History. Students planning to go to university or to study certain community college programs must select courses ending in either 1 or 2. Students should seek advice from the Guidance Department with regard to entrance requirements for specific programs.

<p style="text-align: center;">Required Courses</p> <p>All Humanities courses are semester-long. Students must select one of the following:</p>	<p style="text-align: center;">AP History Option</p> <p>Students interested in AP must register for Modern History 111 and European History 120 AP.</p>
<p><u>Modern History 113</u> <i>Prerequisite:</i> Social Studies 10 <i>Recommended Mark:</i> 60% <i>Description:</i> Modern History 113 is designed to provide an understanding of the main events of the twentieth century, as well as some familiarity with basic skills used to interpret historical accounts. A survey approach is given to the following topics: Basic World Geography, Industrialization, Life in the 1920's and 30's, World War I, World War II, and the Cold War.</p> <p><u>Modern History 112</u> <i>Prerequisite:</i> Social Studies 10 <i>Recommended Mark:</i> 65% <i>Description:</i> Modern History 112 is a rigorous study of the evolution of the peoples of the West during the nineteenth and twentieth centuries and their widening involvements in global issues. The course describes the rise of nationalist and socialist movements, the international connections growing out of the World Wars and the Cold War era, and the widening global contacts of the contemporary world.</p> <p><u>Modern History 111/ F.I. Modern History 111</u> <i>Prerequisite:</i> Social Studies 10 <i>Recommended Mark:</i> 75% <i>Description:</i> Modern History 111 is an enriched, in-depth thematic study of Modern European History, examining the following revolutions: the Liberal Revolutions of 1848, the French Revolution, the Industrial Revolution, the Communist Revolution, and the National Socialist Revolution.</p>	<p><u>European History 120AP</u> <i>Prerequisite:</i> Modern History 111 <i>Description:</i> The current AP program in European history corresponds to the most recent developments in history curricula at the undergraduate level. Students are expected to demonstrate knowledge of basic chronology and of major events and trends from approximately 1450 to the present, that is, from the High Renaissance to the very recent past. In addition to providing a basic narrative of events and movements, the goals of the AP program in European history are to develop (a) an understanding of some of the principal themes in modern European history, (b) an ability to analyze historical evidence, and (c) an ability to analyze and to express an historical understanding in writing.</p>



HUMANITIES

Elective Courses

Students having a specific interest in the Humanities can also select from the following options:

Physical Geography 110

Prerequisite: Science or Social Studies 10

Description: Students undertake 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 principles of the geographic method.

Canadian Geography 120

Prerequisite: Physical Geography 110

Description: Canadian Geography 120 is a study of the ever changing cultural and physical landscapes of Canada and the interaction of the two. It examines physical systems and inter-relates these with man-made structures and systems. It involves environmental issues, which are currently pertinent to the lives of Canadians. Geographic understandings and skills are integrated throughout the course.

Hospitality and Tourism 110

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

Law 120

Description: Law is designed to give students knowledge of the law, the courts' changing trends, and the major changes the constitution has brought about. Origins of the Canadian legal system, criminal law, civil and human rights, torts/civil law, and contracts will be covered using case studies.

Sociology 120

Description: Sociology is the study of human group behavior. Topics covered include the nature of sociological analysis and its relationship with psychology, culture, personality formation, class structure, deviance and crime. Students will be given the opportunity to examine Canadian profiles and statistics and to experiment with different sociological methods inside and outside the classroom. A major term paper is required.

World Issues 120

Prerequisite: Social Studies 10

Recommended Mark: 60%

Description: World Issues 120 examines various issues that are global in nature and that require a global solution. The concept of the global village is studied as is the relationship between nations as players in the global community. Various issues are examined to acknowledge the fact that events in any part of the World have a reverberating effect. The future of the global community is also examined.

Canadian History 121/ F.I. Canadian History 121

Prerequisite: Modern History 111

Recommended Mark: 75%

Description: Canadian History 121 is a thematic study of Canada over approximately the last century. Themes examined include: constitutional (dilemma or identity), social (ethnic clash) and economic (economic nationalism versus economic internationalism).

Canadian History 122 / F.I. Canadian History 122

Prerequisite: Modern History 112

Description: Canadian History 122 is a study of Post-Confederation with an emphasis on the 20th century. The curriculum is organized by outcomes in four units: MacDonald Era, Expansion and Consolidation, Canada's Century Begins, New Challenges and New Ideas, Canada and the Global Community. There is emphasis on a selection of themes including English-French relations, First Nations, Continentalism, Regionalism, Canadian Identity and social themes which lead into the Post-Confederation study.

Political Science 120

Description: Political Science 120 is an introductory political science course designed to develop an understanding of various political ideologies and systems, as well as the ability to assess the merits of each and to make comparisons Contemporary political issues are also examined.

Economics 120

Description: Economics 120 provides a basic understanding of our economic system and how it works. The role of Canada's major economic institutions and how they interact is examined. It is designed to develop an understanding of the concepts and techniques needed for making economic decisions and to develop an awareness of the major economic problems and issues of the day.



FRENCH IMMERSION & LANGUAGES

SPR: Mr. Stephane Dupont
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French Immersion Graduation Requirements

All students are required to obtain 3 credits in French Immersion Subjects. All students must take a F.I. Language Arts 11 course (1 credit), a F.I. Language Arts 12 course (1 credit) and 1 additional course in French Immersion. Additional course offerings include:

- F.I. Modern History 111
- F.I. Individual and Family Dynamics 120
- F.I. Techniques de Communications 120
- F.I. Biology 112
- F.I. Foundation of Mathematics 110

Please note: Not all French Immersion Courses are offered every year and are dependent on student interest. Students should seek advice from the Guidance Department with regard to entrance requirements for specific programs.

Proficiencies and Certifications

- **Certificate of French Proficiency:** The requirements for this certificate are outlined in Policy 309. Students completing either F.I. Language Arts 120 or French 120 are eligible to complete the French Proficiency exam administered by the Province of New Brunswick.
- **French Immersion Certificate:** Students who complete the grade 9/10 FI program and continue with FI Language Arts 11 and 12 plus an additional F.I. Credit Course are eligible for this certificate.

Required Courses

All French Immersion courses are semester-long. Students must complete both:

F.I. Language Arts 110

Prerequisite: F.I. Language Arts 10

Description: 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.

F.I. Language Arts 120

Prerequisite: F.I. Language Arts 110

Description: This course emphasizes vocabulary building, writing and oral expression, literature, grammar and culture. All these aspects are examined in context using various resources, visual and auditory, a variety of contemporary written material, articles and novels from francophone regions. Emphasis is placed on oral proficiency and understanding; therefore, group work and communicative activities and projects are of great importance.

Elective Courses in French

Students having a specific interest in French language might also like to consider:

FI Techniques de Communications 120

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

Pre-requisite: FILA 110

AP French and Culture 120

Prerequisite: F.I. Language Arts 120

Description: This course prepares students for the AP French exam which consists of five different components. Students will refine their skills in oral and written communication, reading comprehension, grammar and listening. AP students may elect to complete the AP French exam in May in order to gain credit at post-secondary institutions in North America.



LANGUAGES

SPR: Mr. Stephane Dupont
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Graduation Requirements

The French language requirement for Graduation in the Province of New Brunswick is satisfied by the completion of the French 9 and 10 courses. Any further study would prepare students to take the French Proficiency Certification at the completion of any French 12 course.

Elective Courses

All Language Courses are semester-long. Students may select from the following:

Post Intensive French 110

Prerequisite: Post Intensive French 10

Description: Post-Intensive French 110) PIF 11 is a French course that emphasizes oral expression, reading, writing and contextual grammar. It is a continuity of PIF 9 and PIF 10. Students are expected to do an oral interview with their teacher at the end of the course instead of a written exam. The completion of PIF 11 and PIF 12 will allow students to take the oral proficiency interview in Grade 12 and to receive a level from the Oral Proficiency Scale of New Brunswick.

French 121

Prerequisite: French 111

Description: The course work includes all French 122 components plus extra independent assignments such as novel study, oral presentations and written assignments. Expectations (evaluation standards) of 121 students are higher than for 122 students.

French 122

Prerequisite: French 112/French 111

Recommended Mark: 65%

Description: This course is a continuation of and follows the general pattern of French 112. Course work includes novel study, class discussion, oral presentations and grammar study in context. This is the third year of the regular academic program.

Spanish 110

Prerequisite: French 10

Description: This course serves as an introduction to Spanish language and culture. It emphasizes communication in order to foster growth of the following language skills: listening, speaking, reading and writing. This course encourages the use of the language to allow the students to express themselves in various situations and to increase their cultural knowledge in order to promote an appreciation of Spanish culture.

Spanish 120

Prerequisite: Spanish 110

Description: This course serves as an extension of Spanish language and culture learning. It emphasizes communication in order to further develop the following language skills: listening, speaking, reading and writing. This course encourages the use of the language to allow the students to express themselves in various situations and to increase their cultural knowledge in order to promote an appreciation of Spanish culture.



HEALTH & PHYSICAL EDUCATION

SPR: Ms. Carrie Shea
Carrie.Shea@nbed.nb.ca

Graduation Requirements

Students must obtain 1 credit from the Fine Arts & Life Role Development cluster. Students may choose any of the following courses:

- | | |
|--|---|
| ○ Visual Art 110/120 (page 21) | ○ Individual and Family Dynamics 120 |
| ○ Outdoor Pursuits 110 (page 18) | ○ Theatre Arts 120 |
| ○ Music 11/12 (page 21) | ○ Wellness through Physical Education 110 |
| ○ Entrepreneurship 110 (page 20) | ○ Physical Education Leadership 120 |
| ○ Graphic Art and Design 110 (page 21) | ○ Co-Op Education 120 |
| | ○ Reading Tutor 120 (page 8) |

Elective Courses

Students having an interest in Health and Physical Education may choose from the following courses:

Wellness through Physical Education 110

Prerequisite: Health and Physical Education 10

Description: The goal of the Wellness through Physical Education Course is to promote healthy active living for life. The course is intended to encourage a broad-base exploration of a variety of activities, highlighting non-traditional approaches to fitness and wellness [e.g. yoga, hiking, ultimate frisbee, personal training, Tai Chi]. As a result this course will offer a range of learning experiences for students that encourage healthy active living, but are not sport specific

Nutrition For Healthy Living 120

Description: Through research, the science of nutrition continues to expand. It is important to understand information provided and to make smart, healthy decisions. Nutrition for Healthy Living 120 is designed to make students aware of preventative strategies to contribute to overall wellness, make healthy food choices and maintain a balance between eating habits and physical activity. Current issues relating to chronic diseases, lifestyles and food technologies will also be discussed. Students will be encouraged to use reliable information to examine their eating habits and lifestyle choices.

Individual and Family Dynamics 120(F.I. Option Available)

Description: Family Living 120 examines the Canadian family in its many forms and studies the issues that affect families during each stage of the Family Life Cycle. The overall aim of Family Living 120 is to provide students with the necessary knowledge, skills, and abilities to meet the challenges of our dynamic and complex society.

Outdoor Pursuits 110 (Grade 12 ONLY)

Prerequisite: Health and Physical Education 10

Description: This course will develop personal outdoor recreation skills based on environmental ethics. Students must complete a series of out-trips that may be day-trips, overnight excursions or extended trips. This course will take advantage of local outdoor access and could include camping, hiking, canoeing and other adventure activities. Students must be prepared to lead and evaluate out-trip experiences from personal and group dynamics perspectives.

Physical Education Leadership 120 (Grade 12 ONLY)

Prerequisite: SPR Approval and teacher recommendation.

Description: This course is designed 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. 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.



TECHNOLOGY & FINE ARTS

SPR: Mr. Ray O'Donnell
Raymond.odonnell@nbed.nb.ca

Graduation Requirements

Students must obtain 1 credit from the Fine Arts & Life Role Development cluster. Students may choose any of the following courses:

- | | |
|---|--------------------------------------|
| ○ Visual Art 110 and Visual Art 120 (page 21) | ○ Individual and Family Dynamics 120 |
| ○ Outdoor Pursuits 110 (page 18) | ○ Theatre Arts 120 |
| ○ Music 11 and Music 12 (page 21) | ○ Physical Education Leadership 120 |
| ○ Entrepreneurship 110 (page 20) | ○ Co-Op Education 120 |
| ○ Graphic Art and Design 110 (page 21) | ○ Reading Tutor 120 |
| | ○ Wellness through Physical Edu. 110 |

Proficiencies and Certifications

- **Certificate of Fine Arts:** This certificate is available to any student meeting criteria established by District 8.
- **FIT Certification:** Provides students with technology and business/entrepreneurial skills and essential workplace skills. Qualifying Courses include: Information Technology 120, Entrepreneurship 110, Technical Support 110, Business Organization and Management 120, Digital Technologies and Computer Science 110. Courses denoted by this symbol **FIT**
- **Woodlinks Certification:** International certification for any forestry related careers.

Computing Technology Courses

All Technology classes are semester-long.

Computer Aided Design 110

Description: This course is designed to give students a solid base of knowledge and skill in the drafting area. Through various activities, including sketching, board drawing and computer assisted drawing (CAD), students gain the skills necessary to both visualize and present ideas graphically. The universal nature of this form of graphic communication makes this course of interest and benefit to a wide range of students beyond those pursuing a career specifically in the drafting industry or technology/engineering areas.

Information Technology 120 **FIT**

Description: General technical competencies introduce students to the full range of ICT work and how it supports/facilitates all types of organizations in achieving their goal

Computer Science 110 **FIT**

Description: This course is essentially a study of computer languages. Structured computer programming languages are used to design and implement programs that will solve problems on a computer. The obtained skills will provide a foundation for further studies in computer science or related fields

Media Studies 120

Description: 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. Priority will be given to grade 12 students.

Computer Aided Graphics 120

Prerequisite: Computer Aided Design 110

Description: Primarily, this is an architectural drafting course with emphasis placed on the skills and techniques involved with Computer Aided Drafting. As well as spending considerable time on task at CAD stations, students will be involved with developing their planning, sketching, instrument drawing, and work organizational skills. Course content includes plot plans, floor plans, elevations and wall sections. Also included are an electrical and survey drawing unit. Students who seek employment in the drafting industry or who plan to study in post-secondary technology/engineering will benefit from this course.

Tech Support 110 **FIT**

Description: PC Hardware and Software curriculum provides an introduction to the computer hardware and software skills needed to help meet the growing demand for entry-level information and communication technology (ICT) professionals. The curriculum covers the fundamentals of PC technology, networking, and security, and also provides an introduction to advanced concepts.

Digital Production 120 **FIT**

Description: Digital Technologies 120 is a skills-based course designed for self-paced interactive learning. Students will study Web development, digital imaging, digital animation and digital audio. The skills that are developed will allow students to build complex Web and multimedia productions.



TECHNOLOGY & FINE ARTS

SPR: Mr. Ray O'Donnell
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Business Courses

All Technology classes are semester-long.

Business and Organization Management 120 **FTT**

Description: This course will allow students to work successfully for a small business by providing the students with skills in leadership, critical thinking, and problem solving. Canadian businesses will be the focus of the course, with an emphasis on business within Atlantic Canada whenever possible.

Entrepreneurship 110 **FTT**

Description: 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. Assessment is based on testing, written assignments, group work and oral presentations.

Introduction to Accounting 120

Prerequisite: Math 11

Recommendation: This course is designed for students who are planning to attend university or community college.

Description: 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.

Trade Technology Courses

All Technology classes are semester-long.

Introduction to Applied Technology 110

Prerequisite: SPR Approval

Description: This is a course aimed at students who wish to explore career opportunities in trades and technology. Students will explore modules consisting of: basic electrical and home maintenance, manufacturing, small gas engines, excavator simulation and occupational health and safety. There is limited enrollment and students will complete an application and an interview. NOTE: This will be offered in conjunction with Mill & Cabinet Grade 120.

Mill and Cabinet 120

Co-requisite: Introduction to Applied Technology 110

Description: This course will run in conjunction with Introduction to Applied Technology. Students will develop hands on skills in the field of cabinetry as well as studying theory behind various techniques involved with cabinetry, safety, fasteners, wood types, tool identification and use and careers.

Robotics and Automated Technology 120

Prerequisite: SPR Approval

Description: This is a course aimed at students who wish to explore career opportunities in engineering and technical trades. Students will explore areas of pneumatics, pressures systems, automation and robotics. Students will also maintain and modify a robot which may be used in robotics competitions. Students should have an aptitude for mathematics and science and will be required to complete an application process.

Co-Op Education 120

Prerequisite: In order to enroll in Co-operative Education, students entering Grade 12 must submit an application with references, and be screened by an interviewing committee. There is limited enrollment in this course.

Description: Co-operative Education is a two or three credit course. In addition to related theory and reflective learning classes, students will participate in work placements in the community. The purpose of this program is to provide students with exploratory experiences in a variety of work roles while also fostering personal responsibility, self-reliance, and teamwork. Students can take two courses up to a maximum of 6 credit hours.



TECHNOLOGY & FINE ARTS

SPR: Mr. Ray O'Donnell
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Fine Arts Courses

All Technology classes are semester-long.

Visual Arts 110

Prerequisite: Visual Arts 10

Description: Visual Arts 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. Students interested in this credit must have passed Grade 10 Art.

Graphic Art and Design 110

Description: Graphic design is the creative planning and presentation of visual communication to attract attention or communicate effectively. The course promotes the skills and knowledge that are necessary to understand and develop images, signs, symbols, logos, etc. that communicate a message or value. Graphic Design is an introduction to specialized training in critical thinking & creative visualization techniques while you learn skills such structure aesthetics and self reliance.

Music 111/112

Prerequisite: Music 9 & 10

Description: The course consists of three major outcomes that require students to demonstrate achievement in performing music, in the application of theoretical and aural skills and concepts, and, in understanding music in an historical context. The course lists a series of performance indicators that will assist in determining the course level.

History of Popular Music 120

Description: The role of popular music has a great influence on many aspects of society. This course is designed to understand the music you listen to and the role it plays in society. To understand these concepts, it is necessary to know where the music came from historically, how it was created, and where popular music is headed in the future.

Visual Arts 120

Prerequisite: Visual Arts 110

Description: Visual Arts 120 is designed for students who wish to pursue art related interests. 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.

Studio Art 120AP

Prerequisite: Visual Arts 120

Description: The Advanced Placement Studio Art course is for the highly motivated student who is seriously interested in the study of art at a college/university level. Students will develop a portfolio evaluated by the College Board according to their specifications. The AP student will work outside the classroom as well as in and beyond scheduled periods in order to accomplish his/her goals. Supplies and a fee (scholarship available upon need) for portfolio submission are needed for this class.

Music 120

Prerequisite: Music 111/112

Description: The Music 120/122 course is designed for the advanced and serious student of music who wishes to pursue the subject as an avocation or who may be interested in further studies at the post secondary level. The course assumes an advanced level of musical literacy, good aural skills, a sound theoretical background, knowledge of historical styles and forms, an interest in improving upon and expanding their areas of musical knowledge and expertise. Students may enter Music 122 by passing Music 111 or 112 or by having private study equivalent to grade 6 practical and grade 2 theory offered by the Royal Conservatory of Music or equivalent.



Alternative Options

Graduation Requirements

- Students may take up to two Challenge for Credit courses and one Independent Study for graduation purposes.
- Students may, in special circumstances, wish to pursue to Distance Education Courses in order to obtain specific courses for post secondary education.

Information and Online References

Independent Study

- Independent study may include;
 - A prescribed course in the province of New Brunswick as listed in the most current version of the High School Program of Studies.
 - A Topic or Theme that extends the curriculum of a prescribed course. (Submit school approved proposed courses to the department of education for review and coding)
 - A topic or theme chosen by the students including work that combined a number of disciplines.
- Further details can be found on the Department of Education Website
 - <http://www.gnb.ca> *SEARCH TERM: Independent Study*
- Interested Students should contact:
 - Mr. Brad Stevens or Mrs. Jennifer Craft by no later than:
 - June 1, 2014 for Semester 1 Courses
 - November 30, 2014 for Semester 2 Courses

Challenge For Credit

- Challenge for Credit is an opportunity to recognize prior learning and to acknowledge this through the granting for a credit(s). The opportunity to the challenge is consistent with a view of schooling that promotes and validates learning that takes place in a variety of circumstances including outside of school.
 - **Available to:** Any student currently enrolled in a New Brunswick high school, students who outside school have met all the learning, process, interpersonal, participation objectives or outcomes/ requirements of a course.
 - **Available in:** Any prescribed course in the New Brunswick public high school system in grades 11 and 12. Prescribed courses are listed in the most current version of the High School Program of Studies.
- Students apply in writing (with parents signature) to the principal prior to/or within two weeks of the beginning of a semester/year.

Distance Education

- 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.
- Please consult the SPR for Technology and the Guidance Department for more information.
- Please see the Distance Education Website for details and course offerings.
 - <http://www.gnb.ca> *SEARCH TERM: Distance Education*



Graduation Requirements: Grades 11 & 12

In the 20-credit system, students must:

- meet the requirements of the prescribed common curriculum of the 9/10 program as outlined in the grades 9/10 Companion Document (completing Information Technology outcomes satisfies Computer Literacy requirements).
- obtain a literacy credential by achieving a successful rating on the Grade 9 English Language Proficiency Assessment or Reassessment.
- attain 17 of 20 credits (including compulsory credits) as outlined in the High School Program.
- accumulate a minimum of 5 credits at the grade 12 level.

There are 7 compulsory credits.

- **5 credits are obtained as follows:**
 - *English grade 11 (2 credits);*
 - *English grade 12 (1 credit);*
 - *Foundations of Mathematics 110 OR Financial and Workplace Mathematics 110 (1 credit);*
 - *Modern History grade 11 (1 credit)*
- **1 credit must be in Science. Students can choose from;**
 - *Physics,*
 - *Biology,*
 - *Chemistry,*
 - *Introduction to Environmental Science 120,*
 - *Robotics*
 - *Physical Geography 110.*
- **1 credit must be from the Fine Arts/Life Role Development Cluster. Students can choose from:**

<ul style="list-style-type: none"> ○ Visual Arts 110 ○ Individual and Family Dynamics 120 ○ Music 11 ○ Co-op Ed 120 ○ Outdoor Pursuits 110 	<ul style="list-style-type: none"> ○ Theatre Arts 120 ○ Physical Education Leadership 120 ○ Graphic Arts and Design 110 ○ Entrepreneurship 110 ○ Reading Tutor 12 ○ Wellness through Physical Edu. 110
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- **10 Additional credits are chosen from the electives listed on pages 7 -20**

Graduation requirements for a student identified as being exceptional (as defined by the Education Act) may vary as documented in his/her Special Education Plan (SEP). Modification (MOD), and/or Individualization (IEP) must be indicated on the transcript. No such indication will appear on the diploma.



Guidance Department See Mrs. Currie and Ms. Craft for advice and resources for course selection and career planning.



Department Heads (SPRs) See any of the subject specialist SPRs for guidance on course levels and difficulty.



Resource and Methods Department. See Mrs. Champion, SPR of Student Services, for guidance on course requests for accomodated or modified curriculum.