**MIRAMICHI VALLEY HIGH SCHOOL**



**MIRAMICHI, NB**

**TELEPHONE: 627-4083**

**MINI-BROCHURE GUIDE**

**FOR COURSE SELECTION**

**2013-2014**

# GUIDANCE

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# types of Courses

There are two types of courses; Compulsory and Elective. Compulsory courses are required for graduation. Elective courses are available to support your interests and future career plans.

# Course Levels

All course names include a three-digit number. The first two digits indicate the grade; the third digit indicates the level at which the course is offered. Level 1 – enriched university preparation; Level 2 – regular university, community college and private training institution preparation; Level 3 – non-technical community college, private training and business college preparation; Level 0 – not offered at another level and will vary in level of difficulty. Some qualify for university entrance and others do not.

# Distance Education

A number of courses are offered through Distance Education (DE) and may be available to meet specific circumstances. Distance Education courses are offered on-line via the Internet and require a high degree of self-discipline and commitment to self-directed learning. For further information go to <http://www.gnb.ca/0000/as/dl-e.asp> or see your Guidance Counsellor. Courses in French Immersion are available as well.

# Honours

Honours averages for ranking for university are based on Grade 11 courses and first semester Grade 12 courses (to include English 12 or English 11 if English 12 is in the second semester, Modern History 11, Geometry and Applications 11, and 5 academic credits). Ranking is done only for averages over 75%.

# Award of Academic Excellence

This requires a student to have an average of 85% on the 10 credits they have taken in a single academic year. If a student is taking a level 1 or an AP course and achieves a mark of 85% or higher, one percent will be added to their average to a maximum of 3 percent. Grade 12 recipients of the Award of Academic Excellence will be identified at graduation. Recipients of the award in grades 9-11 will be recognized at a ceremony at the beginning of the next academic year.

# French Immersion Programs

To graduate as a French Immersion (FI) student recognized by the province of New Brunswick, students must take a required number of FI designated courses. Specifically, 50% of the course load in grade 9 and 10 must be FI designated. They must also take a minimum of 5 courses with an FI designation in grades 11 and 12.

Students who participate in the French Immersion program and complete French Immersion Language Arts (FILA) 11,FI Modern History 11, FILA 12 and Two other FI courses

Students may also receive a Bilingual Language Certificate upon graduation. To receive the certificate, students must pass an oral interview with an interviewer appointed by the province. When a student takes FILA 12, the interview will be arranged by the French Department and will be conducted as part of the course

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# FIT Certification

**Focus on Technology (FIT) Certificate**

The Focus on Information Technology (FIT) program is a nationally recognized certificate that is issued by ICTC. Students are required to take

* Information Technology 120,
* Business Organization and Management 120, and
* at least one elective course from the following: Entrepreneurship 110, Tech Support 110, Computer Science 110, and Digital Technology 120.

Graduates of the FIT program will have the benefit of a certificate that distinguishes them from other candidates when applying for employment and admission to post-secondary institutions.

The FIT certificate will be awarded with five different levels of certification.

* FIT Basic (courses only),
* FIT with experience (Co-op education, paid work, or volunteer experience of at least 200 hours),
* FIT with certification (IT Essentials, CompTIA A+, Microsoft Office Specialist),
* FIT with experience and certification, and
* FIT Plus (All requirements for FIT plus an additional industry standard including Cisco CCENT, Java, CompTIA Network+, or Microsoft Office Specialist).

# Locally Developed Courses

The New Brunswick Department of Education only allows a student to graduate with one Locally Developed course of their 17 credits to graduate.

# Course Changes

Students, with the help of parents, are encouraged to consider carefully their choices when selecting courses. Consideration should be given to the entry requirements of various post-secondary institutions as well as your career interests. To aid in this selection, teachers and guidance counsellors are prepared to help you to choose appropriate courses. Once all students have been scheduled, course changes are difficult to accommodate.

Requests for a course change due to a failure in June will be accommodated, if space allows, and if requested at that time. Requests for course change initiated once school opens in September must be submitted using a Guidance Request Form. These requests will be considered if supported by academic need, graduation requirements, post-secondary admission requirements and/or career direction providing there is available space in the course(s) requested

# Graduation Requirements

In order to graduate, you must complete the Grade 9-10 program and pass 17 out of 20 credits in Grades 11-12. Five of these credits must be Grade 12 courses. Of the 17 credits, seven are compulsory courses that you must take. The remaining ten are elective credits. The pass mark for all courses is 60%. You must also pass the English Language Proficiency Assessment administered during Grade 9.

# Compulsory Courses

English 11 ( 2 Credits)

Math 11 **(1 credit)**

Science **(1 credit)** (see list of options below)

History 11 **(1 credit)**

Fine Arts & Life Role Development **(1 credit)** (see list of options below)

English 12 **(1 credit)**

**4 Grade 12 Level courses**

6 other courses at any level

**Science Options Fine Arts & Life Role Dev. Options**

Physics Career Explorations 110

Biology Cooperative Education 120

Chemistry Entrepreneurship 110

Environmental Science Family Living 120

Physical Geography 110 Graphic Art & Design 110

Automotive Electrical Health & Physical Education 120

Systems 120 Music 112, 122

Outdoor Pursuits 110

 Reading Tutor 120

 Theatre Arts 120

 Visual Arts 110, 120

**TENTATIVE CURRICULUM OFFERINGS**

### ENGLISH

#### English 111 A

This is a course requiring above average ability, and achievement in English. The course deals with poetry, prose and drama with an emphasis on the writing process and oral communication. A compulsory examination is written in this course.

#### English 111 B

This course is a continuation English 111 A. It is a course requiring above average ability, and achievement in English. The course deals with poetry, prose and drama with an emphasis on the writing process and oral communication. A compulsory examination is written in this course.

#### English 121

This is a course requiring above average ability and achievement in English. The course deals with poetry, prose and drama with an emphasis on the writing process and oral communication. A compulsory examination is written in this course.

#### English 112 A

This is an academically orientated program concentrating on the novel and short stories. A compulsory examination is written in this course.

#### English 112 B

This course is a continuation of English 112 A. It is an academically orientated program concentrating on drama, the formal essay, and poetry. A compulsory examination is written in this course.

#### English 122

This is an academically orientated program concentrating on literature and writing skills. A compulsory examination is written in this course.

#### English 113 A

This is a general English program emphasizing reading development and basic writing skills. A compulsory examination is written in this course.

#### English 113 B

This course is a continuation of English 113 A. It is a general English program emphasizing reading development and basic writing skills. A compulsory examination is written in this course.

#### English 123

This is a general English program emphasizing reading development and basic writing skills. A compulsory examination is written in this course.

#### Writing 110

This is a course in developing writing skills through practice and workshop techniques with other students. It is designed for both the creative writers and for those who demonstrate a definite proficiency in the writing process. Much time is spent writing in class and focusing on using peer editors to encourage and guide “works in progress”.

#### Theatre Arts 120

This is an elective course that deals with the major aspects of theatre performance including acting, stage craft, play management and theatre history. Students are required to perform in public and must be prepared to memorize. \*Fine Arts/Life Role Development Option

#### Journalism 120

This course is designed for students to develop communicative skills, to learn the principles of journalistic expression and the practice of both. Journalism is a creative process involving such skills as design, layout, creative writing and photography. Students learn to identify or generate story ideas, to gather information pertinent to the stories and to write and edit their stories. An integral part of this program is the preparation of the school yearbook. This includes meeting deadlines, producing a viable product, selling and delivering the product (yearbook or newspaper). There may be two Journalism 120 courses per school year - one dealing with the yearbook (Semester 1) and the other with the newspaper (Semester 2 - if there is enough interest).

#### Reading Tutor 120

This course presents a unique opportunity for grade 12 English students who are well organized, independent and committed. Under the guidance of the instructor, tutors work on a one to one basis with students who are seeking to raise their reading level/improve their writing skills (may be teaching English to students from other cultures). Tutors learn basic reading theory and teaching techniques, and are 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 because the student depends on the tutor. 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 especially recommended for those planning careers in education, guidance, or the social services.

#### Debate 120

This course is designed to help students develop their logical thinking skills through debate. Students will be exposed to the three forms of debate and practice debating in each of these forms. Students will be required to research opposing sides of arguments, as well as perform impromptu debates on a variety of topics. Much oral work and research are expected. \*Locally Developed Course.

#### Canadian Literature 120

Students in this course encounter the characters, ideas, values and experiences that contribute to Canada's unique and global nature. The organizing center of the course is a series of seven units, four of which are compulsory: Canadian Identity; Historical and Literary Highlights; The Canadian Novel; Publication of a Class Literary Magazine. The remaining three may be chosen from the following: Literature from the Atlantic Provinces; New Brunswick Literature; Canadian Native Literature; Women in Canadian Literature; Canadian Humour; Canadian Drama; Canadian Poetry; The Canadian Short Story; The Canadian Essay.

#### Media Studies 120

This is a course that offers an introduction to the evolution and impact of mass media on the individual and society. The television/video unit is compulsory, accompanied by a choice of three additional units on advertising, film, print and electronic journalism.

The primary purpose of the course is to have students learn through experiment and exploration; the course is practical and activity based. Students enrolled in Media Studies 120 must be mature enough to meet the high level of independence, reliability and responsibility required of them.

#### Broadcast Journalism 120

Broadcast Journalism 120 is an enriched course open to selected students from the high schools in School District 16. This is a two-credit course available to students who are recommended by their English teachers. These students should be mature, independent learners with excellent communication skills who may be interested in a career in journalism.

Students will gain hands-on experience in writing, editing and producing news stories for an on-line newsletter and also for radio and television broadcast. Students will serve as reporters for the various schools and learning centers in District 16. They will be free to visit their assigned schools (with parental consent) to get information for a weekly newsletter, radio show and television production.

\*Locally Developed Course.

### SOCIAL STUDIES

#### Native Studies 120

This course is designed to promote understanding of the Micmaq and Maliseet perspectives on life in the Maritime Provinces. Using the text Maritime Native Studies, students will learn about language and culture, religion and spirituality, ancient times, arts and crafts, the land and the Micmacs of the Miramichi region. . This course offers a good look at the culture and lifestyle of the original Canadians. This course is open to all interested students. This is a university recognized credit.

#### Modern History 112

This is a compulsory course for academically orientated students dealing with the historical development of modem Europe since Napoleon and the French Revolution.

#### Modern History 113

This is a compulsory general history course dealing with events of the twentieth century.

#### Canadian History 122

This is an academic course of Canadian studies concentrating on the development of Canada since Confederation. This is a university recognized credit.

#### World Issues 120

This is an academic course that is sometimes accepted for university entrance. This course explores the idea that the world has become a global community with major obstacles to overcome. Students will compare the rich northern nations with the poor southern countries; study environmental problems; explore the Population "explosion"'; examine earth's depleting resources; plus look at current social and political issues.

#### Law 120

This is an academic course that is sometimes accepted for university entrance. It is taught as a university preparatory course. This course is designed to help students become more aware and appreciative of the law and how it applies to them. Students are expected to read and study related legal materials.

#### Political Science 120

This 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 (particularly with respect to the Canadian system). This is a university recognized credit.

#### Economics 120

This course 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 in making economic decisions and to develop an awareness of the major economic problems and issues of the day. This is a university recognized credit.

#### Physical Geography 110

This course provides a general introduction and includes such topics as: The Earth in Space, Measuring the Earth’s Size and Shape, the Biosphere, Earthquakes and Volcanoes, World Population Pattern, Protection of the Earth’s Environment and several units in meteorology. The course is particularly recommended to students planning to pursue university or college programs in forestry, geology, civil engineering, urban or rural planning or any field related to the mining industry.

#### Canadian Geography 120

This course is designed to provide an examination of the basic patterns of Canadian Geography, both physical and cultural. Students are encouraged to look for these patterns and relationships in order to develop an understanding of geographical concepts - like that of a region. This is a university accepted course.

**SOCIOLOGY 120**
This course will introduce students to the basic theoretical development and scientific foundation of this discipline. Students will develop the ability to examine social phenomena objectively and increase their understanding of the components and dynamics of social groups as they affect culture. Many interesting topics such as culture, socialization, deviance and social control, religion and social movements will be covered. Each student will be required to prepare and deliver a seminar to the class. Enrollment is limited to grade 12 students. We strongly recommend that a student has a mark of 70% or more in Grade 11 Modern History.

### MUSIC

#### Music 112

This course involves increased demands on ability of a major instrument, history and theory. NOTE: Participation in Concert Band and/or Jazz Ensembles is an element of this course. \*Fine Arts/Life Role Development Option

#### Music 120

This is a preparation course for university level music: performance, history and composition. There is a Band element also. Course selection is subject to approval. This is a university preparatory class. \*Fine Arts/Life Role Development Option

#### Elementary Music Methods 120

This is a “selective elective” course that teaches students the skills of planning, preparing, leading and evaluating music lessons to elementary children combined with a work placement at an elementary school.

Enrolment is limited to 18 and preference will be given to Grade 12 students. Students will be considered for this course by application and audition. \*Locally Developed Course.

### ART

#### Art 110

This course is designed to improve student skills and knowledge in a variety of areas: drawing, painting, color theory, sculpture, art history, sketchbooks. \*Fine Arts/Life Role Development Option

#### Art 120

This course is designed for motivated art students and those considering attending art school in the future. Studio projects will demand technical excellence and originality. Students will keep a sketch book and notebook and are required to supply some of their own materials. Art 110 is a prerequisite for Art 120. \*Fine Arts/Life Role Development Option

#### Graphic Art And Design 110

This course is designed to provide students with a basic understanding of design and layout which will foster confidence in their own abilities. Throughout the course students will be asked to take other individual ideas and requirements and make them visual and appealing using an assortment of hardware and software programs such as Adobe Photoshop, Adobe Illustrator and other photo manipulation tools to achieve desired effects with graphic images. Good attendance is extremely important in this course.

Students will work both independently and within groups to develop various graphic projects starting with fundamental progressing on through advanced procedures.

Areas of study will include:

 The History of Graphic Arts

 Elements of Visual Perception

 Principles of Visual Perception

 Composing the Image Optically

 Creating a Permanent Record

A basic understanding of file management would be an asset but not a necessity, as well as a willingness for the student to explore their creative side is beneficial. Students considering a career in a graphic arts related area would benefit greatly from this course.

An interest/ability in art and drawing is an asset.

\*\*Fine Arts/Life Role Development Option

### MATHEMATICS

**PRE-CALAULUS 110**

The elective course follows *Foundations of Mathematics 11*, and is the first course in the Pre-Calculus pathway that can be selected by students. This pathway is designed to provide students with the mathematical understandings and critical-thinking skills identified for entry into post-secondary programs that require the study of theoretical calculus.

**FINANCIAL AND WORKPLACE MATHEMATICS 110**

This is a compulsory course that meets the graduation requirement of ONE Mathematics course at the grade 11/12 level. This course will develop basic and practical skills that will ensure students develop basic life skills to deal with money, measurement, statistics, and basic number operations.

**Financial and Workplace Mathematics 120**

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.

***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.*

**FOUNDATIONS OF MATHEMATICS 11**

This course has the following pre-requisites: Geometry, Measurement & Finance 10 AND Numbers, Relations & Functions 10. This course is designed to ensure that students obtain the necessary foundation to pursue post-secondary programs that may require a Mathematical background. Upon completion, students may continue on to further study mathematics by enrolling in the Pre-Calculus 11 course. Otherwise, students will be able to take either the Workplace/Financial Mathematics 11 or Foundations of Mathematics 12.

**PRE-CALCULUS 12A**

This elective course follows *Pre-Calculus 110*, and is the second course in the Pre-Calculus pathway that can be selected by students. This pathway is designed to provide students with mathematical understandings and critical-thinking skills identified for entry into post-secondary programs that require the study of theoretical calculus.

***Pre-Calculus B 120*** *is a pre-requisite for this course.* ***Calculus 120*** *will be offered as a pilot at selected schools in February 2014, and will be implemented across NB in September 2014. Though not required as an entrance requirement for most math, science or engineering university programs, students may take it as an additional mathematics elective.*

**Calculus 120**

This is the last course offered in the Pre-Calculus Pathway, and follows *Pre-Calculus B 120*. The course will introduce derivatives of polynomial, trigonometric, inverse trigonometric, exponential and logarithmic functions, and the product, quotient and chain rules. Applications of derivatives will be explored including rates of change, increasing and decreasing functions, maximum and minimum values, optimization problems, concavity and the second derivative, curve sketching, indeterminate forms and l’Hopital’s Rule. Integrals will also be explored including interpretations, properties and numerical approximations of definite integrals, applications of integrals, and techniques and applications of antidifferentiation.

#### Stats Concepts 120

This elective course follows Geometry and Applications in Mathematics 112, and may be taken by students in grade 11 or 12.  Students will study the science of conducting studies to collect, organize, summarize, analyze, and draw conclusions from data.  The course will follow a similar layout to a first year university course and it is designed to help all students that will be required to take a university stats course for their degree.  It would be great for nursing, business, psych, engineering, sciences, etc.

\*Locally Developed Course

### SCIENCE

**Introduction To Environmental Science 120**

The objective of this course is for students to develop the knowledge base and skills for investigating/analyzing environmental issues while communicating their findings to others. The units of study are: 1) An Overview of Environmental Science [Issues and Populations];

2) Sustainable Development [Ecology, Environmental Awareness, Sustainable Ecosystems and Communities]; 3) Investigating Environmental Issues [Themed Project with a research paper, presentation and eco-challenge activities].

\* There will be a separate course where the theme is ‘Miramichi River – Watershed and Ecology’.

#### Biology 111

This course is designed for students who have a strong science background and are interested in pursuing a post-secondary education related to Biology. Subject material will be presented by lecture and students should have good organizational skills. Laboratory experiments require the ability to think critically and to solve problems using reason.

#### Biology 112

This is an introductory course based on four units of study. The principle emphasis is on energy, water, equilibrium and systems. The units of study are: 1. Biodiversity; 2. Energy Flows and Cellular Matter; 3. Energy and Matter Exchange by Human and Other Organisms; 4. Energy and Matter Exchange in Ecosystems; 5. Animal Kingdom; 6. Digestion, Circulation, Blood and Immunity and Respiration.

#### Biology 113

This is an introductory general interest course covering such topics as the cell, nutrition, animal tissues circulation, respiration, excretion, the nervous system, behavior, functional disorders, health, reproduction, immunity, genetics, drugs and alcohol.

#### Biology 122

This is a continuation of Biology 112. It is based on four units of study. The principal emphasis is on exchange, diversity, equilibrium, systems and models. The units of study are: 1. Systems Regulating Change in Human and Other Organisms; 2. Reproduction and Development; 3. Chromosomes, Genes and DNA; 4. Change in Populations, Communities and Species; 5. Protein Synthesis. (Biology 112 would be an asset and is recommended but is not a prerequisite.)

#### Biology 121

This course is designed for students who have a strong science background and are interested in pursuing a post-secondary education related to Biology. Subject material will be presented by lecture and is technical in nature requiring strong problem-solving skills. Laboratory experiments require critical thinking, sound reasoning and commitment to completion and success.

#### Chemistry 111

This is the first of a two-semester sequential course recommended for students who plan to pursue science/engineering courses at the university level. Students choosing this course have a genuine interest in science as well as an above average ability in mathematics. Students will be expected to engage in individual projects and research.

#### Chemistry 112

This is the first of a two-semester sequential course designed for students who plan to pursue nursing, medicine, science or engineering courses at the university level or similar technical programs at community college. Proficiency in science and mathematics is required. Level two mathematics is highly recommended.

#### Chemistry 122

This is the second of a two-semester sequential course recommended for students planning to pursue nursing, medicine, science or engineering courses at the university level or similar technical programs at community college. Prerequisite: Chemistry 112.

#### Chemistry 121

This is the second of a two-semester sequential course recommended for students who may be pursuing science or engineering at the university level. Students choosing this course have a genuine interest and a better that average ability in science and mathematics. The teaching method emphasizes laboratory experiences and teacher demonstrations. Students will be expected to engage in individual projects and research.

#### Physics 111 – offered 2nd semester only

This is a course designed for students who may be pursuing science/engineering courses at the university level. Students choosing this course should have a genuine interest in science and be taking enriched (level 1) mathematics. Students planning on writing the Advancement Placement exam must take this course.

Students choosing this course do not have to write the Advanced Placement Physics exam in grade 12.

#### Physics 121– offered 1st semester

This course is recommended for students who may be pursuing science/engineering courses at the university level. Prerequisite: Physics 111 or high honours in Physics 112. Students planning on writing the Advanced Placement exam must take this course and Science 122.

#### Physics 112- offered 2nd semester only

This is the first of a two-semester sequential course designed for students planning to pursue science/ engineering courses at the university level or who plan to enroll in a technical program at community college. Proficiency in science and mathematics is required. Level two mathematics is highly recommended.

#### Physics 122 - offered 1st semester only

This is the second of a two-semester sequential course recommended for students planning to pursue science/engineering at the university level or who plan to enroll in a technical program at community college. Prerequisite: Physics 112.

#### Science 122 – offered 2nd semester only

This is a one-semester course designed for students who plan to pursue science/engineering courses at the university level. Prerequisites for this course are the Chemistry and Physics courses outlined below. The course deals with the following topics:

1. Optics
2. Magnetism

 3. Fluid Mechanics

 4. Thermal Physics

 5. `Nuclear Physics

 6. Redox Reactions

 7. Electrochemical Cells

 8. Electrolytic Cells

### LANGUAGES

#### French 112/122

This is a two year sequential program for students with previous knowledge of French as a second language. It is designed to bring the student to a level of communicative efficiency useful in daily life in a French environment.

#### French Immersion Language Arts 110/120

This is a required course for French Immersion students where the development of the four language skills will be treated under vocabulary and oral expression/comprehension, literature, grammar, written expression and culture. This is required to graduate from the French Immersion program.

#### French Immersion Modern History 110

This is a French Immersion course for students taking Modern History. This is required to graduate from Immersion program.

#### FRENCH IMMERSION Physical Geography 110

This course provides a general introduction and includes such topics as: The Earth in Space, Measuring the Earth’s Size and Shape, the Biosphere, Earthquakes and Volcanoes, World Population Pattern, Protection of the Earth’s Environment and several units in meteorology. The course is particularly recommended to students planning to pursue university or college programs in forestry, geology, civil engineering, urban or rural planning or any field related to the mining industry.

#### French Immersion World Issues 120

This course 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. Accent will be placed on a project/research based approach in French. Pre-requisite French Immersion History 110 or equivalent.

### HEALTH AND PHYSICAL EDUCATION

#### Wellness through Physical Education 110

The aim of Wellness through PE 110 is to promote healthy active living for life.  The course goal is to explore a variety of activities highlighting non-traditional approaches to fitness and wellness.  As a result, the course offers a range of learning experiences for students that encourage healthy active living.  This course is intended to allow students the opportunity to be physically active, while further enhancing their decision-making skills towards personal wellness.  This course requires excellent participation and attendance in the 9/10 Physical Education programs as a pre-requisite.

#### Advanced Training Principles 110 (Fitness 110)

Health and physical education 110 is a course which develops and improves ones physical fitness level.  The course is designed for students to learn about training and the importance of physical fitness for life.  Daily training will include;  daily running, circuits, weight training, various fitness tests etc.

\*Locally Developed Course

#### Health And Leadership In Physical Education 120

This course is intended for students who wish to develop Leadership Skills in Community Programs for managing, teaching coaching and officiating. It involves selecting a volunteer Project in the community, on your own time (journal must be kept) and the course requires (one month) in the pool doing Water Safety and First –Aid Skills.

This course is based on team work. If you have the desire to work in a group setting towards helping others then this course is for you. This course requires excellent participation and attendance in the 9/10 Physical Education programs as a pre-requisite. \*Fine Arts/Life Role Development Option

#### Outdoor Pursuits 110

This course is a “selective-elective” with 9/10 physical education as a pre-requisite. The course will develop personal outdoor recreation skills based on environment ethics. Students must satisfy a requirement to complete a series of out-trips that may be day-trips, overnight or extended trips. The course will take advantage of local outdoor access and could include camping, hiking, canoeing and other outdoor adventure activities. Students must be prepared to plan, lead and evaluate out-trip experiences from personal and group dynamics perspectives by compiling a journal. Enrollment limited to 18 students per semester and preference is given to grade 12 students. Students must apply. \*Fine Arts/Life Role Development Option

#### Advanced Outdoor Pursuits 120

This is a follow-up to Outdoor Pursuits 110. It builds on the skills learned in the previous course. Enrollment is limited to 18 students per semester and preference is given to grade 12 students. Students must apply. \*Locally Developed Course

### TECHNICAL VOCATIONAL DEPARTMENT

#### Technical Support 110

This course is designed to introduce students to basic computer repair and maintenance. They will learn to safely work around computer equipment while learning parts of the computer. A major part of this course will encompass troubleshooting computers and building computers from parts. This course consists of both theory and “hands-on” components. This course would be a good introduction for those students who may wish to become a computer technician.

#### Networking Basics 110

This course is the first of four courses dealing with the design, construction, and maintenance of a home and/or small computer network. This introductory course concentrates on the building basic wired and wireless networks. Students will learn how to make network cables, configure home/SOHO routers and troubleshooting skills. Students who plan to enter the world of technology or business ownership after graduation should seriously consider taking this course.

#### Routers & Routing 110

This course is the second of four courses leading to CCNA certification. Students must have successfully completed Networking Basics 110 to be eligible to take this course.

#### Introducing Routing And Switching In Enterprise 120

This course is the third of four courses leading to CCNA certification. Students must have successfully completed Routers & Routing 110 to be eligible to take this course.

#### WAN/Designing And Supporting Computer Networks 120

This course is the last of four courses leading to CCNA certification. Students must have successfully completing Introducing Routing and Switching in Enterprise 120 to be eligible to take this course.

#### Introduction to Accounting 120

The focus of this course is to provide the essential understandings, economic framework, consumer skills and attitudes to successfully participate in a society influenced by financial and business decisions. Students will better manage personal finances understand obligations of business owners and make informed decisions concerning life careers and choices. The intention of this course is to encourage students to further their education in a Bachelor of Business Administration or Bachelor of Commerce program. This is a University recognized credit.

#### Accounting 120

This is computerized accounting. The pre-requisite is Intro to Accounting 120. Topics include but are not limited to receivables, payables, payroll, merchandising, cost accounting and banking.

#### Business Organization and Management 120

The course is designed to provide the student with skills in leadership, critical thinking and problem solving. Students will develop communication and collaboration skills while working on project based learning assignments. Through this course students will develop 21st century skills which will help students to become creative innovators who will be able to quickly adapt to an ever changing business environment. While students are engaged in their learning they will develop digital literacy skills. Main topics to be covered include Personal Finance, Ethics, Business Environment, Management, and Human Resources.

#### Computer Science 110

 This course is essentially an introduction to the computer language Visual Basic. It focuses on developing the knowledge, skills and attitudes to solve real world problems via computer programming. Specifically this course focuses on problem solving, technological competence and communication. This course will prepare the student to make an educated decision with respect to career opportunities at the post-secondary level.

#### Computer Science 120

This course will teach programming using the computer language Java in a Windows environment. This course may help students planning on taking Computer Science / Engineering at University or Community College. Computer Science 110 is highly recommended.

#### Information Technology 120

This course covers the use of MS Office 2007 (Word, Excel, Access, PowerPoint and Publisher) in depth. It is designed for students pursuing a post-secondary education in business.

#### Career Explorations 110

This is a two credit experiential course that offers a sequence of activities aimed at furthering the career exploration and career skill development of youth in Grades 11-12. Through a combination of in-school course work and out-of-school workplace learning experiences, students will explore personal characteristics, learn about and consider various career options and learn about the world of work. Students will develop essential skills, identify potential learning and career pathways and develop a self-directed school-career transition plan. Students will be considered for this course by application and/or recommendation. \*Fine Arts/Life Role Development Option

#### Cooperative Education 120

This course is open to all Grade 12 students who wish to acquire on the job experiences in an area in which they plan to further their education. Students have to apply in advance for this course, have acceptable grades, show maturity and have good attendance. Students will be considered for this course by application and interview. (This is a two-credit course.)

\*Fine Arts/Life Role Development Option

#### Multimedia Design 120

The course consists of hands-on computer instruction in writing, storyboards, video production, editing, designing, and printing, using programs like Adobe Premier and MGI Video Wave. Students will follow the course through the history of Multimedia Design, looking at the different formats including MPEG, AVI., and MOV to name a few. Study will include capturing and editing digital video as well as editing and adding sound.

Students will also study Webpage design including animation gifts and graphics including JPG. and GIF . In addition, other software packages like Adobe Photoshop, Adobe Illustrator, and Fruityloops will be examined. The course will conclude with a final multimedia project of the students own design. \*Locally Developed Course.

#### Computer Aided Design 110

This course is designed to assist students in understanding the relevance and importance of Computer Assisted Drafting and Design as it related to industry today. Students will use the widely popular AutoCAD program where skills in creating 2D drawings will be the focus. Students will be expected to become familiar with the various procedures required to complete technical drawings that include Isometric Drawings that allow for the creation of 3D drawings and Orthographic Projection Drawings that are used to illustrate floor plans, wall sections and elevation drawings. It will be important that students understand X, Y coordinates as well as Polar Co-ordinates. This course will be worthwhile to students considering the Civil Technology Program at NBCC or other related programs, as well as Bachelor of Science in Engineering or related courseware.

#### Drafting – Computer Aided Graphics 120

Students selecting this course are strongly encouraged to first complete Computer Aided Design 110. This course is designed as a continuation of the material previously covered in the 110 course. Further exploration of 2D principles will be visited, in addition to a number 3D modeling procedures. This course will progress to include X, Y and Z Co-ordinates and rendering. As aptitude for 3D space will be needed and/or developed. Students considering 3D Games or Animation at the NBCC might strongly consider this course. (Prerequisite: Computer Aided Design)

#### Entrepreneurship 110

This is course in the study of the skills involved in owning and operating a small business. Students will be required to work in small groups to plan and operate a business venture. \*Fine Arts/Life Role Development Option

### INDUSTRIAL

**These courses are open to all students. Marks are based on attitude, work habits, attendance, major tests and project work and in some cases, exams. Female students are welcome to take these courses**.

#### Internal Combustion Engines 110

This is a course designed to introduce the basics in the repair, overhaul, service and testing of the internal combustion engine. The theory of operation of the engine and its components is emphasized along with the development of manipulative skills and work habits.

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#### Power train and Chassis 110

This is a course designed to introduce the basics in the service and maintenance of the automobile chassis and power train.

#### Automotive Electrical Systems 120

This is a course designed to introduce the student to the theory of operation and basic service of the automotive electrical systems. The students will study the function of electrical system components and practice basic service procedures. Suggested Pre-requisite: Internal Combustion Engines 110. This course meets the Science requirement for graduation.

#### Tune up And Emissions 120

This is a course designed to provide students with a practical approach to diagnosing, servicing and repairing of automotive fuel and emission systems and to performing engine tune-ups. Suggested Pre-requisite: Internal Combustion Engines 110 and Automotive Electrical Systems.

#### Framing and Sheathing 110

This course combines classroom instruction with hands-on activities to develop the skills and knowledge associated with the framing in or shell construction of a typical single family dwelling. Lab safety as well as hand tools and equipment safety will be emphasized. There is a final exam in this course but exemptions do apply.

#### Mill And Cabinet 120

This is a course designed to introduce students (through classroom instruction and hands-on activities) to the materials and processes involved in the manufacturing and installation of cabinets and interior finish components found in a typical house. Lab safety as well as hand tools and equipment safety will be emphasized. There is a final exam in this course but exemptions do apply. (Suggested pre-requisite: Framing & Sheathing 110)

#### Residential Finish 120

This course examines the work required to finish a family dwelling once it is framed-in. Topics covered include insulation, wall cladding, doors, windows, cornice trim and roof covering. Students will study these topics both in theory and through practical project work. This course should be of interest and value to those students interested in pursuing a career related to the residential construction industry.

#### Metals Fabrication 110

This is a practical course involving both classroom and lab activities. The methods of fabricating and fastening components will be explored as will gas and electric welding, oxy-acetylene cutting, brazing and soldering through the completion of compulsory projects. Lab safety as well as hands on tools and equipment safety will be emphasized. There is a final exam in this course but exemptions do apply.

#### Metals Processing 110

This is an introductory course involving classroom instruction and hands-on activities relating to industrial practices in the metals industry. Includes bench work, basic machine work, lathe operation, drill press and other machines. Lab safety as well as hands on tools and equipment safety will be emphasized. There is a final exam in this course but exemptions do apply.

#### Introduction to Applied Technology 110

Students will complete a series of projects from the areas of Woodworking, Motor Mechanics, Plumbing, Drywall Repair, Electrical,  Manufacturing and Construction. All projects will be done in groups except for woodworking.

### FAMILY STUDIES

#### Culinary Technology 110

This is an entry level hands-on food service training course. Culinary skill sets include: industry organization, standards, safety and sanitation, use of tools and equipment, and food preparation. Students will study the theory of each skill and then practice those skills through enterprise activities in the student operated Culinary Café.

#### Culinary Technology 120

This is a more advanced course in food preparation and technology.

#### Early Childhood Services 110

This course helps students prepare for a career in teaching and/or in child care. Students work in a group setting where they will be involved in planning curriculum, preparing lessons, organizing schedules required in the operation of a playschool for preschoolers. The student will learn practical skills for guiding children as they establish rules and handle daily activities. This is an independent course where self motivation/direction is required. Attendance is critical.

#### Early Childhood Services 120

This is a more advanced course on child and daycare services.

**INDIVIDUAL AND FAMILY DYNAMICS 120**

Students will see the connections made between the course content and their personal development and relationships. This curriculum will help prepare them to have a better understanding of themselves, their family and the world around them. Individual and Family Dynamics 120 touches on aspects of sociology, psychology, economics and anthropology. The knowledge and skills presented in the course will benefit students who may wish to pursue fields of study such as: law enforcement, social services, family law, careers in counseling, psychotherapy and family medicine.

#### Housing And Design 120

This course is designed to interest the student in the Canadian housing industry, interior design, construction and real estate.

#### Child Studies 120

This course is an in depth study of children from conception to school age (6). Learning about children and their development can improve your understanding both of children and yourself. It can also help you think about your future in relation to parenthood and career choices.

#### Fashion Technology 110

This course focuses on the present day fashion, textile and apparel industry.  Students will acquire introductory sewing skills, advanced sewing skills and use of current sewing machine technology.  Creativity and individual style can be developed and experienced through a variety of sewing projects of the student’s choice.   Students will explore the textile industry through the art and science of fabric design.  Entrepreneurship will be fostered through the development of a student directed business providing a variety of sewing skills.  Mending, repairs, alterations, and hemming are some of the skills that will be provided and mastered.  This is a practical course providing all students with the opportunity to develop sewing skills regardless of skill level.

#### Fashion Design 120

This course provides students with the opportunity to acquire introductory sewing skills or equally expand and develop advance sewing skills if desired.  Fashion illustration and the fashion design process will occur through the application of the elements and principles of design.  These elements and principles will be applied to fashion design, merchandising and marketing, fashion photography and fashion show production.  Additional units may involve a detailed focus on Fashion Photography, Merchandising, Extreme Fashion Design, Fashion Show Production and Optional Advanced Sewing Skills.  This is a practical course open to all skill levels.

#### Tourism 110

In this course students will be introduced to the Hospitality and Tourism Industry, particularly in the Atlantic tourism region. They will learn the

workplace skills, knowledge, attitudes and marketing strategies for this industry, as well as safety skills. Various career paths for this industry will be explored.

#### Nutrition For Healthy Eating 120

This is a university level course. This course is excellent for those concerned with personal wellness or for students who wish to pursue a career in Science and Nutrition, Nursing, Dietetics or the Social Sciences.

Nutrition for Healthy Eating 120 is designed to help students understand information to help make them healthy choices. They will become aware of strategies that contribute to overall wellness and strategies needed to maintain a balance between eating habits and physical activity. The roles of nutrients in the body-digestion, absorption, transportation of nutrients and metabolism are explained. Chronic conditions, lifestyles and food technologies will be discussed. Students will be encouraged to use reliable information to examine their eating habits and lifestyle choices.

#### Human Services 110

This course will focus on the skills needed to prepare you to work with the elderly and the handicapped, whether they are institutionalized or being cared for in their own home. The overall aim of Human Services is to increase your awareness of the importance of human service work and to prepare you for the future employment and/or post-secondary education. You will learn practical skills needed to work with and care for special needs students through participation in activities with students in our school.

*Pathways and Courses*

The graphic below summarizes courses offered in three pathways

 ( *= required for graduation*)

**Mathematics K-9**

***Grade 10***

* *2 x 90 hr courses; required to pass both*
* *May be taken in any order or in the same semester*

**Number, Relations and Functions 10** (1069527)

**Geometry, Measurement**

**and Finance 10** (1069027)

***Grade 11***

* *3 x 90 hr courses offered in 3 pathways*
	+ *Students are required to pass at least one of “Financial and Workplace Mathematics 11”*

***or*** *“Foundations of Mathematics 11”.*

* *Pre-requisite Grade 10 course(s) must be passed before taking Grade 11 courses.*

**Pre-Calculus 11**

**Foundations of Mathematics 11**

**Financial and Workplace Mathematics 11**

*Pre-requisites:*

*Geometry, Measurement and Finance 10*

 *AND Number, Relations and Functions 10*

*Pre-requisite:*

*Geometry, Measurement and Finance 10*

*Pre-requisite or Co-requisite:*

*Foundations of*

*Mathematics 11*

 **OR**

***Grade 12***

* *5 x 90 hr courses offered in 3 pathways*
* *Pre-requisite Grade 11 or Grade 12 course must be passed before taking Grade 12 courses.*

**Foundations of Mathematics 12**

*Pre-requisite: Foundations of Mathematics 11*

**Pre-Calculus 12A**

**Financial and Workplace Mathematics 12**

*Pre-requisite: Pre-Calculus 11*

*Pre-requisite: Financial and Workplace Mathematics 11*

**Pre-Calculus 12B**

*Pre-requisite: Pre-Calculus 12A*

*Pre-requisite: Pre-Calculus 12B*

**Calculus 12**

## SUMMARY

The Conceptual Framework for Grades 10–12 Mathematics describes the nature of mathematics, the mathematical processes, the pathways and topics, and the role of outcomes and achievement indicators in grades 10–12 mathematics. Activities that take place in the mathematics classroom should be based on a problem-solving approach that incorporates the mathematical processes and leads students to an understanding of the nature of mathematics.