**Dalhousie Regional**

**High School**

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| **GRADE 11 and 12****Registration Guide****2021-2022** |

**Nine-tenths of wisdom consists of being wise in time.**

**Teddy Roosevelt- Speech, 1917**

Introduction

This course registration guide, for students entering grades 11 and 12, is designed to assist you in selecting courses that will meet the New Brunswick High School Graduation requirements and to choose courses that will reflect your future learning and career goals. Students have the opportunity to choose from a wide variety of courses and programs that lead to success in post-secondary studies and in the workforce.

This guide has been developed to assist parents and students to make informed decisions in regards to high school course selection. It also includes graduation requirements, second language proficiency levels, course listings, course descriptions and various options for students. Parents and students should contact the school’s guidance counselor to address any concerns or questions regarding course selection.

The guidance counselor will provide students with direction and information, and will assist students with the course selection process. Students should take every opportunity to discuss course options and requirements, as well as post-secondary options and career plans with their parents, guardians, teachers, and the school’s guidance counselor.

Courses are selected online by student, with the assistance of the Guidance Counselor, in late March/early April. This is done following a classroom presentation by the guidance counselor.

**General Information**

**Types of Courses**

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

**Course Levels**

All course names include an additional three digits. The first two digits indicate the grade designation (11 or 12); 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 technology preparation; Level 3 – non-technical community college, private training and business college preparation; Level 0 – will vary in level of difficulty, some qualify for university entrance and others do not. As a general rule, courses designated as grade 11 are meant for students in their third year of high school and courses designated as grade 12 are meant for students in their fourth or graduating year. Students are encouraged to consult their teachers and guidance counselor regarding course levels.

**Choosing a Level 1 Course**

If you are a student who demonstrates the following characteristics, you will be given first consideration for placement in a Level 1 course:

1. You have a strong work ethic.
2. You have demonstrated that you have the skills to work independently.
3. You have a high standing in the previous corresponding course.

Pre-requisites

Many courses have prerequisites, co-requisites or recommended prerequisites. Please read the course descriptions carefully prior to course selection. Students without the required prerequisites will not be allowed to enroll in the course. Example, Chemistry 112 is required prior to attempting Chem.122.

Course Load

Students are required to take a full course load in each semester (5 courses) and must attempt 20 credits to be eligible to graduate. The successful completion of 17/20 courses is required for graduation (see Graduation Requirements).

Challenge for Credit/Independent Study

For students in Grades11 & 12, opportunities exist to allow students to earn additional credits through Challenge for Credit and/or Independent Study options. Challenge for Credit is an opportunity to recognize prior learning and to acknowledge this through the granting of a credit(s). Pilot and local option courses are not eligible for challenge. See the principal and/or guidance for complete application procedures.

Independent Study is meant to encourage students to take more responsibility for their learning. This program is intended to enrich the learning experience of students. Only one Independent Study may be applied for and the onus is on the student to arrange for the project to be supervised by a teacher. It will require several weeks for this process to be complete; therefore, students are urged to begin the process quite early.

Certificate of French Language Proficiency

The Certificate of Oral Proficiency is issued by the Department of Education to students who take a Grade 12 French course. An interview is conducted by an external person to determine the level of oral competence.

Certificate of Immersion

A Certificate of Immersion will be issued to students who have successfully completed the Immersion program at the end of Grade 12. Note: Students transferring from Francophone schools may not register in Immersion programs at the senior high level.

**Distance Education**

A number of courses are offered through Distance Education and may be available to meet specific circumstances. Student approval and any final decisions are made by the administration. A complete list is available at:

<https://www2.gnb.ca/content/gnb/en/departments/education/k12/content/anglophone_sector/elearning/distance.html>

**External Credits**

Any credit not issued by a New Brunswick high school must be reviewed and evaluated by the Department of Education. This would include correspondence courses, home schooling and private agency instruction. In all cases, prior permission must be obtained to enroll in external credits if they are to be used for graduation purposes.

**Course Changes**

Students, with the help of parents and the school’s guidance counselor, are encouraged to make careful and wise choices when selecting courses. Consideration should be given to the entry requirements of various post-secondary institutions that you may be interested in. To aid in the selection process, the school’s guidance counselor will advise students in making appropriate course selections. Please note that once all students have been scheduled, course changes are difficult to accommodate.

Remember that the number of classes in each subject area depends upon the number of students electing that course each spring. When you register for a course, the school considers this a commitment by you to honour this choice with regular attendance and completion of the course.

The school can provide three occasions when you may adjust your course selections:

1. End of June – After marks are received – changes based on failures.
2. Early August – Changes based on Summer School results.
3. January- If you should fail a course in the first semester, every attempt will be made at the start of the second semester to permit you to repeat a **compulsory** course failed. You may also need to select another course if you failed a prerequisite for second semester. This is always subject to availability of space.
4. **Please note:** *Once a semester begins, course changes are very difficult to make. Care should be taken in choosing courses*.

**GRADUATION REQUIREMENTS for NB HIGH SCHOOLS**

***17 CREDITS (including compulsory credits) are required.***

* ***7 credits of the 17 courses, are compulsory****. See the following list.*
* ***English*:** English 111, 112, 113 (parts A & B)
* ***English*:** English 121, 122, 123 (***one*** of these) This is a semester course and counts as 1 credit
* ***Mathematics*:** Foundation of Mathematics 110 ***or*** Financial and Workplace Math 110
* ***History*:** Modern History 112 or 113 or FI Modern History 110
* ***Science*** (one credit from the following): Biology 112, Human Physiology 110, Chemistry 112, Environmental Science 120, Physics 112, Auto-Electrical Systems 120
* ***Fine Arts or Personal Development*** (one course from the following): Visual Arts 110, Music 112, Theatre Arts 120, Individual Family Dynamics 120, Co-Operative Education 120 (2 credits), Wellness in Physical Education 110, Leadership Through Physical Education 120, Outdoors Pursuits 110, Entrepreneurship 110, Graphic Arts and Design 110, Culinary Tech 110
* English and at least 4 other credits must be taken at the *Grade 12 level*.
* Students must successfully complete the *English Language Proficiency Assessment* which is first administered in Grade 9. Should a student fail this assessment in Grade 9, there will be opportunities to re-write this test in grade 11 and grade 12.

**COURSE DESCRIPTIONS**

***(ARRANGED ALPHABETICALLY)***

**AUTO ELECTRICAL SYSTEMS 12O**

Introduction to the theory and operation of automotive electrical systems. Students will begin with a study of the basic elements and principles of electricity, which include the electron theory, magnetism and electrical symbols and then progress to the study of individual components throughout the vehicle. Restricted to 20 students. Prerequisite: Internal Combustion Engines 110

**BIOLOGY 112**

This course is designed for students who plan to proceed to university or community college. Topics for study include ecology, photosynthesis and respiration, cellular organelles, the modern classification system and human physiology. Students will take part in laboratory sessions and will be assigned projects based on curriculum components. Strong science and math abilities are recommended for students taking this course. Prerequisite: Science 10

**BIOLOGY 122**

Human reproduction, genetics, inheritance patterns, DNA replication, protein synthesis, cellular function and population dynamics will be investigated by students taking this course, in lecture and lab sessions. The program is designed for students who plan to proceed to university or community college after graduation. Prerequisite: Science 10

**CANADIAN HISTORY 122**

This outcomes-based course begins with Confederation. Other areas of study include immigration, industrialism, American and British influences, Canada’s participation in wars, the French-English situation, multiculturalism, and Canada’s present strengths, weaknesses, and global position. The basic text is Canada: A North American Nation, but music, visuals and Canadian Literature are regularly integrated into the course. Prerequisite: Social Studies 10, recommended Modern History 112.

**CHEMISTRY 112**

This course is the first of two sequential Chemistry courses and introduces students to the language of chemistry, elements, compounds, types of reactions, solutions and chemical reaction calculations. Labs will be completed to reinforce the class instruction. A large portion of this course involves mathematics, an understanding of unit conversion, formula re-arranging and calculating. Prerequisite: Science 10 Co-requisite: Foundations Math 110

**CHEMISTRY 122**

This is the second of two sequential chemistry courses. A good level of understanding of chemistry 112 is recommended. This course uses previously learned concepts to investigate organic compounds, equilibrium calculations, acid-based reactions and heat/thermal calculations. Many labs will be completed to reinforce the class instruction. Prerequisite: Chemistry 112

**CO-OPERATIVE EDUCATION 120**

Cooperative Education 120 is an experiential course that offers students in grades 12 the opportunity to participate in the exploration of an identified area of learning and career interest while still in school. The four course objectives are: career awareness, knowledge of required skills & preparation for work, development & enhancement of employability skills and profile literacy skills. By combining in-school instruction with an out-of-school workplace experience of approximately 14 weeks, students will gain information that will assist them as they prepare for the transition from high school to post-secondary education and/or work. Essential skills for life/work are fostered and youth gain an appreciation of learning and skills development as a life-long process. Co-Op is available as a 2-credit course. Due to the out-of-school workplace components of this course, students will be selected based upon an application and interview process that will consider teacher recommendations, attendance patterns, commitment to learning and the ability to represent the school in a mature and responsible manner.

**CULINARY TECHNOLOGY 110**

This course 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 be encouraged to practice those skills. The overall aim of this course is to cultivate the need and desire of students to follow safe work practices and to develop the language and work skills of the trade.

**CULINARY TECHNOLOGY 120**

Culinary Technology 120 is a continuation of Culinary Technology 110. The grade 12 skill sets include a review of skills learned in grade 11, along with large equipment and food preparation skills with a focus on scratch cookery and current trends in nutrition and industry. Students will continue to study the theory of each skill and then be encouraged to practice those skills through enterprise activities. The overall aim of this course is to cultivate the need and desire of students to follow safe work practices and to develop the language and work skills of the trade by being able to: explore employment skills and career awareness in Culinary Arts and associated trades (cook, baker, pastry chef, server, steward, and management), identify potential employment options looking at provincial statistics and industry projections; and identify the certification and continued education available at colleges and universities, as well as an awareness of the Canadian Red Seal Certification Program and its professional designation (RSE).

**ELECTRICAL WIRING 110**

A residential wiring course that emphasizes lighting and power circuits normally found in a single family dwelling. A study of: basic equipment, supplies and techniques used in residential wiring to the design and placement of the total electrical requirements of a single family dwelling. This course will be of interest to those with a career objective in the fields of electrical technology. Restricted to 20 students. Prerequisite: Intro to Applied Tech 110

**ELECTRICAL WIRING 120**

Course will cover advanced wiring topics, including service entrances, remote control wiring, electrical heating systems and motor control. Emphasis is on current technology including the use of computers and programmable logic controllers as used in industry. Restricted to 20 students. Prerequisite: Electrical Wiring 110

**ENGLISH 112 Part A & B**

These courses are designed for students who wish to pursue a post-secondary education at the university level and may be required for courses at the college level. Areas of study include a Shakespearean drama, a short story unit, class/independent novels, poetry, and an essay unit. Formal and informal presentations and various forms of composition, as well as one formal essay are required. Prerequisite: English 10 and a successful evaluation on the grade ~~8~~ 9 English Language Proficiency Examination (ELPA) is highly recommended.

**ENGLISH 113 Part A & B**

These courses are designed to prepare students for some community colleges and/or direct employment after completion of high school. Areas of study include modern drama, short stories, poetry, class/independent novels, formal and informal presentations, and various forms of composition. Prerequisite: English 10

**ENGLISH 122**

This course is designed for students who plan to pursue a post-secondary education at the university level or may be required for courses at the college level. Areas of study include a Shakespearean play, an historical and/or modern novel, a study of poetry from an historical perspective and a formal essay. Prerequisite: English 112 Parts A & B

**ENGLISH 123**

This course is designed to prepare students for some community colleges and/or direct employment after completion of high school. Areas of study include short stories, modern plays, poetry, essays, class/individual novels, and various forms of composition. Prerequisite: English 113 Parts A & B

**ENTREPRENEURSHIP 110**

This is an exploratory course for students interested in entrepreneurship and small business venture creation. It offers students the opportunity to develop the skills and attitudes associated with enterprising people and how these are applied to personal life and small business development. Through a combination of classroom theory, activities and projects, students explore their personal entrepreneurial characteristics and participate in the venture creation process from idea generation through business plan development. This course meets the Fine Arts/Life Role Development graduation requirement.

**F.I. LANGUAGE ARTS 110**

Through this course students will continue to expand their facility in oral and written French with the following general objectives:

1. To ensure at the high school level, the maintenance and progression of the linguistic acquisitions of the pupil coming through the French Immersion program.

2. To continue to emphasize communication in order to foster growth of the language skills: listening, speaking, reading and writing.

3. To encourage the use of the language as a vehicle allowing pupils to express themselves in a fitting manner suited to their intellectual, social and emotional growth.

4. To increase the pupil’s cultural knowledge and experiences in order to promote an appreciation for the French speaking population and culture of our country and of other parts of the world.

The course content will include listening, reading, writing, speaking, grammar, literature, and culture. There will be a continued insistence on the use of French, both as the language of instruction and communication in the classroom.

This is a compulsory course for those students who have elected to follow the French Immersion option at the high school level.

**F.I. LANGUAGE ARTS 120**

Through this course students will continue to expand their facility in oral and written French with the general objectives as stated in the course description for FI Language Arts 110. The content of the course is based on four components: reading, writing, listening, and speaking. To realize the stated objectives of the course, there will be continued exposure to various texts and activity books, French novels and short stories, poetry, drama, newspapers and magazines. Language of instruction and communication will be in French. Prerequisite: FILA 110

**F.I. MODERN HISTORY 110**

This course is for students who have completed FI Language Arts 10. The purpose is to continue the student’s progress through the French Immersion option at the high school level. FI Modern History 110 presents a study of the principle developments that have occurred on the world scene in modern times. In addition, it assists students to understand and use several of the skills used in historical research and writing, such as the recognition of a frame of reference, asking questions, forming and evaluating a hypothesis. Language of instruction and communication will be solely in French. Prerequisite: FISS 10

**FINANCIAL and WORKPLACE MATHEMATICS 110**

This pathway is designed to provide students with the mathematical understandings and critical thinking skills identified for entry into some college programs and for direct entry into the work force. Financial and Workplace Math 110 focuses on: personal budgets, investment portfolios, renting and buying, slope and rate of change, scale, and statistics. Prerequisite: Geometry, Measurement, and Finance 10

This course is required for programs, such as:

*College*: Early Childhood Education, Firefighting, Drafting, Welding, Plumbing, Carpentry and Cosmetology

*Bachelor Degrees*: Arts or Fine Arts at Saint Thomas University (ONLY).

**FINANCIAL and WORKPLACE MATHEMATICS 120**

Financial and Workplace Mathematics 120, is an elective course, focusing on: measurements and instruments, sine and cosine laws, transformations, business (sales, profits, loss) linear relations, statistics, percentiles, probability and analysis of puzzles and games. Prerequisite: Financial and Workplace Mathematics 110

Required for programs, such as: Culinary Arts, Graphic Design

Recommended for: Art and design programs, Forest technology

**FOUNDATIONS OF MATHEMATICS 110**

This pathway is designed to provide students with the mathematical understandings and critical thinking skills identified for post-secondary studies in programs that do not require the study of theoretical calculus. Topics include financial mathematics, geometry, measurement, number, logical reasoning, relations and functions, statistics, and probability. It is a higher academic level of math. Prerequisites: Math NRF 10 and Math GMF 10

This course is required for programs, such as:

*College*: medical laboratory technology, business administration, practical nursing

*Bachelor Degrees*: Arts and Fine Arts

**FOUNDATIONS OF MATHEMATICS 120**

This pathway is designed for students who plan to take post-secondary courses that do not require calculus. This course is an elective ~~course,~~ focusing on: statistics (standard deviation, confidence intervals), logical reasoning, set theory, probability (permutations and combinations), binomial theorem, polynomial functions, exponential and logarithmic functions, sinusoidal functions. Prerequisite: Foundations of Mathematics 110

Required for programs, such as:

*College*: engineering technology, computer technician, pharmacy technology

*Bachelor degrees*: Nursing, Business Administration, Economics, Kinesiology, Psychology

**FRAMING & SHEATHING 110**

This course provides students with skills and knowledge associated with the framing or shell construction of typical single family dwellings. Students will participate in construction and planning activities which include interpretation of the National Building Code, blueprint reading, estimating and material layout. Restricted to 20 students. Prerequisite: Intro to Applied Tech 110

**GRAPHIC ARTS & DESIGN 110**

If you find logos, comics, or illustrations interesting and would like to learn how to successfully create them, then Graphic Art and Design 110 will prove both enjoyable and useful. You will learn the technical side of the graphic process along with how to communicate your own original ideas. Images will be created by hand and/or scanned and manipulated by the use of a computer. Note: A strong interest in Art and a high level of dedication to artwork is required for this course.

**HOSPITALITY and TOURISM 110**

This course is an introductory course providing students with an awareness of career opportunities in a dynamic and growing industry sector. Students are made aware of potential social and economic benefits. Emphasis is placed on Tourism in Atlantic Canada. A combination of sound business principles and vision are demonstrated throughout the course.

**HUMAN PHYSIOLOGY 110**

The goal of this course is to build an understanding of the physiology of the human body as a complex dynamic organism that is self-contained but impacted by and responsive to the outside world. The study of the human body is placed in the context of overall health and the interaction between mental, social and physical wellness, making links with previous studies of nutrition and fitness. The course focuses on developing an understanding of the structure and functions of each human body system with relation to other systems. The healthy functions of each body system is studied. Students will explore the effect of exercise, sleep, stress, and nutrition on their health as well as causes, symptoms, and treatments of a variety of diseases and conditions. Prerequisite: Science 10

**INDIGENOUS STUDIES 120**

This course is designed to promote understanding of the Micmac and Maliseet cultures in the Maritime provinces-past, present, and future-and to see how Native and non-Native views have influenced the course of events in the Maritimes. Some of the units to be considered are language and culture, religion and spirituality, ancient times, arts and crafts, community and colonial relations. This elective course is open to all Year 11 and 12 students who are interested in developing an understanding of Native culture and their perspectives on various native issues.

**INDIVIDUAL and FAMILY DYNAMICS 120**

Individual and Family Dynamic 120 is an elective course that will expose the student to the skills and information necessary to make informed decisions about personal development, lifestyle choices and healthy relations. 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. The course touches on aspects of sociology, psychology, economics, and anthropology. This course will benefit students who wish to pursue fields of study such as: law enforcement, social services, family law, careers in counseling, psychotherapy and health. This course meets the Fine Arts/Life Role Development graduation requirement.

**INTERNAL COMBUSTION ENGINES 110**

Course is a study of the operation of the internal combustion engine including the construction, theory of operation and function of its systems. Students assemble and disassemble engines, checking, servicing and repairing components and systems. Course will be of interest to persons entering the trades as well as to students with an interest in mechanics. This is an elective course. Restricted to 20 students. Prerequisite: Into to Applied Tech 110

**INTRODUCTION to ENVIRONMENTAL SCIENCE 120**

The objective of this course is for students to develop the knowledge base and skills for investigating and analyzing environmental issues and for communicating their knowledge to others. Prerequisite: Science 10

**INTRODUCTION to APPLIED TECHNOLOGY 110**

This course introduces students to a variety of careers in trades, providing opportunities to explore and research practices and skills required for employment in trades/technology sectors. There is an emphasis on student directed learning and it is structured to reflect the reality of work. Problem identification, teamwork and leadership skills are reinforced. Student creativity and life skill development in the design, construction, repair, and maintenance unit modules reinforce situations that ae found in industry. The course is a prerequisite to all other industrial arts courses. If you are heading towards the trades, this is the first course you must take. Restricted to 20 students.

**LAW 120**

This elective course provides the student with a basic knowledge of the Canadian legal system, its operation and awareness of the impact of law on one’s life. Major topics of the course include legal systems, civil and criminal law, human rights, property law and labor law.

**LEADERSHIIP THROUGH PHYSICAL EDUCATION 120**

The vision for this course is to have students successfully plan, organize, and administer their own recreational programs and programs developed for others, with direction from teachers who assist in providing opportunities for the development of student's personal leadership skills. It is hoped that the leadership opportunities experienced in the course will also develop an awareness of the need for dynamic, professional, and volunteer leadership within the community.

**MEDIA STUDIES 120**

This course studies how the media influence your life and society. You will explore the world of media through radio, television, music, newspapers, and the Internet. This course also includes such topics as: advertising, popular culture, gender issues, violence, and other elements that impact on today’s society. You will create your own media project.

**METALS FABRICATION 110**

This course is concerned with the processes used to cut, form and fasten metal. Emphasis is placed on the development of basic skills needed to use electric arc and oxyacetylene welding and cutting processes. Machines and processes used to layout, cut and form sheet metal are also introduced. This course will appeal to students interested in entering occupations in metalworking, mechanical technology, mechanical service and primary resource industries. Restricted to 20 students. Prerequisite: Intro to Applied Tech 110

**METALS PROCESSING 110**

This is a study of the standard machine shop processes used in the manufacture of metal products. Students will apply theory as well as develop practical skills through the production of practical projects. Restricted to 20 students. Prerequisite: Intro to Applied Tech 110

**MILL and CABINET 120**

This is a finish woodworking course in which students will develop the necessary skills, knowledge and work habits required to construct cabinets and other miscellaneous mill work typically found in residential dwellings. Students, through a series of projects will be involved with all aspects of mill work including planning, estimating, operation of equipment and machines, and finish operations. This course is of benefit to those interested in entering the construction or woodworking occupations, as well as those with a general interest in woodworking. Restricted to 20 students. Prerequisite: Intro to Applied Tech 110

**MODERN HISTORY 112**

History 112 presents a study of the principal developments that have occurred on the world scene in modern times. It is an overview of the major changes in political, social, and economic lifestyles beginning with absolutism. Other topics presented are the French Revolution, Napoleon, Industrial Revolution, Nationalism, rise of Germany and Italy, World War I, post-World War 1 era, World War II, Russian Revolution, Fascism, Marxism, post-World War II period, and current problems in Southeast Asia and Middle East. In addition, it assists students to understand and use several of the skills used in historical research and writing such as recognition of a frame of reference, asking questions and forming and evaluating a hypothesis. This course is accepted for university entrance. Prerequisite: Social Studies 10

**MODERN HISTORY 113**

History 113 is designed to provide an understanding of the main events of the twentieth century, as well as some familiarity with a few of the 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 1930’s World War 1, World War II, Cold War and United Nations. Prerequisite: Social Studies 10

**MUSIC 110**

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, as well as understanding music in historical context. Pre-requisite: Music Grade 10.

**MUSIC 120**

Course is designed for the advanced or serious student of music. Course will be beneficial to those who wish to pursue music at the post-secondary level. Students are required to have a level of music literacy, good aural skills, sound theoretical knowledge and be intent on improving their musical expertise. Pre-requisite: Music 110

**OUTDOOR EDUCATION 110**

Outdoor education can be described as experiential learning in, for, or about the outdoors and typically involves wilderness based experiences in which students learn how to participate in a safe manner in a variety of outdoor activities such as hiking, climbing, canoeing, camping, etc.. It draws upon the philosophy, theory and practices of experiential and environmental education and offers students a range of learning experiences. Through interaction with the outdoors, Outdoor Education aims to develop an understanding of self, others and the natural world. It provides students with opportunities to develop essential life skills and physical activity skills, as well as, opportunities to develop a comprehensive understanding of the environment and develop a positive relationship with nature. Appropriate outdoor clothing is the responsibility of the student. Students will be outside the majority of the classes.

**PHYSICS 112**

Physics 112 provides valuable background for those university-bound students interested in such fields as engineering, physics, oceanography, meteorology, astronautics, any of the physical sciences, or any program for which Physics is a prerequisite. UNB requires students entering Science, Engineering, and Forestry to have credits in Physics 112 and 122. NB Community College also requires credits in Physics 112 and 122 for entrance to some technology courses (i.e.: Power Engineering). The topics covered are measurement, uniform motion, uniformly accelerated motion, wave motion, sound and light, force/dynamics, momentum introduction, work/power/energy. Co-requisite: Foundation of Math 110

**PHYSICS 122**

Physics 122is designed for students who have successfully completed Physics 112 or equivalent. Topics covered are vectors, circular motion, projectile motion, Newton’s Laws, momentum conservation, universal practicum Kepler’s Law, dynamics II and field theory. Students will have several laboratory sessions on these topics. UNB requires students entering Science, Engineering, and Forestry to have credits in Physics 112 and 122. Some programs at NBCC also require Physics 122. Prerequisite: Physics 112 and Foundation of Math 110. Recommended: Pre-Calculus 110

**POLITICAL SCIENCE 120**

This course is designed as an introduction to basic principles of the study of politics, and extensive use is made of historical and current documents. Individual assignments and group projects form a significant part of the learning experience. The early part of the course will be spent learning the basic concepts and terminology of political science, and in developing the basic skills of political science research. The latter part will include such topics as Canadian government and politics, characteristics of politicalsystems, political philosophers, and current political happenings. Prerequisite: Modern History 112 or FI Modern History 112.

**POST INTENSIVE FRENCH 110**

This course is not available to immersion students. Intensive French is a literacy-based approach to teaching French as a second language in which students are required to use French to speak, read and write for authentic purposes. Skills are developed in an integrated fashion through interactive learning experiences built around age appropriate and interesting themes. Intensive French programs focus on oral language (fluency and accuracy) first, helping students to develop an internal grammar of correct forms and structures; reading and writing are integrated to help students learn aspects of written language. Prerequisite: PIF 10

**POST INTENSIVE FRENCH 120**

This is the final course in the program of Post Intensive French and is not available to immersion students. This course deepens and sharpens the language skills, structures, and concepts for effective communication acquired in PIF 110. It is designed to bring the student to a proficiency level required to communicate in a French environment. Prerequisite: PIF 110

**POWER TRAIN CHASSIS 110**

Course is designed to develop skill and knowledge in the service and maintenance of the automobile chassis and power train. Emphasis is placed on the function, repair and replacement of components. Topics include spring and shock assemblies, brakes, steering, wheel bearings, tires, transmissions, differential and drive lines. Restricted to 20 students. Prerequisite: Intro to Applied Tech 110 or Internal Combustion Engines 110

**PRE-CALCULUS 110:**

This course covers the following topics: absolute value functions, radical expressions and equations, trigonometric ratios, polynomial factoring and linear inequalities. Co-requisite: Foundations of Mathematics 110

Required for programs, such as: College engineering (i.e.: Power Engineering), environmental technology and other programs requiring theoretical mathematics & Bachelor degrees such as Nursing.

**PRE-CALCULUS 120A:**

This course focuses on the following topics: graphs of functions and their related equations (operations, translations, stretches), logarithms and logarithmic functions and equations, trigonometric reasoning (ratios, sine, cosine, tangents, equations, and identities).Prerequisite: Pre-Calculus 110

Required for programs, such as: Bachelor Degrees in Science, Engineering, Mathematics, Computer Science

**PRE-CALCULUS 120B:**

Most programs that require Pre-Calculus A, also require Pre-Calculus B. This course focuses on the following topics: arithmetic and geometric sequences, polynomials (factoring and functions), other functions (radicals, reciprocal, rational), limits of functions. Prerequisite: Pre- Calculus A 120

Required for programs, such as: Bachelor Degrees in Science, Engineering,

Mathematics, Computer Science

**RESIDENTIAL FINISH 120**

Course examines the work required to finish a family dwelling once it is framed-in. Topics include: insulation, wall cladding, doors, windows, cornice trim and roof covering. Course will include both theory and practical project work. Course is of interest to those thinking about a career in residential construction. Restricted to 20 students. Prerequisite: Intro to Applied Tech 110

**THEATRE ARTS 120**

The course will cover the major aspects of theatre performance, including acting and interpretation, stagecraft, play management, and theatre history. The course will capitalize on the individuality, confidence, creativity, and communication abilities of the student. Theatre Arts 120 is an elective course for students in Grade 11 and 12 who have an interest in theatre. Restricted to 25 students.

**TUNE-UP & EMISSIONS 120**

This course is the final course in a series of automotive courses. It is designed to provide students with a practical approach to diagnosis, servicing and repairing of automobile fuel and emission systems and to performing engine tune-ups. Restricted to 20 students. **Prerequisite: Internal Combustion Engines 110** and Automotive Electrical 120

**VISUAL ARTS 110**

The student is given opportunities to work independently and to explore in greater depth, materials and concepts touched on in Grade 10 Visual Arts. This course has a lab fee which provides a required sketchbook, painting and drawing materials. Prerequisite: Grade 10 Visual Arts

**VISUAL ARTS 120**

Visual Arts 120 is designed for students who wish to pursue art related interests or careers. Students will review skills and concepts previously learned in grade 11, and apply them to select media with the goal of creating interesting and technically advanced art. Students will also critique aspects of their creative process and product. Prerequisite: Visual Arts 110

**WELLNESS THROUGH PHYSICAL EDUCATION 110**

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

**WORLD ISSUES 120**

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 can have a profound effect on Canada. The future of Canada within the global community is also examined.

**SUCCESS IS NOT A DESTINATION.**

**IT’S A JOURNEY!**