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**Introduction**

This guide is for students entering grades 11 and/or 12 and is designed to help you choose courses that will meet the New Brunswick High School Graduation requirements. Please note that all grade 10 courses are required for graduation and may be prerequisites for many grade 11 courses.

Homeroom teachers and guidance counselors will provide you with direction and information, and counsellors will assist you with the course planning and selection process. Students should take every opportunity to discuss course options and post-secondary learning and career plans with their parents, guardians, teachers and guidance counselors. We are here to help you, but ***it is ultimately up to the student and his/her/their parents or guardians to ensure courses are selected to meet post-secondary entrance requirements.***

###### General Information

**Course Levels**

All courses have a name and number. The first two digits indicate grade and the third digit indicates the level.

**Open or “0” courses** are offered to all at one level only; ex: Entrepreneurship 110

**Level 2 courses** are academic/university/college preparatory. ex: Music 112, Biology 122

**Level 3 courses** are general/college preparatory. ex: Modern History 113, English 123

**Level 1 courses** are enriched university preparatory. ex: English 111, Physics 121

**Many electives are open to both grades 11 and 12; read descriptions and pre-requisites carefully.**

**Prerequisites**

Many courses have prerequisites or co-requisites. Please read the course descriptions carefully prior to course selection. Students without the required prerequisites will not be allowed to enroll in the course. **See page 27 for a listing of courses requiring prerequisites.**

**Prerequisite:** A course that must have been successfully completed prior to enrolling in the course.

**Co-requisite:** A course that, if not previously completed, must be taken during the same semester as the course. (ex. Foundations 110 and Chemistry 112).

**Course Fees and Applications:**

Please note that some courses require additional supplies and/or payment of lab, studio or other fees. Some courses require applications -**due March 16th** to the guidance department-show to homeroom teacher when submitting course requests electronically. **See page 27.**

**Student Timetables:**

Timetables are computer-generated to best match the maximum number of student requests and therefore courses fall by chance into either semester.

When all timetables are deemed ready and the school schedule and staffing are settled, timetables will be distributed for the upcoming school year to all students at the same time-typically the first day of school.

***We are unable to entertain requests for early access to your timetable.***

###### Special Programs

In addition to the range of compulsory and elective courses available to you, the following programs offer students the opportunity to enroll in courses that support their special interests and/or career goals.

**Career and Transition Planning**

A variety of elective courses are offered to support the career interests of students. In addition, specific interests may also be explored through on-the-job work placements in both Career Exploration 110 and Cooperative Education 120 courses. These courses provide opportunities to gain work experience and develop workplace skills as part of your high school program. Workplace opportunities exist in many different areas. **Additionally, placements in trades related areas may be used as hours credited towards apprenticeship.**

\*\*Two new career specific co-op programs are being offered now: Long-term Care Co-op and Introduction to Early Childhood 120 Co-op. See your guidance counselor for more information.

## Trades Course Option at FHS

This program provides the opportunity to enroll in two trades related courses per semester held at FHS in the afternoon while attending LHHS in the morning. Students must enroll in both courses. Transportation by bus from LHHS to FHS and return is expected and provided for students in this program. **NOTE:** **Enrolment is limited and competitive.** Priority will be given to students that can demonstrate a commitment to regular attendance and appropriate, respectful behaviours.

**Fine Arts Certificate Program**

This program, designed to reward both quantity and quality of artistic work, is an enrichment opportunity for students that are motivated, self-disciplined, and interested in the Arts.  If students are interested in earning the LHHS Fine Arts Certificate (FAC) they should consult a Fine Arts teacher for more information.

###### French Immersion Program

**CERTIFICATE OF IMMERSION**

This certificate is issued by Anglophone School District West and is offered to all students who have completed the requirements of the **French Immersion Program** through grade 12; 50% of courses in each of grades 9 and 10; 25% of grades 11 & 12 over the two years (five courses gr 11/12).

A complete listing of LHHS’ F.I. courses can be found on the Course Theme Index, page 6.

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**CERTIFICATE OF PROFICIENCY**

The certificate of Oral Proficiency is issued to **grade 12 students** either in the **Immersion or PIF program** and indicates a student’s level of proficiency. This certificate is awarded by the Department of Education following an oral assessment by professional evaluators. The certificate is presented upon completion at the end of the semester. There is no cost for this assessment. Students must be enrolled in a grade 12 French course in grade 12 to be eligible for the proficiency test.

**Mathematics Program Pathways**

The NB mathematics curriculum requires grade 10 students to successfully complete two grade 10 math courses as part of the grade 10 compulsory program. Upon entering grade 11, students have the option of following one of three mathematics pathways. **Students must successfully complete one of two prescribed grade 11 mathematics courses to meet minimum graduation requirements.** Students should seek advice from their grade 10 math teacher regarding the pathway that best suits their ability and their guidance counsellor re post-secondary.

The below chart outlines the math program, the three pathways, the prerequisites required for each and the mathematics graduation requirement. Should further information be required, Guidance Counsellors and/or Math teachers may be contacted.

***Grade 10***

**Number, Relations and Functions 10**

**Geometry, Measurement**

**and Finance 10**

**AND**

***Grade 11***

***Students must pass EITHER “Financial and Workplace Mathematics 11”***

***OR “Foundations of Mathematics 11”for graduation.***

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

**Pre-Calculus 110**

**Foundations of Mathematics 110**

**Financial and Workplace Mathematics 110**

*Prerequisite:*

*Geometry, Measurement and Finance 10*

*Prerequisite or Co-requisite:*

*Foundations of*

*Mathematics 11*

*Prerequisites:*

*Geometry, Measurement and Finance 10 AND Number, Relations and Functions 10*

***Grade 12***

*All elective courses; students must pass the corresponding Grade 11 prerequisite course.*

**Math 1208-NBCC Math Foundations 120**

**Pre-Calculus 12A**

**Foundations of Mathematics 120**

*Prerequisite: Pre-Calculus 11*

*Prerequisite: Financial and Workplace Mathematics 11*

**Pre-Calculus 12B**

*Prerequisite: Foundations of Mathematics 110*

*Prerequisite: Pre-Calculus 12A*

**Students and parents should research post-secondary requirements for programs of interest. Requirements vary from school to school.**

Financial Workplace 110-Entrance into a Bachelor of Arts, Fine Arts, Social Sciences and various college programs that don’t require further math.

Foundations 110 & 120-Bachelor of Nursing, BBA at some universities, such as Acadia, SMU (not UNB)

Foundations 110, Pre-Cal 110, 120A, 120B-Bachelor of Science and all Science related degrees, Comp. Science, Engineering, Some BBA programs (UNB)

Math 1208 is the required math for many first year NBCC trades’ programs; this math will provide credit for both high school and NBCC first year math-see counsellor for list of programs this applies to.

**Calculus 120**

*Prerequisite:Pre-Calculus12A&B*

**Entering Grade 11**

###### New Brunswick High School Graduation Requirements

**In order to graduate, you must meet all of the following requirements:**

* Complete the entire Grade 9-10 program
* Pass 17 out of 20 credits in Grades 11-12, seven of which are compulsory courses listed below
* **Five** of these credits must be from Grade 12 courses including English
* Pass the English Language Proficiency Assessment
* Have no more than **two** local option courses out of the 17 required courses
* Students are expected to attempt 20 credits

**Compulsory (must select and pass) courses**

* English 11 **(full-year course, 2 credits)**
* Financial and Workplace Mathematics 11 **OR** Foundations of Mathematics 11 **(1credit)**
* 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)**

**\*Notes**- **French Immersion students must successfully completed five of their 20 credits** (over the two years) in French to obtain their FI certificate in grade 12.

To be eligible for the oral proficiency interview in grade 12, a grade 12 French course must be taken in grade 12.

**Science Options Fine Arts and Life/Role Credit Options**

Physics

Biology Career Exploration 110

ChemistryCooperative Education 120

Human Physiology 110 Entrepreneurship 110

Introduction to Environmental Science 120 Individual & Family Dynamics 120

Introduction to Electronics 110 Fine Arts 110

Micro Electronics 120 Graphic Art & Design 110

Physical Geography 110 Physical Education Leadership 120

Robotics and Automated Technology 120 Music 111/2, 120, 122

Nutrition for Healthy Living 120

Automotive Electrical Systems 120 Outdoor Pursuits 110\*

Theatre Arts 120

\*Duke of Edinburgh’s Award Young Canadians Challenge Silver or Gold level may be used as Challenge for Credit for Outdoor Pursuits 110. See Guidance Counsellor.

Visual Arts 110, 120

Wellness through Physical Education 110

\*Army, Air, Sea Cadet courses may be combined and used as Challenge for Credit for Outdoor Pursuits 110. See Guidance Counsellor.

**Only two of 17 required courses for graduation may be local options. (Three for 18 credits, four for 19 credits, five for 20 credits).**

**COURSE THEME INDEX**

**GRADE 11-12 COURSES 2020-21**

|  |  |  |
| --- | --- | --- |
| **Business and Related Courses** |  | **French Immersion Courses** |
| Economics 120 |  | FI Biology 112 |
| Entrepreneurship 110 |  | FI Language Arts 110 |
| Hospitality & Tourism 110 |  | FI Language Arts 120 |
|  |  | FI Techniques de Communication 120 |
| **WORK EXPER. & PERSONAL INTEREST** |  | FI Modern History 112 |
| Career Exploration 110 |  | FI Individual Family Dynamics 120 |
| Cooperative Education 120 |  | FI Foundations of Mathematics 11 |
| Intro to Early Childhood Coop 120 |  | FI Pre-Calculus 110 |
| Long-Term Care Coop 120 |  |  |
| Senior Project 120 (1 or 2 credits) |  | **TrADES and technology** |
|  |  | Applied Technology 110 (Introduction to) |
|  |  | Computer Science 110 (Intro to Gaming) |
| **English and Related Courses** |  | Computer Science 120 |
| Canadian Literature 120 |  | Culinary Technology 110 |
| English 111 |  | Culinary Technology 120 |
| English 112 |  | Cybersecurity 120 |
| English 113 |  | Digital Production 120 |
| English 121 |  | Electrical Wiring 110 (Residential) |
| English 122 |  | Electronics 110 (Introduction To) |
| English 123 |  | Housing and Interior Design 120 |
| Goals, Growth, and Grit: Skills for Success 120 |  | Information Technology 120 |
| Media Studies 120 |  | Microelectronics 120 |
| Writing 110 |  | Mill & Cabinet Making 120 |
|  |  | Robotics and Automated Technology 120 |
| **Fine Arts** |  |  |
| Fine Arts 110 |  |  |
| Graphic Arts & Design 110 |  | **Languages** |
| Indigenous Wabanaki Art 110 |  | Introductory Wolastoqey 110 (Latuwewakan) |
| Visual Arts 110 |  | Post Intensive French 110 |
| Visual Arts 120 |  | Post Intensive French 120 |
| Music 112 (Choral) |  | Spanish 120 |
| Music 112 (Guitar) |  |  |
| Music 112 (Instrumental) |  | **Life Studies** |
| Music 112 (Keyboarding) |  | Child Studies 120 |
| Graphic Arts & Design 110 |  | Individual and Family Dynamics 120 |
| Music 122 |  | Psychology 110 |
| Theatre Arts 120 |  | **\*See Co-op options in Long-term Care and Early Childhood Co-op** |
|  |  |  |
| **Math** |  | **Trades Course Options at FHS** |
| Financial & Workplace Mathematics 110 |  |  |
| Math 1208-NBCC Math Foundations 120 |  | **SEMESTER 1** |
| Foundations of Mathematics 110 |  | Metals Fabrications 110 **and** |
| Foundations of Mathematics 120 |  | Metals Processing 110 |
| Pre-Calculus 110 |  |  |
| Pre-Calculus 120A |  | **SEMESTER 2** |
| Pre-Calculus 120B |  | Power Train and Chassis 110 **and** |
| Calculus 120 |  | Automotive Electrical Services 120 |
|  |  |  |
| **Science** |  | **Physical Education & Health** |
| Biology 111 |  | Nutrition for Healthy Living 120 |
| Biology 112 |  | Outdoor Pursuits 110 |
| Biology 121 |  | Physical Education Leadership 120 |
| Biology 122 |  | Wellness Through Physical Education 110 |
| Chemistry 111 |  |  |
| Chemistry 112 |  | **LOCAL OPTIONS** |
| Chemistry 121 |  |  |
| Chemistry 122 |  | Active Citizenship and Engagement 120 |
| Environmental Sci. 120 (Introduction to) |  | FI Techniques de Communication 120 |
| Human Physiology 110 |  | Indigenous Wabnaki Art 110 |
| Physical Geography 110 |  | Introduction to Debate 110 |
| Physics 111 |  | Psychology 110 |
| Physics 112 |  | Senior Project 120 (1 cr) & Comprehensive Sen Project 120 (2cr) |
| Physics 121 |  | Introductory Wolastoqey 110 |
| Physics 122 |  |  |
| Science 122 (Advanced) |  |  |
|  |  |  |
| **Social Studies** |  |  |
| Active Citizenship and Engagement 120 |  |  |
| Canadian Geography 120 |  |  |
| Canadian History 122 |  |  |
| Debate 110 (Introduction to) |  |  |
| Law 120 |  |  |
| Modern History 111 |  |  |
| Modern History 112 |  |  |
| Modern History 113 |  |  |
| Native Studies 120 |  |  |
| Sociology 120 |  |  |
| World Issues 120 |  |  |
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**ALPHABETICAL INDEX**

**GRADE 11-12 COURSES 2020-21**

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| **Course** | **Page** | **Course** | **Page** |
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| Applied Technology 110 (Introduction to) | 10 | FI Language Arts 110 | 16 |
| Automotive Electrical Services 120 | 10 | FI Language Arts 120 | 16 |
| Biology 111 | 10 | FI Modern History 112 | 16 |
| Biology 112 | 10 | FI Pre-Calculus 110 | 16 |
| Biology 121 | 10 | FI Techniques de Communication 120 | 25 |
| Biology 122 | 10 | Financial and Workplace Mathematics 110 | 16 |
| Calculus 120 | 10 | Fine Arts 110 | 16 |
| Canadian Geography 120 | 11 | Foundations of Mathematics 110 | 16 |
| Canadian History 122 | 11 | Foundations of Mathematics 120 | 17 |
| Canadian Literature 120 | 11 | Framing and Sheathing 110 (N/A 2020-21) |  |
| Career Exploration 110 (2 credits PM) | 11 | Goals, Growth, and Grit: Skills for Success 120 | 17 |
| Chemistry 111 | 11 | Graphic Arts & Design 110 | 17 |
| Chemistry 112 | 11 | Hospitality and Tourism 110 | 17 |
| Chemistry 121 | 12 | Housing and Design 120 | 17 |
| Chemistry 122 | 12 | Human Physiology 110 | 17 |
| Child Studies 120 | 12 | Indigenous Studies 120 | 17 |
| Computer Science 110 (Intro to Gaming) | 12 | Indigenous Wabanaki Art 110 | 25 |
| Computer Science 120 | 12 | Individual Family Dynamics 120 | 18 |
| Cooperative Education 120 (2 credits PM OR 3 credits AM) | 12 | Information Technology 120 | 18 |
| Culinary Technology 110 | 13 | Internal Combustion Engines 110 (N/A 2020-21) | 18 |
| Culinary Technology 120 | 13 | Introduction to Early Childhood Coop 120 | 18 |
| Cybersecurity 120 | 13 | Introductory Wolastoqey 110 | 25 |
| Debate 110 (Introduction to) | 25 | Law 120 | 18 |
| Digital Production 120 | 13 | Long-Term Care Coop 120 | 18 |
| Economics 120 | 13 | Math 1208 NBCC Foundations 120 | 19 |
| Electrical Wiring 110 | 13 | Media Studies 120 | 19 |
| Electronics 110 (Introduction to) | 14 | Metals Fabrication 110 | 19 |
| English 111 | 14 | Metals Processing 110 | 19 |
| English 112 | 14 | Microelectronics 120 | 19 |
| English 113 | 14 | Mill and Cabinet Work 120 | 19 |
| English 121 | 14 | Modern History 111 | 19 |
| English 122 | 14 | Modern History 112 | 20 |
| English 123 | 14 | Modern History 113 | 20 |
| Entrepreneurship 110 | 15 | Music 112 (Choral) | 20 |
| Environmental Science 120 (Intro to) | 15 | Music 112 (Guitar) | 20 |
| FI Biology 112 | 15 | Music 112 (Instrumental) | 20 |
| FI Foundations of Mathematics 110 | 15 | Music 112 (Keyboarding) | 20 |
| Music 122 | 20 | Psychology 110 | 26 |
| Nutrition for Healthy Living 120 | 21 | Residential Finish and Insulation 120 (N/A 2020-21) | 23 |
| Outdoor Pursuits 110 | 21 | Robotics & Automated Technology 120 | 23 |
| Physical Education Leadership 120 | 21 | Science 122 (Advanced) | 23 |
| Physical Geography 110 | 21 | Senior Project 120 (1 credit) & Comprehensive Senior Project 120 (2 credits) | 26 |
| Physics 111 | 21 | Sociology 120 | 23 |
| Physics 112 | 22 | Spanish 120 | 24 |
| Physics 121 | 22 | Theatre Arts 120 | 24 |
| Physics 122 | 22 | Tune Up and Emissions 120 (N/A 2020-21) | 24 |
| Post Intensive French 110 | 22 | Visual Arts 110 | 24 |
| Post Intensive French 120 | 22 | Visual Arts 120 | 24 |
| Power Train and Chassis 120 | 22 | Wellness through Physical Education 110 | 24 |
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**Also available on our website: http://leohayeshigh.nbed.nb.ca**

**APPLIED TECHNOLOGY 110**

**(Introduction to)**

Whether you are a trade’s oriented person or academic, this is a good course to take! You will receive hands-on training and have a chance to learn valuable life skills. You will learn how to competently use various wood working hand tools, as well as stationary and power tools. The following topics will be covered in the semester:  
•   Safety  
•   Machine instruction  
•   Wood working   
•   Design project  
•   Reading Blue Prints  
Over the semester, you will learn a variety of skills from dressing rough lumber to size to applying a finish.  
*Lab fee $50.00*

**AUTOMOTIVE ELECTRICAL SERVICES 120**

This course introduces the student to the theory and operation of automobile electrical systems. Students will study the principles of electricity that includes electron theory, magnetism, and electrical systems and will then progress from the study of individual components such as coils, distributors, and alternators to the study of systems as a whole. Charging, ignition, and starting systems will be the main focus. This course also includes an introduction to engine management systems, scanning, and diagnostics. This course may be used as a science credit. Power Train and Chassis must also be selected if you choose this course.

**BIOLOGY 111**

***Prerequisite: Science 10***

***Teacher recommendation***

Biology 111 is an advanced course that includes the following topics: microscopy, cellular organics, cellular respiration, principles of taxonomy, microorganisms and kingdoms of life. These topics will be covered in greater depth than in Biology 112. Teaching methods will combine lectures, independent and group research projects, laboratories (including dissections), guest speakers and field trips. An average above 85% in Science 10 is highly recommended for students taking this course. *Lab fee $5.00.*

**BIOLOGY 112**

***Prerequisite: Science 10***

This course is designed for students who plan to proceed to university or community college.  Topics include:  microscopy, cellular organics, and principles of taxonomy, microorganisms and kingdoms of life.  Students will take part in laboratory sessions (including dissections) and will be assigned projects based on curriculum components. *Lab fee $5.00*

**BIOLOGY 121**

***Prerequisite: Science 10***

***Recommended Prerequisite: Bio 111***

This course is targeted toward students who have a strong science background and are interested in post-secondary studies in medicine, forestry, biotechnology and genomics. The program will focus on genetics, human reproduction, DNA replication, protein synthesis, biochemistry, ecological functions and the physiology of human sight and hearing. Students will present seminars, conduct lab experiments, take field trips and perform library and internet research. *Lab fee $5.00.*

**BIOLOGY 122**

***Prerequisite: Science 10***

This course is designed for students who plan to proceed to university or community college.  Topics including Human reproduction, genetic, inheritance patterns, DNA replication, protein synthesis, cellular function and population dynamics will be investigated by students taking this course, in lecture and lab sessions. *Lab fee $5.00.*

**CALCULUS 120**

***Pre-requisites: Pre-Calculus 12A & 12B***

This course will extend students’ knowledge in the area of Calculus by studying the following topics: limits (continued), derivatives, applications of derivatives, curve sketching, and an introduction to anti-derivatives. This course is recommended for higher ability math students (entering university Math/Science based fields of study). At the completion of this course students will be prepared for and have the option to write the “Calculus Challenge Exam” at UNB. Please visit [www.math.unb.ca](http://www.math.unb.ca) for more details. This course will only be offered in semester two.

**CANADIAN GEOGRAPHY 120**

Where we live plays a tremendous role in our culture and our day-to-day lives. This course is a study of the ever-changing cultural and physical landscapes of Canada and how they impact each other. It considers where things are, why they are there, and the significance of these with respect to our lives today and into the future. Included is a look at environmental issues that affect all Canadians. Students will use a wide range of new skills and information to project a vision of Canada in the future.

**CANADIAN** **HISTORY 122**

***Prerequisite: History 111/112***

This course explores the deep and often complex history of Canada since confederation. It includes the study of immigration, industrialism, American and British influence, Canada’s participation in World Wars, the French-English relationship, and multiculturalism. Students will explore Canada’s current strengths and weaknesses and its place in the world. This course will integrate visuals, Canadian literature, music and textbook work.

**CANADIAN LITERATURE 120**

This course is for Grade 12 students who love literature and want to further explore an interest in Canadian texts. The course offers opportunities to examine and respond personally and critically to our rich literary heritage. The ultimate goal of the course is to approach and examine texts in a way which will launch a life-long appreciation for Canadian writing. A fundamental principle of this course is that students assume responsibility for their own learning through inquiry into an area of interest. Self-motivation and independence are key characteristics for success in the course.

**CAREER EXPLORATION 110**

Are you looking for an opportunity to explore possible career options, gain actual work experience and earn two credits while still in school? Career Exploration will allow you to explore and identify personal characteristics, consider various career paths and develop skills in the workplace. Trades related placement hours can be credited towards Apprenticeship Certification. Due to the out-of-school workplace component of this course, an interview process is required that will consider teacher recommendations, attendance patterns, commitment to learning and the ability to represent the school in a mature and responsible manner. Own transportation to workplace required.

***Enrollment is limited and competitive.***

**CHEMISTRY 111**

***Prerequisites: Science 10; NRF & GMF Math 10; Pre/Co-requisite: Foundations Math 110; Teacher recommendation***

Chemistry 111 is designed for students who may be pursuing science, engineering or a related field at the post-secondary level. It is the first of two chemistry courses which exposes students to the development of atomic theory, the classification and structure of matter, elements and compounds, bonding, molecular shape, the mole, chemical reactions and stoichiometry. Chemistry 111 will cover more topics than Chemistry 112, therefore a more accelerated learning pace can be expected. In addition to several labs (including a field trip to UNB), students will be expected to do an enrichment project. A mark of 85%+ in Science 10 and Math 10 (GMF/NRF) is recommended for students taking this course.

*Lab fee $5.00.*

**CHEMISTRY 112**

***Prerequisites: Science 10; NRF & GMF Math 10***

***Pre/Co-requisite: Foundations Math 110***

Chemistry 112 is designed for students who may be pursuing science, engineering or a related field at the post-secondary level. It is the first of two chemistry courses which exposes students to the development of atomic theory, the classification and structure of matter, elements and compounds, bonding, molecular shape, the mole, chemical reactions and stoichiometry. Students will have the opportunity to perform lab experiments to support their understanding of these concepts.

*Lab fee $5.00.*

**CHEMISTRY 121**

***Prerequisites: Chemistry 111 (112 w/Teacher recommendation), Foundations Math 110***

Chemistry 121 is designed for students who are interested in pursuing science, engineering or related field at the post-secondary level. Chemistry 121 will cover more topics than Chemistry 122, therefore an accelerated learning pace can be expected. Previous concepts from Chemistry 11 will be applied to new topics including thermochemistry, kinetics & equilibrium, acids & bases and organic chemistry. In addition to several lab reports, students will be expected to do an individual enrichment project. A minimum mark of 85% in Chemistry 111 (or teacher recommendation in Chemistry 112) is recommended for students taking this course. *Lab fee $5.00.*

**CHEMISTRY 122**

***Prerequisite: Chemistry 112/1; Fnd.Math 110***

Chemistry 122 is designed for students who are interested in pursuing science, engineering or related field at the post-secondary level. Students must have previously completed Chemistry 11 and Math Foundations 11 as previous concepts will be applied to new topics including thermochemistry, kinetics & equilibrium, acids & bases and organic chemistry. Students will have the opportunity to perform lab experiments to support their understanding of these concepts. *Lab fee $5.00.*

**CHILD STUDIES 120**

This course explores the early years of childhood development. How does a baby develop in the womb? How do children learn? What support and care do children need? It is an intensive theory course designed for students who have in interest in continuing study in fields such as childhood education, nursing, child psychology or social work. Topics covered: heredity, conception, prenatal developments, pregnancy and childbirth, child growth and development. Mandatory component: Extended observation of a young child. The student is responsible for choosing the child to observe and study outside of regular class time.

**COMPUTER SCIENCE 110**

**(Introduction to Gaming)**

Interested in creating your own computer programs? In this course for beginners, you will learn the fundamentals of programming using Visual Basic. Activities include the creation of programs to solve problems and the creation of simple games. Computer Science 110 is recognized as an entrance credit at UNB. This course is also an area of concentration credit for the FIT certificate (Focus on Information Technology Program).

**COMPUTER SCIENCE 120**

***Recommended Prerequisite: Computer Sci. 110***

This is an advanced course intended for students who have prior programming experience and will benefit students who will be entering Engineering or Computer Science post-secondary programs. The software used in this course is Java.

**CO-OPERATIVE EDUCATION 120**

Do you want to learn more about a specific area of career interest, and actually experience what working in that area or related area might be like, develop workplace skills and earn two or three credits while still in school? Cooperative Education will allow you to explore your career interest though an extensive workplace component during which you will learn more about your career field and the skills and learning required for success.

Co-Op will help you to formulate more specific learning and career goals. Trades related placement hours can be credited towards Apprenticeship Certification. Due to the out-of-school workplace component of this course, an interview process is required that will consider teacher recommendations, attendance patterns, commitment to learning, the ability to represent the school in a mature and responsible manner and **your own access to transportation to and from the workplace.** Options include morning 3 credit hour or afternoon 2 credit hour classes.

***Enrolment is limited and competitive.***

**CULINARY TECHNOLOGY 110**

Culinary Technology 110 is an entry level hands-on food service training course designed for students who may be considering a career in the food service industry. 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 under supervised lab activities. The activities include preparation of the following foods- quick breads, yeast bread and rolls, cakes and cookies, pies and pastry, and beverages. Catering events are also part of this course and are completed outside of class time. *Lab fee: $25.00.*

**CULINARY TECHNOLOGY 120**

***Prerequisite: Culinary Technology 110***

This course continues to develop the skills learned in Culinary Technology 110. Topics of study include food preparation-soups, grilling, broiling, sandwiches, salads, salad dressing, fruits, vegetables; job search skills; large equipment operation and food borne illnesses. This course will require students to participate in school-based catering opportunities such as “Meals to Go” and other events outside of class time during noon hours and evenings.

***Enrolment is limited and competitive.***

*Lab fee: $25.00.*

**CYBERSECURITY 120**

The Cybersecurity 120 (CYBER120) course will inspire students through the experiential learning of the fundamentals and possibilities of cybersecurity. In CYBER120, students will be actively engaged in the design, development and evaluation of defensive cybersecurity projects, including awareness, concepts and challenges. The intent of this program of study is to have students discussing real-world case studies and learning in hands-on activities from day one, while maintaining a high level of engagement throughout the course through a commitment to problem-based and project-based learning.

**DIGITAL PRODUCTION 120**

Digital Media can be defined as information that can be created, viewed, organized, distributed, modified and preserved using computers. If you are interested in Digital Media, creating web sites, and working with digital audio, Digital Productions 120 can offer you the skills you need to create different digital media. This class is a skills-based course designed for those who are self-directed and motivated to learn more about digital media as it relates to Digital Media. No prerequisite required. This course is also an area of concentration credit for the FIT certificate (Focus on Information Technology Program).

**ECONOMICS 120**

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

**ELECTRICAL WIRING 110 (RESIDENTIAL)**

The course will be of interest to students interested in exploring careers related to the electrical trade. Students will be introduced to Canadian Electrical Code (CEC) standards. They will learn to design, install, test, and troubleshoot circuits, and become familiar with the tools, techniques, materials, and devices associated with it. Students will also be introduced to blueprint reading.

**ELECTRONICS 110 (INTRODUCTION TO)**

***Recommended Prerequisite: GMF & NRF 10***

Resistors, transformers, batteries, capacitors, inductors, and basic circuit analysis…sound interesting? Students with a career objective in the technical trades, an interest in this technology as a hobby, or for those who plan to pursue a career in engineering will benefit from this course. It is also recognized as an entrance credit for Engineering Degree Programs at UNB. This course meets the science graduation requirement.

**ENGLISH 111**

***Prerequisite: English 10 with mark of 85%; Successful evaluation on the grade nine English Language Proficiency Assessment. Teacher recommendation may be required.***

This year-long course worth two credits is designed for students wishing to pursue the study of English at a more advanced pace and scope. Areas of study include short stories, essays, poetry, a Shakespearean play and novels. Formal and informal presentations (including a speech), a formal essay and various forms of written composition are required.

**ENGLISH 112**

***Prerequisite: English 10; Successful evaluation on the grade nine English Language Proficiency Assessment is highly recommended.***

This is a year-long course worth two credits and is designed for those students who wish to pursue a post-secondary education. As a result, you will notice an increase in the volume of independent reading and expected depth of understanding. Formal and informal speaking and listening presentations (including a formal speech) will be conducted throughout the year. Writing assignments will include a formal essay, research writing, creative writing, poetry analysis, etc. Close reading of a variety of literary genres (i.e. short stories, fiction, poetry, drama etc.) including opportunities for personal choice will be the focus of your reading and viewing experiences.

**ENGLISH 113**

Prerequisite: English 10

This mandatory, full-year course (2 credits) is designed to prepare you for college entry or the world of work. The communication skills you will need to be successful after high school are the focus of this course. In English 113 you will be required to read novels of your choosing as well as class novels. Other topics include short stories, poetry, drama and many different forms of writing (literature response, journals, personal responses, etc.). In addition to this, you will participate in formal and informal presentations, complete hands on assignments and work collaboratively with your peers.

**ENGLISH 121**

***Prerequisite: English 111***

This semester course is designed for students wishing to pursue the study of English at a more advanced pace and scope. Areas of study include short stories, essays, poetry, a play, and novels. Formal and informal presentations, a formal essay and various forms of written composition are required.

**ENGLISH 122**

***Prerequisite: English 112***

This semester course is designed for students who plan to pursue a post-secondary education. Areas of study include short stories, essays, poetry, novels, a play, formal and informal presentations, a formal essay and various forms of written composition are required.

**ENGLISH 123**

***Prerequisite: English 113***

This semester 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, and novels. Formal and informal presentations and various forms of written composition are required

**ENTREPRENEURSHIP 110**

This course is designed for students interested in developing the skills essential for starting a small business or pursuing careers in marketing, business or finance. Through a combination of classroom theory, group tasks, and individual work, students will develop their own comprehensive business plan, based on an original idea. Entrepreneurship 110 meets the Fine Arts/Life Role Development graduation requirement.

**ENVIRONMENTAL SCIENCE 120 (INTRO TO)**

***Prerequisite: Science 10***

The objective of this introductory course is for students to develop the knowledge base and skills for investigating and analyzing environmental issues (local and global) and for communicating their knowledge and analysis to others. Students will investigate population growth and resource limitations, ecology of natural systems, historical and current perspectives of the environment from various world views, recognize the ways we value the environment, and look at other topics connect to the environment. They will explore the interconnectedness of natural ecosystems and human dependence and impact on these systems. Each student will research a current environmental issue and in groups will explore current solutions to environmental problems and share their findings with the class. Students will also choose from an extensive list, a few projects that suit their interest (i.e. Outdoor activities, art, research, photography, etc.), with the aim of increasing their appreciation/respect/understanding of the environment. This course meets the science credit graduation requirement. *Lab fee: $5.00*

**F.I. BIOLOGY 112**

***Prerequisite: F.I. Science 10***

This course is designed for students who plan to proceed to university or community college.  Topics include:  microscopy, cellular organics, principles of taxonomy, microorganisms, kingdoms of life and human physiology.  Students will take part in laboratory sessions and will be assigned projects based on curriculum components.

*Lab fee: $5.00*

**F.I. FOUNDATIONS OF MATHEMATICS 110**

***Prerequisite: Numbers, Relations & Functions 10 and Geometry, Measurement & Finance 10***

This course is the first course in the Foundations pathway and the prerequisite for the Pre-Calculus pathway. The Foundations pathway is designed for entry into non-math based degrees and technical courses at the college level. Students must pass this course to enter into the Pre-Calculus courses and/or to take Foundations 12. Topics include financial mathematics, geometry, measurement, number, logical reasoning, and relations and functions. Students entering this pathway should have a 70% or higher in Numbers, Relations and Functions 10. ***This course fulfills graduation requirements for mathematics.***

**F.I. INDIVIDUAL AND FAMILY DYNAMICS 120 (Relations Familiales)**

The main theme of this course is the individual in relation to the family, friends and society. Students will explore their own development through a study of themselves and their relationships with others. Topics covered include personal development, relationships and the importance of family. Students will learn strategies on how to cope with the ever-changing issues that impact our lives. This course is an excellent introduction to further studies in psychology, sociology, teaching, social work, and family life education. Student projects are an integral part of this course. This course follows the same themes as the English version.

**F.I. LANGUAGE ARTS 110**

This course is a continuation of FILA 9 and FILA 10 in the French Immersion option. Students will continue to expand their communication skills in oral and written French to ensure the maintenance and progression of their linguistic ability and increase students’ cultural knowledge and experiences. Students will explore oral, regional & poetic language, present a debate, participate in group role play scenarios and will study and perform part of a French play.

**F.I. LANGUAGE ARTS 120**

Students who have successfully completed F.I. Language Arts 110 will continue to expand their skills in oral and written French. The main objectives of the course are to use reading, writing & listening to support and expand their oral skills as students will prepare for the provincial interview to determine their level of proficiency in French second language.

**F.I. MODERN HISTORY 112**

***Prerequisite: F.I. Language Arts and Social Studies 10***

History is the story of the human community-how people lived, how people shared ideas, how they ruled and were ruled, and how they fought. Modern History is a journey through historical development from the French Revolution to the Cold War. In this course you will learn about big ideas that have shaped the world we live in today. This course will count towards a French Immersion certificate.

**F.I. PRE-CALCULUS 110**

***Prerequisite: Foundations of Mathematics 11***

This course is the first course in the Pre-Calculus pathway which is designed for entry into post-secondary programs that require the study of theoretical calculus. Topics include algebra and number, relations and functions, and trigonometry. Students entering this pathway should have a 70% or higher in the Foundations 11 course.

**FINANCIAL & WORKPLACE MATHEMATICS 110**

***Prerequisite: Geometry, Measurement & Finance 10***

This course is the first course in the Financial and Workplace pathway which is designed for entry into Bachelor of Arts, many college courses, the majority of trades and for direct entry into the work force. Topics include financial mathematics, algebra, geometry, measurement, number, and statistics. ***This course fulfills graduation requirements for mathematics.***

**FINE ARTS 110**

This elective course requires no previous experience and is intended to give students exposure to the arts. Content areas include music, art, drama, and literature. Students will be expected to take part in discussions concerning the value of art and will explore artists and art institutions at the local, provincial and international level. Art History will be explored and visual works will be created to demonstrate an understanding of an art movement of your choice. Students will discover the elements of music, create and use non-traditional instruments and explore the meaning of lyrics. The focus of this course is performance based and there will be several opportunities to share and present work for the class. Students will create puppets and write and act in a play. Final projects will allow students to create expressive works using visual arts, music or drama. This course meets the Fine Arts/Life Role Development graduation requirement.

***Lab fee: $10.***

**FOUNDATIONS OF MATHEMATICS 110**

***Prerequisite: Numbers, Relations & Functions 10 and Geometry, Measurement & Finance 10***

This course is the first course in the Foundations pathway and the prerequisite for the Pre-Calculus pathway. The Foundations pathway is designed for entry into non-math based degrees and technical courses at the college level. Students must pass this course to enter into the Pre-Calculus courses and/or to take Foundations 12. Topics include financial mathematics, geometry, measurement, number, logical reasoning, and relations and functions. Students entering this pathway should have a 70% or higher in Numbers, Relations and Functions 10. ***This course fulfills graduation requirements for mathematics.***

**FOUNDATIONS OF MATHEMATICS 120**

***Prerequisite: Foundations of Mathematics 110***

This course is the second course in the Foundations pathway. The Foundations pathway is designed for entry into non-math based degrees and technical courses at the college level. Topics include statistics, probability, relations and functions.

**GOALS, GROWTH, & GRIT: SKILLS FOR SUCCESS 120**

This course will help students develop skills in three main areas—positive and productive mindsets and behaviours, organizational patterns, as well as functional and critical literacy. Within the learning expectations of the course, specific success skills, strategies, and practices will be explored. Students will be supported to transfer these skills, strategies and practices to authentic life situations and circumstances, including their other courses. Students will also learn how these support their plans for life after high school.

**GRAPHIC ARTS AND DESIGN 110**

Prerequisite: Grade 10 Visual Arts.

Students will explore skills, processes and knowledge involved in graphic art and design in order to create original art and design products such as logos, illustrations, and more. Images will be created by hand and/or computer. A strong interest in Art and a high level of dedication to artwork is required for this course. Course meets the Fine Arts/Life Role Development graduation requirement.

*Lab fee: $5.00.*

**HOSPITALITY AND TOURISM 110**

Looking for a fun, interesting, and dynamic career option? Hospitality & Tourism 110 may be for you! In this introductory course, you will learn about one of the fastest growing industries in North America and its many social and economic benefits. You will also learn about the abundance of world-wide job opportunities available in Tourism and how you can pursue them. Some of the potential career choices are chef, pilot, flight attendant, ski/snow board instructor, travel agent, hotel manager, party planner, and the list goes on. Come discover the world of Tourism and all its possibilities.

**HOUSING AND DESIGN 120**

Housing and Design is intended for students who are interested in learning more about the housing environment in the past, present and future. You will learn about housing decisions as this may account for the single largest expenditure for the majority of people. This course also requires creativity and individuality in designing a living environment with a focus on interior décor.

**HUMAN PHYSIOLOGY 110**

***Prerequisite: Science 10***

This course is designed to appeal to a wide range of learners, including students for whom this will serve to fulfill their science graduation requirement. The goal of this course is to build an understanding of the physiology of the human body. Throughout the course students will build their scientific literacy skills as they learn to navigate the extensive volumes of information on human health now available - in particular on the Internet. By the end of the course students will have developed a holistic personal wellness plan, demonstrating their understanding of overall health, human physiology, and the effect of disease and lifestyle choices. *Lab fee $5.00.*

**INDIGENOUS STUDIES 120**

This course is designed to promote understanding of the Mi’kmaq and Wolastoqey 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 grade 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**

The main theme of this course is the individual in relation to the family, friends and society. Students will explore their own development through a study of themselves and their relationships with others. Topics covered include personal development, relationships and the importance of family. Students will learn strategies on how to cope with the ever-changing issues that impact our lives. This course is an excellent introduction to further studies in psychology, sociology, teaching, social work, and family life education. Student projects are an integral part of this course.

**INFORMATION TECHNOLOGY 120**

IT 120 offers students the opportunity to become competent using information processing tools in Microsoft Office 365. Word processing, worksheets, and presentations are key components of this course. Whether you plan to join the workforce or pursue post-secondary studies immediately following high school, this course will be of benefit to you. This course is also a general skill credit for the FIT certificate (Focus on Information Technology Program).

**INTERNAL COMBUSTION ENGINES 110**

\**This course not offered in 2020-21; will be offered in 21-22*

This course content includes the theory of operation and function of the engine systems. Students learn the safe operation of tools and equipment used to disassemble, diagnose, service and repair engine components and systems. Emphasis is placed on the development of skills essential for persons entering the automotive, aircraft or marine service industries. ***Tune Up and Emissions 120 must also be chosen.***

**INTRODUCTION TO EARLY CHILDHOOD COOP 120**

Early Childhood Coop is a two or three-period coop program where you work in a licensed childcare centre and complete the Early Childhood 90-hour online course. You will complete the coop program as normal, but you will also spend time working with a childcare expert to complete the online part of the program. If successful, you will earn the Early Childhood Certificate that shows you are ready to work in any licensed childcare centre in the province. Transportation is required. ***Enrolment is competitive and very limited.* Only students seriously planning a career working in a day care should select both Coop 120-either 2 or 3 and Early Childhood Services 120.**

**LAW 120**

Who writes the law? Who enforces the law? How does the law impact my life? What are my rights? The aim of the course is to provide students with a basic understanding of the Canadian Legal System. While the course does have a theoretical side, it is designed to be highly interactive. Students will be encouraged to engage in discussion and debate and share ideas freely with the class.

**LONG-TERM CARE CO-OP 120**

Long-term Care Coop is a three-period coop program at a licensed long-term care facility with seniors and other individuals needing long-term care. You will spend the morning at a care facility near your school and earn two credits in Co-op 120 and one credit in Health Care 110. You will also receive “employment ready recognition” from the care facility. An excellent opportunity for students interested in Resident Assistant or Personal Support Worker careers. ***Enrollment will be very limited and competitive.***

***Students must select Health Care 110 and Coop Education (2 credits).***

**MATH 1208 NBCC FOUNDATIONS 120**

**Prerequisites: Financial & Workplace Math 110 or Foundations Math 110**

The purpose of this course is to refresh skills in mathematics developed throughout school in areas deemed essential for the successful completion of trades programs. Although the topics covered in this course are common to any math program, every effort is made to illustrate their usage in the trades’ professions. Upon completion of this course students will receive a high school credit and, in addition, if they attend a trades’ program at NBCC they may apply for the Math 1208 credit thus this course provides dual credit at high school and NBCC. Topics include: decimals, fractions, percentages, measurement, area, volume and perimeter.

**MEDIA STUDIES 120**

Media Studies centers on learning how to analyze the messages that inform, entertain and sell to us every day. We’ll use critical thinking skills on all media—from music videos and Web environments to product placement in films and virtual displays on NHL hockey boards! We’ll develop your instinct to question what lies behind media productions – the motives, the money, the values and ownership. The course also depends upon lots of group collaboration and your work on many multimedia projects. In lieu of an exam, students will present a seminar and major term project.

**METALS FABRICATION 110**

Students in this welding course develop basic skills in the safe use of arc and MIG welding equipment, instruction is also provided in oxygen-acetylene and plasma cutting equipment as well as machine and equipment used to cut and form metals. Students use a modern, well equipped welding shop to construct or repair products such as furniture and cargo trailers. The course will appeal to students interested in exploring opportunities in metal working, mechanical servicing and other skilled trades. **Metals Processing 110 must also be selected.**

**METALS PROCESSING 110**

This course develops skills in the operation of lathes, shapers, grinders and milling machines in the lab, students learn a variety of processes used to form parts for machines and tools. This course would appeal to students interested in pursuing a career in the mechanic or machines trades, mechanical engineering or mechanical technology area. **Metals Fabrication 110 must also be selected.**

**MICROELECTRONICS 120**

***Recommended Prerequisite: Electronics 110 (Introduction To)***

Through theory and practical labs, this course is designed to introduce students to the world of semiconductors and digital electronics. Students planning a career at the electrical occupational or engineering levels, or who have a keen interest in electronics/computers should consider this course. This course meets the science graduation requirement.

**MILL AND CABINET WORK 120**

***Recommended pre-requisite: Applied Tech 110 (Introduction to)***

Do you like building projects with your hands? This is the second of the woodworking classes offered which engages students who have previous woodworking experience. You will learn how to effectively and safely use a variety of wood working and hand tools. Topics will include learning about the Tree to shelf process and how Lumber is harvested, dressing stock, advanced joinery techniques, moldings, and traditional woodworking methods. Other projects may include special projects or personal projects if time allows.

*Lab fee $50.*

**MODERN HISTORY 111**

***Prerequisite: Recommended mark of 85% and recommendation of Social Studies 10 teacher.***

History 111 closely mirrors History 112 in the exploration of big ideas and modern developments in our history. As a level 1 course students with be exposed to more independent work, project-based learning and primary source discovery. This is a course for self-motivated history lovers.

**MODERN HISTORY 112**

***Prerequisite: Social Studies 10***

History is the story of the human community-how people lived, how people shared ideas, how they ruled and were ruled, and how they fought. Modern History is a journey through historical development from the French Revolution to the Cold War. In this course you will learn about big ideas that have shaped the world we live in today.

**MODERN HISTORY 113**

***Prerequisite: Social Studies 10***

A journey through the major events and ideas of Modern History, this course begins with 18th century revolution and travels through the industrial age, world wars, the Roaring Twenties and Dirty Thirties all the way to the Cold War and current events. Students will learn the basics of thinking like a historian as they analyze our recent past.

**MUSIC 112 (CHORAL)**

***Prerequisite: Grade 10 Music***

This course is designed for students who have taken the grade 10 Music course and who wish to further develop their skill in singing and their knowledge of music. Approximately half of the class time is spent on sight-reading, working repertoire, and vocal technique. The remainder of the class time will include the study of theory and music appreciation. Composition using various forms of technology are included so familiarity with technology will be an asset. In-class solo and group performances occur regularly.

\**Students interested in participating in the school production as an extra-curricular may benefit from the skills learned in this course.*

**MUSIC 112 (GUITAR)**

***Prerequisite: Grade 10 Music***

This course is designed for students that have taken Grade 10 music and wish to extend their study with a specific guitar focus. Students will learn to read music and compose and perform pieces. The course will study the development of the guitar historically and learn performance techniques and theory through various styles such as blues, jazz, folk, and classical.

**MUSIC 112 (INSTRUMENTAL)**

***Prerequisite: Grade 10 Music***

This course is for anyone who has played an instrument for the last two or more years.

Approximately 50% of class time is spent on creating and performing a varied repertoire on your instrument of choice and developing fluency in technology that meets industry standards. The balance of the time is spent on theory and music appreciation. There will be opportunity to perform and compose for both solo and group performances. The course builds on outcomes and experiences covered in grades 9/10.

**MUSIC 112 (KEYBOARDING)**

***Prerequisite: Grade 10 Music***

This course is designed for students who have taken the grade 10 Music course and who wish to extend their experience to more advanced skills. Approximately half of the class time will be spent playing the keyboard while the remainder will be used to study how music is put together. Composition using various forms of technology is included so familiarity with technology will be an asset. In-class solo and group performances occur regularly.

**MUSIC 122**

***Choral, Instrumental, Guitar, or Keyboarding***

***Prerequisite: Music 112***

Students enrolled in any strand of this course will have a strong interest in music. As part of this course, students will be expected to work individually and in small groups in composition, research, and performance. Students who successfully complete Music 122 will have a strong foundation to study music as a vocation after high school or to pursue it in post-secondary studies.

**NUTRITION FOR HEALTHY LIVING 120**

This course is designed to introduce students to making healthy food choices, maintaining a balance between eating habits and physical activity and the use of preventative strategies that contribute to overall wellness. Current health trends and issues relating to chronic diseases, lifestyles, and food technologies will be explored and students will be encouraged to use research and reliable information to examine their own eating habits and lifestyle choices. This course will be of interest to students concerned with personal wellness and those interested in pursuing a career in a health or wellness related field.

**OUTDOOR PURSUITS 110**

***Prerequisite: Grade 10 Health & Phys. Educ.***

This course will develop personal outdoor recreation skills based on environmental ethics. Students must satisfy a requirement to complete a series of out-trips that may be day-trips, overnight excursions 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. This course meets the Fine Arts/Life Role Development graduationrequirement. Please note that it is recommended that students do not take this course and Phys. Educ. 120 during the same semester**. *Course fee:* *$100***

***Enrolment is limited and competitive.***

**PHYSICAL EDUCATION LEADERSHIP 120**

***Prerequisite: Grade 10 Phys. Ed*.**

Health and Physical Education 120 is an elective course for students who wish to develop leadership skills. The purpose of the course is to prepare students to become skilled and knowledgeable in order to become involved and assume leadership in community and school sport and recreation programs. The course will involve both theoretical and practical aspects. The theory will deal with the concept of leadership; characteristics of leaders and those led; sport and recreation in contemporary society; and health concerns of leaders. The practical aspects will deal with managing, teaching, coaching, and officiating, athletic injuries. Students are required to volunteer for 35 hours during the semester in and out of class time. Please note that it is recommended that students do not take Outdoor Pursuits 110 and Phys. Ed. 120 during the same semester**.**

***Enrolment is limited and competitive.***

**PHYSICAL GEOGRAPHY 110**

***Prerequisite: Science 10***

This course is designed to appeal to a wide range of learners, including students for whom this will serve to fulfill their science graduation requirement. “A Portrait of a Planet” involves students in an examination of the current state of planet Earth. Students will determine how it the Earth came to be the way it is today and look at the long-term future of the planet and its passengers. The course is particularly recommended to students who are interested in the scientific fields of astronomy, oceanography, geology, meteorology, mapping, or urban and rural planning. The course also presents an introduction to skills and methods that are basic to further study of survey engineering.

**PHYSICS 111**

***Prerequisites: Science 10; NRF & GMF Math 10; Teacher recommendation***

***Pre/Co-Requisite: Foundations Math 110***

Students who choose this course must have a genuine interest in science and a better-than-average achievement in both science and mathematics. The student employs the scientific method in gathering experimental data, and laboratory work is a major part of this course. Topics covered will be the same as those in Physics 112 but the depth of coverage will be greater and independent project work may be required. An average of 85%+ in Science 10 and Math 10 (GMF/NRF) is recommended for students taking this course.

**PHYSICS 112**

***Prerequisites: Science 10; NRF & GMF Math 10***

***Pre/Co-Requisite: Foundations Math 110***

This course is the first of two Physics courses. Successful completion of Physics 112, as well as giving a science credit for high school graduation, 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. Topics covered include measurement, vectors, kinematics, including uniform motion and accelerated motion, Newton’s laws of motion, forces and dynamics, introduction to momentum, work, power, energy, conservation of energy, wave motion, sound waves and light.

**PHYSICS 121**

***Prerequisite: Physics 111 (112 w/ Teacher recommendation); Foundations Math 110***

***Recommended Prerequisite-Calculus 110***

Physics 121 utilizes the discovery approach. Students who choose this course must have a genuine interest in science and a better-than-average achievement in both science and mathematics. The student employs the scientific method in gathering experimental data.

Laboratory work is a major part of this course. Topics covered will be the same as Physics 122 (vectors, dynamics II, Newton’s laws’, applications, momentum and energy conservation, projectile motion, circular motion, universal gravitation, Kepler’s Laws, field theory, electrostatics, and electricity) but the depth of coverage will be greater and independent project work will be required.

**PHYSICS 122**

***Prerequisites: Physics 112/111***

***Foundations Math 110***

***Recommended Prerequisite-Calculus 110***

This is the second of two sequential Physics courses and is designed for students who have successfully completed Physics 112 or equivalent. Topics covered include vectors, dynamics II, Newton’s laws’, applications, momentum and energy conservation, projectile motion, circular motion, universal gravitation, Kepler’s Laws, field theory, electrostatics, and electricity.

**POST-INTENSIVE FRENCH 110**

This course is designed to help students communicate effectively in French, through speaking, reading and writing and to interact appropriately in a variety of situations that relate to their needs and interests*.* It is a non‐immersion program for students to continue to learning French as a second language. Themes at this level include mysteries, injustices and the power of photography.

\**Note: students who function at an Intermediate level in French may choose to enroll in French immersion courses (including online options) in addition to or in place of Post‐Intensive French courses in grades 11 and 12.*

**POST-INTENSIVE FRENCH 120**

Post-Intensive French is designed to help students communicate effectively in French, through speaking, reading and writing and to interact appropriately in a variety of situations that relate to their needs and interests.

It is a non‐immersion program for students to continue to learning French as a second language. Themes at this level include looking to the future, ecological challenges, and cultural similarities and differences. This course will also include preparation for the Oral Proficiency interview by the Department of Education.

\**Note: students who function at an Intermediate level in French may choose to enroll in French immersion courses (including online options) in addition to or in place of Post‐Intensive French courses in grades 11 and 12.*

**POWER TRAIN AND CHASSIS 110**

This 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. Students planning on pursuing a career in the motor vehicle service industry would benefit from this course. *Automotive Electrical Systems 120 must also be selected.*

**PRE-CALCULUS 110**

***Prerequisite: Foundations of Mathematics 110***

This course is the first course in the Pre-Calculus pathway which is designed for entry into post-secondary programs that require the study of theoretical calculus. Topics include algebra and number, relations and functions, and trigonometry. Students entering this pathway should have a 70% or higher in the Foundations 11 course.

**PRE-CALCULUS 120A**

***Prerequisite: Pre-Calculus 110***

The Pre-Calculus pathway is designed for entry into post-secondary programs that require the study of theoretical calculus. Topics include in-depth study of trigonometry and various functions both graphically and algebraically. Students entering this pathway should have a 70% or higher in the Pre-Calculus 11 course.

**PRE-CALCULUS 120B**

***Pre-requisite: Pre-Calculus 12A***

The Pre-Calculus pathway is designed for entry into post-secondary programs that require the study of theoretical calculus. Topics include sequences and series, radical, polynomial, rational and reciprocal functions. Students entering this pathway should have a 70% or higher in the Pre-Calculus 12A course.

**RESIDENTIAL FINISH AND INSULATION 120**

*Not offered in 2020-21; Available 21-22*

This advanced building construction course enables students to acquire knowledge and skills in the installation interior and of insulation, wall and ceiling cladding and the installation of trim, doors and windows. This course will be of interest to students exploring career opportunities in the building construction industry***. Framing and Sheathing 110 must also be chosen.***

**ROBOTICS & AUTOMATED TECHNOLOGY 120**

This is a technical course that deals primarily in Pneumatic systems and EV3 robotics. Students will learn about the various components of Pneumatic systems used in industry and how they are utilized. Classes are largely lab based using hands-on training centers and actual equipment, to complete the lab exercises. The robotics part of this class will see students do a 6-8 week study on Engineering in Robotics using the Lego EV3 as a medium. Students will learn how to program the EV3 brick, download the program into a Robot they have built complete with various sensors and have it complete various tasks on its own. This is not remote control robotics! The various sensors including, touch sound, sight and hearing will enable you to build an interactive robot capable of completing tasks entirely by itself.

**SCIENCE 122 (ADVANCED)**

***Prerequisite: Chemistry and Physics 11***

***Co-requisites: Chemistry and Physics 12***

This course, which is the completion of topics from Chemistry 11 & 12 and Physics 11 & 12, will include study of magnetism, electromagnetism, atomic structure, quantum mechanics, nuclear physics, redox reactions and electrochemistry. This course is recommended for students contemplating university entrance into Science, Engineering, Forestry, Nursing or other related fields.

**SOCIOLOGY 120**

Have you ever wondered why humans behave the way they do?  What shapes their attitudes, behaviors, beliefs, and values?  Sociology is the study of society, and seeks to understand why humans behave the way they do when they are in groups.  In this class you will learn to critically examine, and better understand your own beliefs about the social world.  In this class we will be examine topics such as: culture, race, crime, gender, social structure, social reform, religion, family, media and deviance.

**SPANISH 120**

The primary objective of this introductory course is to develop the ability to communicate in the Spanish language. Students taking this course will experience continual practice in communicating, and will become familiar with common Hispanic customs and traditions.

**THEATRE ARTS 120**

Theatre Arts 120 is an elective course for students in grade 11 and 12 who are interested in participating in stage performance. In this **performance-based class** students are introduced to all aspects of theatrical performance including acting technique, scene creation, and history of drama, physical theatre and technical theatre. The course will capitalize on the individuality, confidence and creativity of the students as they work through the process of bringing scenes to performance level. Excellent attendance is essential to be successful in the course.

**TUNE UP AND EMISSIONS 120**

*Not Offered in 2020-21; Available 21-22*

This advanced automotive course includes the study of automobile fuel and emission systems. Students will study the component functions and service procedures of modern fuel injection and emission systems. This course would be of interest to students entering the automotive, aircraft or marine service industries. ***Internal Combustion Engines 110 must also be chosen.***

**VISUAL ARTS 110**

***Prerequisite: Grade 10 Visual Arts***

The student is given some opportunities to work independently and to explore in greater depth, materials and concepts touched on in Grade 10 Visual Arts. A look at several artists from Art History creates a background for various projects. This course requires students to have painting and drawing materials. Course meets the Fine Arts/Life Role Development graduationrequirement. ***Lab fee: $5.***

**VISUAL ARTS 120**

***Prerequisite: Visual Arts 110***

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. A look at several artists from Art History creates a background for various projects. Students will also critique aspects of their creative process and product. Course meets the Fine Arts/Life Role Development graduationrequirement.

*Lab fee: $5.00.*

**WELLNESS THROUGH PHYSICAL**

**EDUCATION 110**

This course is designed to promote healthy active living for life. It is intended to encourage the broad-based exploration of non-traditional approaches to fitness and wellness such as yoga, zumba, personal training, snow shoeing, dance, boxing, hiking, etc. This is an activity-based course that requires students to be physically active. Students that enroll in this course are expected to be prepared for physical activity by wearing proper clothing and taking part in all planned activities. Running is an essential portion of the course where students train and work up to completing an 8km run. This course studies holistic wellness and requires a wellness action plan within the community that takes the place of a written exam. Course meets the Fine Arts/Life Role Development graduation requirement.

*Course fee: $50.00*

**WORLD ISSUES 120**

Students will look at the challenges of building a sustainable and fair future around the globe. The focus will be on current events that help understand these challenges.  The course provides for student choice within the themes of ‘humanity’, ‘interdependence’, and ‘geopolitics’.

**WRITING 110**

Do you enjoy writing poetry? Have you ever thought you might have a great idea that you could turn into a best-seller? Writing 110 is an elective that could help you get started on the path toward achieving your writing goals. It is designed for students who want to find an outlet for their literary talents. The course focuses on the writing process and consists of journal writing, and other forms of narrative writing, as well as expository and persuasive writing. Students will share their work with peers, as well as conference with the teacher. Within this course structure, opportunity exists for creative, individual expression. Students will maintain a portfolio of their published pieces.

**LOCAL OPTIONS**

*These courses have been developed by LHHS Departments and have been approved by the Department of Education to provide additional course selection opportunities for our students. Students may take up to two (2) courses to meet the graduation requirement of seventeen (17) credits.*

**ACTIVE CITIZENSHIP AND ENGAGEMENT 120**

Students in this course will learn and practice the skills needed to become active, engaged leaders in the school and larger community. Classroom sessions will be focused on communication, collaboration, problem-solving, and community organization. Practical parts of the course will involve hands-on planning and carrying out community-oriented projects. These skills will empower all learners to lead and succeed in all personal, professional and community settings.

**DEBATE (Introduction to) 110**

The most common activity in class will be prepared debates. Students will each take part in several debates and these will involve a number of different formats. They will be required to do research and develop logical arguments. Students are expected to keep track of all arguments and responses. Some debates will be recorded and viewed later with the students for a more detailed analysis and critique. Students will also prepare and present a variety of other types of speeches including persuasive, after-dinner, and congratulatory speeches, as well as interpretive readings. Students will learn structure of arguments and how to use informal logic both to develop and attack arguments. These lessons will be reinforced by practice through both oral and written arguments drawn from class debates, the media, the Internet and everyday life.

**FI TECHNIQUES DE COMMUNICATION 120**

This course will mostly develop and enhance student’s oral communication skills. The use of appropriate language conventions in both written and spoken French will be emphasized. The course will include a variety of communication activities. The focus of this course will be on oral communication and preparation for the Oral Proficiency interview by the Department of Education in grade 12 French courses. The course will include several types of oral presentations and activities. Students must be in grade 12 to register for this course.

**INDIGENOUS WABANAKI ART 110**

This is an introductory art course open to all students that introduces themes reflective of Native culture. Students will explore hands-on crafts such as bead work, paper-maché (mask/puppet) and mural creation.

**INTRODUCTORY WOLASTOQEY 110**

The primary objective of this course is to introduce students to the Wolastoqey language, their culture and traditions. Students will develop the ability to communicate orally in the Wolastoqey language. Students taking this course will learn to introduce themselves, have small conversations, and speak basic phrases while learning about Wolastoqey culture and oral traditions.

**PSYCHOLOGY 110**

Why do you think and act the way you do?  Psychology is a social science that seeks to answer questions about us all - how we think, feel and act.  In this introductory course, you will learn to think critically as you explore human nature.  Topics covered: Groundbreakers and History, Research, Nature/Nurture, the Brain, Sleep and Dreams and Psychological Disorders. This is a great course for anyone interested in pursuing a psychology career or for those who are interested in what makes us tick!  *There is sensitive content and discussion in this course.*

**SENIOR PROJECT (1 credit/ 1 period)**

Designed for grade 12 students, the one credit Senior Project course will appeal to those interested in a self-directed exploration of a topic or subject of their own choosing.  Students will undertake individual project management including: meeting with mentors in the community; project identification and proposal submission; planning and scheduling; research and development; and reflection and reporting.  Students will be required to present the progress / direction of their project at mid-semester and then give a final project presentation at the end of the semester.  Students will also be required to create a display to share their project with the school and the community.  The course is for students who are passionate about learning outside the constraints of a normal classroom environment.  They will need to be self-starters, highly motivated and able to work with minimal supervision.  Students will have approximately 80 hours to devote their project during the school day, but extra time is often required outside of school.  The outcomes for the Senior Project course are based on the New Brunswick Global Competencies.

**Application Required—See Guidance.**

**SENIOR PROJECT (COMPREHENSIVE-2 credits/2 periods)**

Designed for grade 12 students, the two period / two credit Senior Project course will appeal to those interested in an in-depth, self-directed exploration of a topic or subject of their own choosing.  Students will undertake individual project management including: meeting with mentors in the community; project identification and proposal submission; planning and scheduling; research and development; and reflection and reporting.  Students will be required to present the progress / direction of their project at mid-semester and then give a final project presentation at the end of the semester.  Students will also be required to create a display to share their project with the school and the community.  The course is for students who are passionate about learning outside the constraints of a normal classroom environment.  They will need to be self-starters, highly motivated and able to work with minimal supervision.  Students will have approximately 160 hours to devote their project during the school day, but extra time is often required outside of school.  Due to the amount of time provided, the breadth, scope and expectations of the projects produced in the Comprehensive Senior Project course are greater than those of the one credit Senior Project course.  The outcomes for the Comprehensive Senior Project course are based on the New Brunswick Global Competencies. **Application required—see Guidance.**

**Courses with Prerequisites and/or Application Requirements**

**(See Course Descriptions for Details)**

|  |  |
| --- | --- |
| **Course** | **Prerequisite/Application (see course descriptions)** |
| Biology 111 | Science 10; Teacher recommendation |
| Biology 121 | Recommended Pre-Requisite-Biology 111 |
| Calculus 120 | Pre-Calculus 12A & 12B |
| Canadian History 122 | History 112/111 |
| Career Exploration 110 | Enrolment is limited and competitive; not all students will be selected |
| Chemistry 111 | Science,NRF,GMF10; Pre/Co-requisite-Foundations110; Teacher recommendation |
| Chemistry 112 | Science, NRF, GMF 10; Pre/Co-requisite-Foundations 110 |
| Chemistry 121 | Chemistry 111 (112 w/Teacher recommendation) Foundations 110 |
| Chemistry 122 | Chemistry 112/111; Foundations 110 |
| Cooperative Education 120 | Enrolment is limited and competitive; not all students will be selected |
| Culinary Technology 120 | Enrolment is limited and competitive; not all students will be selected; Culinary 110 Required |
| English 111 | English 10 (recommended mark 85%); Teacher recommendation |
| English 112 | English 10 (ELPA successful) |
| English 113 | English 10 |
| English 121 | English 111 |
| English 122 | English 112 |
| English 123 | English 113 |
| FI Language Arts 120 | FI Language Arts 110 |
| FI Foundations of Math 110 | FI NRF & FI GMF 10 |
| FI Pre-Calculus 110 | Foundations of Mathematics 110 |
| Financial & Workplace Math 110 | Geometry, Measurement and Finance 10 |
| Math 1208 NBCC Foundations 120 | Either grade 11 math credit (Foundations of Financial) |
| Foundations of Math 110 | NRF 10 & GMF10 |
| Foundations of Math 120 | Foundations of Mathematics 110 |
| Post Intensive French 122 | Post Intensive French 112 |
| Music 112 (Choral) | Music 10 |
| Music 112 (Guitar) | Music 10 |
| Music 112 (Instrumental) | Music 10 |
| Music 112 (Keyboarding) | Music 10 |
| Music 122 | Music 112 |
| Outdoor Pursuits 110 | Health & Physical Education 10; Enrolment is limited and competitive; not all students will be selected |
| Physical Education Leadership 120 | Health & Physical Education 10; Enrolment is limited and competitive; not all students will be selected |
| Physics 111 | Science, NRF, GMF 10; Co-requisite-Foundations 110 |
| Physics 112 | Science, NRF, GMF 10; Co-requisite-Foundations 110 |
| Physics 121 | Physics 111 (112 w Teacher rec.); Foundations 110; Recommend-Pre-Calculus 110 |
| Physics 122 | Physics 112/111; Foundations 110; Recommended-Pre-Calculus 110 |
| Pre-Calculus 110 | Foundations 110 |
| Pre-Calculus 12A | Pre-Calculus 110 |
| Pre-Calculus 12B | Pre-Calculus 12A |
| Science 122 (Advanced) | Chemistry & Physics 112/111 |
| Senior Project 120 | Application required |
| Visual Arts 110 | Visual Arts 10 |
| Visual Arts 120 | Visual Arts 110 |
| Wellness through Physical Education 110 | Health and PE 10; Enrolment is limited and competitive; not all students will be selected |
| World Issues 120 | History 111, 112, or 113; or F.I. Modern History |

**GRADE 11 &12 COURSE SELECTION PLANNING FORM 2019-20**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Planning:** Check off the Grade 10 courses above that you have successfully completed and select any you haven’t completed yet first. Then complete the Grade 11 and/or Grade 12 chart below to ensure graduation requirements will be met.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| □ Geometry, Measurement & Finance 10 | □ Broad Based Technology 10 | | □ English Language | |
| □ Numbers, Relations and Functions 10  □ English 10 | □ Intro to Applied Tech. 110  **\*Please note: Students who took Health and PE 10 with Wellness 110 (Hockey Enrichment) only need one grade 10 elective.**  □ Phys. Ed. 10 | | Proficiency Assessment | | |
| □ Social Studies 10 | □ Art 10 | |  | |
| □ Science 10 | □Music 10 | |  | |
| □ French 10 or Wolastoqey 10 | **(Any 2 of the above )** | |  | |
| □ PDCP |  | |  | |
| **GRADE 11** | | **ENTERING GRADE 12** | |
| 1. English 111 □ 112 □ 113 □ (full-year, 2 credits) | | 1. English 12 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| 2. Financial & Workplace Mathematics □  **OR** Foundations of Mathematics 11 □  FI Foundations of Mathematics 11 □ | | 2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_    3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| 3. Modern History 111 □ 112 □ 113 □  FI Mod History 112 □ | | 5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| 4. Science (see below) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| 5. Fine Arts & Life Role (see below) \_\_\_\_\_\_\_\_\_\_\_\_\_ | | 7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| 6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | 8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| 7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | 9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| 8. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | 10. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| 9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |  | |
| Alternate #1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Alternate #2: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Alternate #3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | Alternate #1: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Alternate #2:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Alternate #3: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | |
| **SCIENCE OPTIONS**  Biology | | **FINE ARTS AND LIFE ROLE**  **DEVELOPMENT OPTIONS** | |
| Chemistry | | Career Exploration 110 | |
| Physics  Human Physiology 110  Introduction to Electronics 110  Introduction to Environmental Science 120 | | Cooperative Education 120  Entrepreneurship 110  Individual & Family Dynamics 120  Fine Arts 110 | |

Automotive Electrical Systems 120 Graphic Art and Design 110

## Micro Electronics 120 Physical Education Leadership 120

Physical Geography 110 Music 111, 112, 120, 122

Robotics and Automated Technology 120 Nutrition for Healthy Living 120

Outdoor Pursuits 110

## 

## \*Note: 5 grade 12 credits must be earned out Theatre Arts 120

## of the 17 courses required for graduation. Visual Arts 110, 120

***Only 2 of the 17 can be local options.*** Wellness through Physical Education 110

**NOTES**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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