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# ENROLLMENT GUIDELINES

All courses are subject to limited enrollment and may be cancelled if numbers do not warrant a place in the timetable. Staffing allocations ultimately determine availability of sections/courses. Administration reserves the right to review section/course numbers each semester.



# INTRODUCTION AND GENERAL COMMENTS

The purpose of this guide is to provide pertinent information for students as they select grade 11 and 12 courses. The class of 2017: Graduation Requirement Template should be used as a reference. Please note that all grade 10 courses are required for graduation and are prerequisites for most grade 11 courses.

## Choosing Courses:

Each spring, students select courses for the following academic year. There is a wide variety of courses from which to choose in grades 11 and 12, and a number of factors that should be considered when making these choices. It is important that students take time to carefully consider their options since it can be difficult to make changes once scheduling for the year is complete. Additional information may be obtained through the FHS Guidance Department.

## Course Load:

Students are required to take a full course load each semester. All students must attempt 20 credits and complete four semesters in order to be eligible for graduation 17 of 20 credits are required for graduation. A student needing an additional semester past the grade 12 year may take the minimum number of courses to complete graduation requirements.

## Course Descriptions:

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 at one level only.

ex: Parenting 110, Native Studies 120

**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: French 111, Physics 121

**Advanced Placement (AP) courses** give students the chance to experience university level work in high school. These courses provide preparation for writing the AP Exams in May.

## Pre-requisites:

Please read the course descriptions and requirements carefully prior to course selection as many courses have pre-requisites. Many courses must be taken in sequence to fulfill the pre-requisite; students without pre-requisites will not be allowed to take the course. For example, Chemistry 112 must be completed before Chemistry 122.

## Course Fees:

Please note that some courses require additional supplies and/or payment of lab, studio or other fees.

## Timetables:

Timetables are computer-generated and therefore courses fall by chance into either semester. Some listed courses may be dropped due to insufficient enrollment. For senior students, certain courses required for university and college will not be completed in the first semester. However, applications to post-secondary institutions are usually assessed on past, present and predicted performance at the time of application.

## Transcripts:

All grade 11 and 12 courses and final marks are permanently recorded on a student's transcript. The school transcript provides an ongoing record of high school courses taken and marks obtained. It is the official document required by post-secondary institutions to verify a student's academic record.

## Transfer Students:

Students transferring to FHS from other school systems will have their transcript assessed and graduation requirements adjusted accordingly. Every effort will be made to give credit for acceptable work completed.

## Contact Info:

Fredericton High School  
300 Priestman Street  
Fredericton, NB  
E3B 6J8

Phone: (506) 453-5435  
Fax: (506) 453-3050  
<http://frederictonhigh.nbed.nb.ca>

# FRENCH IMMERSION CERTIFICATE PROGRAM

Students in French Immersion who wish to maintain and improve their proficiency level are encouraged to take a minimum of three French Immersion courses a year in grades 11 and 12. French Immersion courses are shown as FI courses on pages 5 and 6, and under the course descriptions.

## CERTIFICATE OF IMMERSION

This certificate is issued by the Anglophone School District West and is offered to all students who have completed at least **ten** courses in the **Immersion Program** during grades 10, 11 and 12. The certificate is presented during an assembly in May.

## 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 after an assessment by professional evaluators. The certificate is presented upon completion at the end of the semester. There is no cost for this assessment.

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# FOCUS ON INFORMATION TECHNOLOGY (FIT) CERTIFICATE PROGRAM

The Focus on Information Technology (FIT) Program is a national high school program for students interested in pursuing a career in an IT-related field. It provides high school students with technology and business skills, essential workplace skills, and work-related experience. The Information and Communication Technology Council of Canada will provide documentation and certificates to those who qualify.

## FIT BASIC CERTIFICATE

Students who successfully complete the courses in one of the pathways listed below will receive a FIT Certificate upon graduation.

### Business & Information Analysis

- Information Technology 120
- Business Organization & Management 120
- Entrepreneurship 110

### Software Design & Development

- Information Technology 120
- Business Organization & Management 120
- Computer Science 110

### Network & System Operations

- Information Technology 120
- Business Organization & Management 120
- Technical Support 110

### Interactive Media

- Information Technology 120
- Business Organization & Management 120
- Digital Production 120

## FIT with EXPERIENCE CERTIFICATE

Students will successfully complete the courses in one of the pathways listed above and will complete Cooperative Education 120 in a related field **OR** 200 hours of documented paid employment or volunteer work outside of school hours. In order to qualify the experience must be in an approved, appropriate IT-related workplace.

# INTERNATIONAL STUDIES CERTIFICATE PROGRAM

Through the International Certificate Program, high school students can become informed, engaged and active global citizens who learn about themselves by learning about the world. Participants earn the certificate by: studying an international language, taking internationally-focused classes, understanding global issues and by participating in an internationally focused project of their choice.

## Requirements

Enroll in the International Certificate Program with the International Certificate Coordinator. To be eligible to receive an International Studies Certificate all four components must be completed.

### Component One: International Coursework

FOUR provincially accredited full credit courses that have a specified international focus from the following list of Grade 11 and 12 courses

Aboriginal Art 110	Political Science 120
AP World History 120	Sociology 120
Economics 120	Women, Media and Culture 120
Environmental Studies 120	World Geography (FI) 120
Media Studies 120	World Issues 120
Physical Geography 110	

For each course, a report (maximum 250 words) describing the international and intercultural knowledge acquired while taking the course, must be completed and put in a portfolio.

### Component Two: International Languages

At least TWO of the following courses

French 112 (or French 122)	Mandarin 120
Spanish 110	Maliseet 100

For students who are newcomers to Canada during their high school years, any language credits in EAL may be considered based on individual circumstances.

### Component Three: International Experience and Engagement

This component requires you to commit to an international experience and engagement of at least 100 hours (locally or abroad) from the end of grade 10 to grade 12. This experience can occur as a one-time experience or through a series of experiences spread from the summer of your grade 10 year until your graduation. Possibilities could include the National Commonwealth Conference, JPH Model UN at St. Thomas University or various lectures at universities approved by the International Certificate Advisor.

### Component Four: Final Portfolio and Personal Reflection

The final requirement for the International Certificate is producing a comprehensive report. After successfully completing all three required certificate components, the final task is to demonstrate, showcase and reflect upon your commitment and learning as a “global citizen”.

*Students who would like more information on the ICP can pick up a pamphlet from the guidance office.*

# CLASS OF 2017: GRADUATION REQUIREMENTS

## YEAR 10 COURSES COMPLETED

- |   |   |
|---|---|
| <p>_____ FI / Math 10 (2 courses: GMF &amp; NRF)</p> <p>_____ English 10</p> <p>_____ FI / Social Studies 10</p> <p>_____ FI / Science 10</p> | <p>_____ PIF 10/FI Language Arts 10</p> <p>_____ Personal Development 10</p> <p>_____ Art 10 or Music 10</p> <p>_____ Other grade 10 elective</p> |
|---|---|

## YEAR 11 & 12 – COMPULSORY (7)

- \_\_\_\_\_ ENGLISH 111, 112, or 113 (2 Credits)
- \_\_\_\_\_ ENGLISH 121, 122 or 123
- \_\_\_\_\_ MATH Foundations of Math 110 (academic) or Financial & Workplace Math 110
- \_\_\_\_\_ SCIENCE (one course) from any of:  
                   Physics, Biology, Chemistry, Human Physiology, Introduction to Environmental Science 120,  
                   Robotics & Automated Technology. 120, Automotive Electrical Systems 120, Introduction to  
                   Electronics 110, Physical Geography 110
- \_\_\_\_\_ MODERN HISTORY 111, 112, or 113
- \_\_\_\_\_ FINE ARTS/LIFE ROLE DEVELOPMENT (one credit) from any of:  
                   Visual Arts 110/120, Individual & Family Dynamics 120, Reading Tutor 120,  
                   Music 111/112/122/120, Physical Education Leadership 120, Theatre Arts 120,  
                   Entrepreneurship 110, Graphic Art & Design 110/120, Outdoor Pursuits 110, Career  
                   Exploration 110, Co-operative Education 120, Digital Media Production Co-op 120, PCMT  
                   Co-op 120, and Skilled Trades Co-op 120, Fine Arts 110, Wellness Phys Ed 110

## YEAR 11 & 12 – ELECTIVES (10)

- |           |  |
|-----------|--|
| 8. _____  | 15. _____                                |
| 9. _____  | <b>Local Options or other electives:</b> |
| 10. _____ | 16. _____                                |
| 11. _____ | 17. _____                                |
| 12. _____ | 18. _____                                |
| 13. _____ | 19. _____                                |
| 14. _____ | 20. _____                                |

## ADDITIONAL NOTES

1. Seventeen (17) grade 11 and 12 credits, including the seven (7) compulsory courses, are required for graduation. **(Only two local option and five co-op courses may be used for the 17 required graduation credits.)**
2. Five (5) grade 12 credits including English 12 are required for graduation.
3. Grade 9 English Language Proficiency Assessment is a requirement for graduation.

**NOTE: The pass mark for all courses effective September 2002 is 60%.**

# COURSE PLANNING GUIDE

## Grade 11

1. English 11 (This is a year-long course worth two credits: Refer to page 5)

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2. Math 11 (refer to page 5)

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3. History 11 (refer to page 5)

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4. Science (refer to list on page 5)

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5. Fine Arts/Life Role Development (refer to list on page 5)

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6.

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7.

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8.

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9.

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## Grade 12

1. English 12 (1 credit)

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2.

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3.

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4.

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9.

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10.

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**NOTE: One Science and one Fine Arts/Life Role Development must be taken in grade 11 OR grade 12. These are listed on page 5. Seventeen out of twenty credits are required for graduation. Only two local options may be used for the 17 required graduation credits. (See list below.)**

### Local Option Electives

Aboriginal Art 110  
Advanced Keyboarding 110  
Conceptual Physics 110  
Drafting Computer Aided Graphics 120  
Early Childhood Services 120  
English Alternate Language 120  
FI Tech de Communication 110  
FI Tech de Communication 120

FI World Geography 120  
Graphic Art & Design 120  
Independent Living 110  
Kinesiology 120  
Maintenance Auto 110  
Mandarin 120  
Marketing 120  
Oceanography 120

Parenting 110  
Psychology 110  
Psychology 120  
Recording & Sound Design 120  
Women & Culture 120  
Yoga 110

## Applied Technology

**NOTE:** Students who achieve a mark of greater than 70% in a skilled trades course will be credited with 80 hours towards their trade certification up to a total of 720 hours over their high school career.

### **AUTOMOTIVE ELECTRICAL SYSTEMS 120**

This course introduces the student to the theory and operation of automotive electrical systems. Students will study the principles of electricity, including electron theory, magnetism and electrical symbols. Course content progresses to components of the charging, ignition and starting systems. Study also includes engine management systems, scanning on-board computers and diagnostics. This course may be used as a science credit for graduation purposes.

**Pre-requisite:** Internal Combustion Eng. 110

### **(CARE AND) MAINTENANCE AUTO 110 (Local Option, see page 8)**

This course is intended to introduce new and prospective drivers to the basic operation of automobile fuel, electrical, lubrication, tires, exhaust, and cooling systems. Students learn repair and maintenance procedures typically performed by car owners and enthusiasts in a well-equipped shop. ***This course cannot be taken by students who are taking other automotive courses.***

### **COMPUTER AIDED BASIC DESIGN 110**

In this introductory course students create technical drawings with part of the course emphasizing the process of design. Students will spend a great amount of time using the computerized drafting system and AutoCAD software. Students interested in post-secondary technology programs, graphic design and all fields of engineering would benefit from this course. This course can be used as an entrance elective for the University of New Brunswick.

### **DRAFTING-COMPUTER AIDED GRAPHICS 120 (Local Option, see page 8)**

This is an Architectural Design course enabling students to gain further experience and knowledge using the C.A.D. system. Course content includes the house design process, foundations, framing systems, electrical/mechanical systems and building costs. In addition, students construct subdivision plans, floor plans, elevations and electrical/mechanical plans. Students who plan to further their studies in the fields of architecture, civil engineering or building construction would benefit from this course.

### **CULINARY TECHNOLOGY 110**

### **CULINARY TECHNOLOGY 120**

**(2 credits)**

The Culinary Technology Program is designed to prepare students for employment and/or future education in the food service industry. This technology-driven and skill oriented program involves not only the "how and why" of food service preparation, but focuses on the development of personal skills and food knowledge that can be applied to the food industry. Learning experiences include planning, costing, and preparation for food service.

Culinary Technology 110 has an emphasis on bakeries, baked goods, breads, and pastries.

Culinary Technology 120 has an emphasis on food and meal preparation in a real restaurant environment.

Contracts are required and will be available in the guidance office.

### **FRAMING AND SHEATHING 110**

Students in this course will participate in the planning and construction of wooden structures in a large, well-equipped shop. Students will learn the safe operation of carpentry tools and equipment. Emphasis will be placed on the interpretation of the National Building Code, blueprint reading, estimating and material layout. This course will be of interest to students exploring career opportunities in the building construction industry.

### **HOUSING AND DESIGN 120**

This course explores various aspects of housing and design through knowledge and applications. Students will explore topics such as architecture and housing styles, influence of history on housing, interior design (using the principles and elements of design), and consumer concerns related to housing such as renting vs. buying. This course is designed for students who are going to study further in this field as well as students who have an interest in housing and design.

**Lab Fee: \$5.00**

### **INTERNAL COMBUSTION ENGINES 110**

The content of this course 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.



**Applied  
Technology  
Continued**

**INTRODUCTION TO ELECTRONICS 110**

The basics of electronic theory and components of electronic devices are the subjects of this course. Students learn through a series of lab activities including many types of Direct Current circuit construction. This course will be of interest to students exploring career opportunities in many skilled trades and also those interested in many Engineering and technology disciplines. This course may be used as a Science credit for graduation purposes and also be used as an entrance elective for the University of New Brunswick. **Recommended:** Successful completion of Grade 10 Math.

**METALS FABRICATION (WELDING) 110**

Students in this welding course develop basic skills in the safe use of arc and MIG welding equipment. Instruction will also be given in oxygen-acetylene and plasma cutting equipment as well as machines and equipment used to cut and form metals. Students work in a well-equipped, modern welding shop to construct or repair products such as furniture and cargo trailers. This course will appeal to students interested in exploring opportunities in welding metal working and mechanical servicing and many other skilled trades.

**Lab Fee: \$15.00**

**METALS PROCESSING (MACHINE SHOP)110**

Students in this course develop skills in the operation of lathes, grinders and milling machines. In the lab they learn a variety of processes used to form and repair metal parts for machines and tools. This course would appeal to students considering a career in the mechanic or machinist trades, mechanical engineering or mechanical technology areas.

**Lab Fee: \$15.00**

**MILL AND CABINET WORK 120**

Students in this course build a series of wooden products to learn the safe operation of woodworking tools and equipment. They also learn project planning and estimating as well as finishing and installation of cabinets and furniture. This course will be of interest to students exploring career opportunities in the building construction industry as well as those with a general interest in woodworking.

**Lab Fee: \$15.00**

**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 exploring career opportunities in the automotive service industry would benefit from this course.

**RESIDENTIAL ELECTRICAL WIRING 110  
(HOUSE WIRING)**

Students in this course will study the basic tools, materials and techniques used in residential wiring. Study includes the design and placement of circuits in a model family dwelling, according to the Canadian Electrical Code. The course will be of interest to students interested in exploring careers related to the electrical trade.

**RESIDENTIAL FINISH 120**

This advanced building construction course focuses on the acquisition of skills and knowledge associated with the completion of a modern wood frame residential building. Students work with lab based projects to select and install insulation, wall and ceiling cladding as well as finish trim, doors and windows.

**Lab Fee: \$15.00**

**ROBOTICS AND TECHNOLOGY 120**

This course explores the field of robotics and industrial automation. Through experimentation and simulation labs, students explore computer programming and construct functional examples which integrate pneumatic, electrical, mechanical and computer-controlled devices to mimic real-world machines. Along the way, students develop their technological design, communication and problem solving skills. This course would be of interest to student exploring career opportunities in processing, manufacturing, engineering, or industrial controls. This course may be used as a Science credit for graduation purposes and may also be used as an entrance elective for the University of New Brunswick.

**TUNE-UP AND EMISSION 120**

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, turbo charges, super chargers and emission systems and how these affect fuel mileage, power and the environment. Students will use various diagnostic tools to read and understand information from vehicle computers, sensors and trouble codes. Hybrid and zero emission vehicles will also be studied. This course would be of interest to students entering the automotive, aircraft or marine service industries. **Pre-requisite:** Internal Combustion Engines 110 **OR** Automotive Electrical Systems 120.

## **SCHOOL-TO-WORK TRANSITION COURSES**

The following school-to-work transition courses feature an experiential component often referred to as a work placement or a Co-op placement. In addition to course content students will gain hands-on experience in a field that they may be interested in pursuing after high school. Students must complete the minimum of hours required at the workplace to be able to qualify for the credit. Students will complete a second mandatory project and presentation instead of a final examination. **Only 5 co-op credits may be used towards graduation.**

Acceptance in these courses is based on an application, transcript to support desired career, attendance, recommendations and an interview. **Applications must be submitted no later than the last week of April** and are available in the Guidance Office. A code of conduct will be signed by all students. Not meeting the expectations outlined in the code of conduct will result in a referral to FHS Administration and possible removal from the course and loss of credits.

### **CAREER EXPLORATION 110 (2 credits) See page 7**

This course is aimed at offering students the opportunity to explore their personal potential and learn about career pathways of interest. After the initial in-class skills component, students will spend two hours in a workplace developing skills that will assist them in preparing for the future.

### **CO-OPERATIVE EDUCATION 120 FI CO-OPERATIVE EDUCATION 120 (3 credits) See page 7**

Students may explore any career field (based on availability in our community) for three hours each school day. After the mandatory in-class component is completed, students gain experience in the desired career field for three hours each day for the remainder of the semester.

If the work component is completed with a placement that can offer the experience primarily in the French Language, students would be granted **two out of the three credits towards the F.I. Certificate.**

### **SKILLED TRADES CO-OP 120 (3 credits) See page 7**

This program is designed to encourage students to explore job opportunities in Skilled Trades fields such as automotive, construction, culinary, etc. This program is open only to students who have successfully completed at least two grade 11 or 12 elective courses related to a specific trade. Students who complete a Co-op

placement with a licensed journeyman will be able to use the Co-op work placement hours towards their trade certification (up to 720 throughout their high school years).

### **DIGITAL MEDIA PRODUCTION CO-OP 120 (2 credits) See page 7**

The morning announcements are a vital part of a school's communication plan. Those selected to take part in this program will be responsible for the collection and delivery of the school's daily announcements. As well students will be responsible for a variety of side projects related to film and video editing. While working in the studio, students will be learning how to use professional video editing and motion graphics software, as well as learning about audio engineering and lighting.

### **PCMT CO-OP 120 (1 or 2 credits) See page 7**

Personal Computer Maintenance & Troubleshooting qualifies as an on-site Co-op credit with an emphasis on providing computer support for FHS. Students disassemble and assemble computers, provide service and repair of hardware, complete software upgrades, add computers to the FHS computer labs and troubleshoot individual systems. Students who excel in the course may return for a second credit with exposure to more difficult tasks and team management. An interest in computers and teacher recommendations are required.

**NOTE: Any school-to-work transition courses listed on this page will qualify for the Fine Arts/Life Role Development credit.**

### **ADVANCED KEYBOARDING 110 (Local Option, see page 8)**

This keyboarding course will assist students in developing a touch keyboarding skill and the ability to format in *Microsoft Word*. Students will learn to format personal business letters, cover letters, résumés, tables, and long reports. This course will be beneficial to students who plan to pursue a career in a computer-related field or who plan to attend post-secondary institutions requiring formal assignments. In our computer-based society this is a life skill.

### **BUSINESS ORGANIZATION AND MANAGEMENT 120 (FIT--see page 4)**

This is an introductory course in business organization, operation, and management. The understanding of business operations as practiced in Canada is a major objective of the course. The main areas of study include legal forms of ownership, marketing, personal and

## **Business, Technology, and Family Studies**

corporate finance, ethics, advances in information technology, understanding the stock market, and labour management relations.

### **CHILD STUDIES 120**

This course is designed for students who are interested in pursuing post-secondary education in early childhood education, pediatric medicine, nursing, child psychology or social work. Topics include heredity, conception, prenatal development, pregnancy and childbirth, as well as child growth and development. Learning strategies as well as intelligence and attachment theories are a major focus.

### **COMPUTER SCIENCE 110**

**(FIT--see page 4)**

This is an introductory course in structured programming in VISUAL BASIC language. The theory component is limited to programming applications. Visual Basic 6.0 is used. Topics include entering data, decision making, loops, one- and two-dimensional arrays, sorting, subroutines, main menu programs, library functions, and string manipulation. Students selecting this course should have good mathematics skills (70%+). Students use the computer as a problem-solving tool and will find this course of value in future studies or careers in engineering, business administration, technology and science.

### **COMPUTER SCIENCE 120**

This course will include a study of high-level languages (mostly JAVA). Advanced concepts and procedures are presented to provide a more comprehensive understanding of computer usage and applications. This is a desirable course for students intending to follow a computer science or data analysis program at a post-secondary institution. Computer Science 110, although recommended, is not a requirement.

### **DIGITAL PRODUCTION 120**

**(FIT--see page 4)**

Are you interested in digital imaging, creating web sites, simple animation or digital audio? If so, Digital Technologies 120 can offer you the skills which will allow you to create multimedia and web pages. This class is a skill-based course designed for those who are motivated to learn more about web design, editing images, animation and audio recording.

### **EARLY CHILDHOOD SERVICES 120 (Local Option, see page 8)**

This course explores child development principles from infancy to 6 years old. Topics include types of early childhood programs, assessment, curriculum, and qualities of an early childhood worker. Daycare/kindergarten

guidelines are examined. Students will plan lessons to teach children ages 4-6 and design a daycare center. Students will make arrangements to do daycare/kindergarten observations.

### **ENTREPRENEURSHIP 110**

**(FIT--see page 4)**

An exploratory course for students interested in the world of small business, this course is designed to involve students in the development of ideas and skills necessary to bring business ideas to the marketplace. This course allows students to see themselves as business people and appreciate the wide range of opportunities available to creators of an idea, owner-operator of a business, or employer-manager of a small business in today's global economy. If you want to start your own business or are interested in how business works—this course is for you.

**Note: Fine Art/Life Role Development credit.**

### **FASHION TECHNOLOGY 110**

This course explores the various techniques and equipment used in the Fashion Industry to construct and assemble various garments and products within the Industry. The students will examine the world of textiles including such areas as natural and man-made classification of fibers, yarn and fabric structure and finishing of fabrics. Learning involves basic construction techniques, small projects and completion of a personal garment. Students will learn the operation of sewing machines and sergers.

**Lab fee: \$10.00 plus cost of project supplies**

### **FASHION DESIGN 120**

This course is designed to give students the opportunity to create, learn, and explore in the field of fashion. Designer studies, the clothing industry, fashion promoting and marketing, textile identification, product knowledge, elements and principles of design are all a part of Fashion Design. In addition to theory, the hands-on work includes designing a basic accessory, fashion sketching, construction of a garment, creating a project from recycled clothing, and an introduction to basic knitting and crocheting. Basic sewing will NOT be taught.

**Lab fee: \$10.00 plus cost of project supplies**

**Pre-requisite:** Fashion Technology 110 or demonstration of basic sewing skills.

### **HOSPITALITY AND TOURISM 110**

Students will explore the sectors of the Travel Industry including accommodations, food and beverage, adventure tourism, and transportation. Students will have the opportunity to create and evaluate Hospitality and Tourism through its past and into the future. Students will learn valuable

**Business,  
Technology,  
and Family  
Studies  
Continued**

customer service skills and create a dream vacation for themselves through a term project. The skills learned will benefit the students with transferable skills for future employment opportunities. This course will explore areas of travel and tourism opportunities around the globe.

**INDEPENDENT LIVING 110 (Local option, see page 8)**

This course is designed to help you prepare to live on your own. Students will explore topics such as learning to manage your finances, housing options (renting vs. buying), buying a car, being a good consumer, meal planning and shopping, living a healthy lifestyle, personal care and responsible citizenship. Students will gain knowledge and life skills necessary to be more independent and successful when they live on their own. Welcome to the real world!

**INDIVIDUAL AND FAMILY DYNAMICS 120**

Students will explore their own personal development through the study of themselves and their relationships with others. Topics such as personality development, relationships, dating, love, marriage and family, sexuality, reproductive systems, birth control and sexually transmitted diseases, wellness and aging, will be studied. This course is an excellent introduction to studies in sociology, psychology, teaching, social work and family life education.

**Note: Fine Art/Life Role Development credit.**

**INFORMATION TECHNOLOGY 120  
(FIT--see page 4)**

This course is designed to familiarize students with tools and capabilities of Microsoft Office. These skills will be of use to students in their post-secondary endeavors. Topics include Microsoft Word, PowerPoint, Excel, and Outlook.

**INTRODUCTION TO ACCOUNTING 120**

This course introduces grade 11 and/or grade 12 students to the procedures, concepts and applications of accounting. Topics which will be covered include the nature of business, accounting as a possible career, bookkeeping procedures, accounting theory, and the entire accounting cycle. In addition, we will look at various forms of business enterprises such as sole proprietorships, partnerships and corporations. This course is designed for students who intend to pursue studies in business at a post-secondary institution.

**Lab fee: \$10.00 for required workbook.**

**MARKETING 120 (Local Option, see page 8)**

This course is designed to introduce students to many of the marketing functions and activities that occur within the Canadian marketplace.

Areas of focus include marketing strategies, product development and branding, and advertising. A portion of the course will involve self-directed learning whereby the students will demonstrate their understanding of the material through project work.

**PARENTING 110 (Local option, see page 8)**

One of the most important and demanding jobs is to be a parent. This course is designed to help students understand and cope with the challenges of being a parent. Students will gain insight into childhood from a parental perspective. Topics include parenting styles, discipline, parental stress, children's self-esteem, health and nutrition.

**TECH SUPPORT 110  
(FIT--see page 4)**

This course provides comprehensive instruction in the maintenance and repair of computers and peripheral devices, hardware, software, operating systems, networking, and printers. The CISCO Systems IT Essentials curriculum and hands-on activities will give students practical skills to provide basic technical support at the school. Students having successfully completed all required objectives have the option of writing the A+ Certification exams at their own expense.

## English

English Language Arts courses are skill-based programs of study that focus on three main areas of development: speaking and listening, reading and interpreting, writing and representing. Through the high school years, students will develop an awareness of how language works in a wide range of genres and will develop flexibility in using language.

**NOTE:** Grade 9, 10 and 11 English courses are full year courses; students will remain in their selected level (especially in grade 11) for the duration of the course, unless the student and teacher agree that an alternate placement is required.

**NOTE:** In compulsory English courses students are asked to pay a viewing fee to help defray the cost of drama performances and enrichment.

**Viewing Fee: \$5.00**

### **ENGLISH LANGUAGE ARTS 111 (2 credits--full year)**

This enriched course is recommended for students who excelled in grade 10 English and who enjoy literature. Students will be expected to think critically and independently, engage in meaningful academic conversation, and devote the required time and energy to the production of engaging texts. Regular attendance is important since students will be required to work in groups to prepare seminars and projects.

**Pre-requisite:** English 10

### **ENGLISH LANGUAGE ARTS 112 (2 credits--full year)**

This course is designed for students whose future plans may include university study. The areas of study focus on formal and informal composition, oral communication to convey ideas, analysis of various literary texts, and exploration of literary theories and perspectives. Students will work independently and collaboratively; regular attendance is very important.

**Pre-requisite:** English 10

### **ENGLISH LANGUAGE ARTS 113 (2 credits--full year)**

This course is designed for students whose immediate future plans do not include university. The areas of study focus on practical reading, writing, and speaking skills. Students will engage in a variety of activities geared toward improving literacy skills. A collaborative film-making unit provides opportunity for students to share their stories and ask questions about the world, learning English in a nontraditional way. Most work is done in class and students are expected to work well in groups. Regular attendance is expected.

**Pre-requisite:** English 10

### **ENGLISH LANGUAGE ARTS 121 (1 credit)**

This advanced level course is designed for students who excelled in English 111/112. It provides opportunity for the student to appreciate, experience, and interpret literature through group discussion and an application of literary theory and criticism. Class members are expected to contribute to guided discussions and are urged to develop an independent and critical understanding of material (print, visual, and audio). A semester project allows students to showcase their literacy skills.

**Pre-requisite-** English 111/112

### **ENGLISH LANGUAGE ARTS 122 (1 credit)**

This course is designed for students whose future plans may include university study. Students are expected to exercise independent and critical thinking as textual material is studied as a class, in groups, and individually. Formal essay writing is emphasized as a measure of student competency in writing and interpreting. Increasingly challenging textual material will be presented to students to guide them along the continuum of text complexity.

**Pre-requisite-** English 111/112

### **ENGLISH LANGUAGE ARTS 123 (1 credit)**

This course is designed for students whose immediate future plans do not include university. The emphasis is placed on clear communication, through both the written and spoken word. Students will continue their study of fiction, nonfiction and all types of text. Guided assignments will provide ample opportunity for students to demonstrate their literacy skills.

**Pre-requisite-** English 113

### **JOURNALISM 120**

An elective course open to students in grade 11/12. Journalism 120 is intended for those who wish to explore journalism as a career or field of study following high school. Students who have taken Writing 110 or who have done well in English or History courses might be interested in Journalism 120. Participants will be involved in the intensive practice of writing stories and articles in various journalistic styles. This course is for writers, not just critics of writing. Students must commit to practical outcomes and work towards publication of their work. Some extra-curricular effort will also be required.

**English  
Continued**

**MEDIA STUDIES 120**

Media Studies 120 is an elective course for grade 11/12 students. In a world dominated by the mass media, this course is designed to help senior students become media literate and understand the impact of mass media on society and culture. Students learn by experiment and exploration from this activity-based course. Areas of focus will include popular culture, television/video, film, photography, journalism, and advertising. Students enrolling in Media Studies must be mature enough to meet the high level of independence, reliability and responsibility required of them.

**READING TUTOR 120**

This course presents a unique opportunity for students with good academic achievement, excellent attendance and good communication skills. Under the guidance of the instructor, tutors work on a one-to-one basis with students who are seeking to raise their reading level and to improve their writing skills. Tutors learn basic reading theory and teaching techniques, and are assigned one student to work with for the term. A real commitment is required (in attendance and day by day planning), since the student depends on the tutor. This is a chance to make a positive contribution to our school, to acquire leadership skills, and to experience a real-life-teaching situation. This course is recommended for those planning careers in education, guidance or the social services.

**Note: Fine Art/Life Role Development credit.**  
**Pre-requisite: English 111/112**

**THEATRE ARTS 120**

This course will introduce the grade 11/12 student to a cross sectional study of theatre and various approaches to theatre. Emphasis will be placed upon the study of theatre from a practical perspective. Other areas of interest will involve props, costumes, make-up, lighting design, stage structure, play writing and production. Students are expected to contribute significantly each day to group discussions, projects and productions. As well, a good attendance record is expected for this course.

**Note: Fine Art/Life Role Development credit.**

**WOMEN & CULTURE 120 (Local Option, see page 8)**

This course aims to introduce students to critical literacy practices by examining cultural constructions (in particular, media representations) that shape and inform identities. The course engages students in reflective thinking about how they have been taught to “read the word and read the world” (Freire, 1970). Students participate in class discussions and activities that focus on

representations of race, gender, class, sexuality, ability, language and other identity categories found in past and present media sources. The overall goal of the course is to encourage critical thinking, critical questioning, and critical action in an effort to construct a more socially just and democratic world.

**WRITING 110**

This is an elective course for grade 11/12 students who wish to improve and enrich their writing skills. The focus will be on writing as a process: brainstorming, outlining, drafting, polishing, and publishing. Many formats will be explored such as free writing, exposition, description, process analysis, narration, book/movie reviews. Within the course structure there is opportunity for creative expression. Assessment will be frequent and will include portfolio assessment, tests, term projects and publishing assignments. Students whose work is complete and whose attendance is exemplary may opt to participate in literary showcase in lieu of a written exam.

**English as  
an  
Additional  
Language**

The WIDA MODEL test is used to identify students who would benefit from EAL classes. This test measures speaking, listening, reading and writing in the areas of Social and Instructional Language, English Language Arts, Mathematics, Science, and Social Studies. After the WIDA test, a recommendation is made for one of the following five pathways:

**Pathway 1**  
**ENGLISH AS AN ADDITIONAL LANGUAGE  
110 A & B**  
**LEARNING STRATEGIES 110 & LEARNING  
STRATEGIES 120**

The focus is on communicative tasks to meet basic needs for social interaction. The activities in these courses focus on literacy development, high frequency vocabulary, language learning strategies, reading and writing short texts, and speaking with others.

**Pathway 2**  
**ENGLISH AS AN ADDITIONAL LANGUAGE  
120 A (*Local Option, see page 8*)**  
**ENGLISH AS AN ADDITIONAL LANGUAGE  
120 B (*Local Option, see page 8*)**

The emphasis is to transition students from *learning to read* to *learning to write* while reinforcing and expanding on skills from Pathway 1. Students will continue to read, write, and interact (speak/listen) in English. The activities in these courses focus on developing academic vocabulary and reading comprehension strategies by using longer texts on a variety of topics.

**Pathway 3**  
**WRITING 110**

The focus is on writing different text-types for a variety of purposes and audiences. As a community of EAL writers, students follow the writing process to write creatively as well as practice the skills of demand writing and editing. Students learn the traits of “good” writing, improve their applied grammar skills, and produce portfolios to showcase their final pieces. Although the focus is on writing, students develop their reading and speaking skills, as well.

**Pathway 4**  
Students develop their language skills in English Language Arts classes and by using English in school and in the community. As they still may experience some challenges in meeting curriculum outcomes, it is recommended that students consider tutoring or other forms of support.

**Pathways 1-3** provide transition supports to a new schooling environment, expose learners to

a variety of cultural opportunities, and focus on developing 21<sup>st</sup> century skills (i.e., intercultural understanding, citizenship and community engagement). Students move through the courses listed above to support the English language learning until they finish Pathway 3. **Pathway 5** is a variation on Pathways 1-4. It is offered, as needed, on a case-by-case basis.

**English Enhancement and Engagement  
Certificate Program**

FHS offers a certificate program for grade 12 students who have:

- 1) Completed all recommended EAL courses,
- 2) Used their English in the school/community by getting involved, and
- 3) Been respectful citizens of FHS.

Please see an EAL teacher or a Guidance Counsellor for more information. Applications are due to the Main Office by May 1<sup>st</sup> each year.

## Fine Arts

**NOTE:** Fine Arts courses may be used as a Fine Arts/Life Role Development credit except for Aboriginal Art 110.

**NOTE:** Students **MUST** not have any outstanding arts fees from grade 9 or 10 art classes prior to enrolling in any art electives.

### **ABORIGINAL ART 110 (Local Option, see page 8)**

This course is open to all students in grade 11 and 12. Students will have the opportunity to complete a variety of Traditional Native Art projects: bead work, painting, mask development.

**Studio fee: \$15.00**

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

If you find logos, comics, T-shirt design 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.

**Studio fee: \$5.00**

### **GRAPHIC ART AND DESIGN 120 (Local Option, see page 8)**

This course builds on the graphic skills acquired in Graphic Art and Design 110 by allowing the student to explore in depth a personal style and direction in the graphic arts. This direction could be in comic art, illustration, cd cover design, corporate identity design, t-shirt design, typography or book layout and binding. Images will be created by hand and/or scanned and manipulated on a computer. Students wishing to continue on in a post-secondary program will have the opportunity to develop a presentation portfolio of their design work.

**Studio fee: \$5.00**

**Pre-requisite:** Graphic Art and Design 110

### **MUSIC 111 (Instrumental/Voice/Piano)**

This course is for anyone who has played an **orchestra or concert band instrument** for the last 3+ years or who is currently **studying voice or piano** and has a strong reading ability.

Approximately 50% of class time is spent on developing playing technique and in performing a varied repertoire. The balance of the time is spent on theory, history and music appreciation. Students will be awarded a level one or a level two credit, dependent on the level of outcomes attained.

### **MUSIC 111/112 (General Piano/Guitar)**

This course is designed for the general level piano/guitar student who has the ability to read

music and has already played the keyboard or guitar or has successfully completed the grade 10 piano or guitar course. Approximately 50% of the class time is spent on the further development of playing technique and performing a varied repertoire. The balance of the time is spent on theory and performance/composition type projects. Students will be awarded a level one or level two credit in accordance with the level of outcomes attained.

\*Please note when selecting this course that the piano and guitar class will be offered separately. When selecting this course you will be enrolled in either the piano or guitar class.

### **MUSIC 122 (Instrumental)**

Students enrolling in this course must have successfully completed Music 112 or have private music study equivalent to grade 6 instrumental or voice AND grade 2 theory offered by the Royal Conservatory of Music or equivalent. The Music 122 course is constructed in a style that can be described as a "guided independent study". The course is comprised of 6 units which are designed to encourage students to research, analyze, and create music. Students will also learn to compose and use recording equipment.

### **RECORDING & SOUND DESIGN 120 (Local Option, see page 8)**

This course is designed for the student who has an interest in audio recording and design. The student will receive instruction in the physics of sound, looping, MIDI, microphone techniques, and recording and sound design. Learning time will be divided between recording sessions in the recording studios, curriculum-based projects on the Mac computer and class projects.

**Recommended:** 111/112 Music or 122 Music or by permission of the instructor.

### **VISUAL ARTS 110**

The student will be working towards an emphasis on personal expression and individual style. This course focuses on drawing, painting, print making, sculpture, art appreciation and art history.

**Studio fee: \$15.00**

### **VISUAL ARTS 120**

This is the second course of the Visual Arts Program. Many of the same areas as in the Visual Arts 110 will be covered but in much greater depth with an emphasis on further developing one's personal style. A presentation portfolio of your artwork will also be developed.

**Studio fee: \$15.00**

**Pre-requisite:** Visual Arts 110



## Health & Physical Education

**NOTE:** Physical Education Leadership 120, Outdoor Pursuits 110, and Wellness Phys. Ed. 110 are Fine Arts/Life Role Development courses.

### **INTRODUCTION TO KINESIOLOGY 120 (Local Option, see page 8)**

This course is designed for students planning on taking kinesiology, science or nursing at the university/college level. This will be a fully developed academic course which will include a variety of engaging instructional practices and group activities including demonstrations, student presentation, guest speakers, as well as activities that will enhance the students' knowledge of kinesiology. Students will develop their skills in critical thinking and problem solving while using technology as a tool to enhance their knowledge. Topics covered during this course will include human anatomy, exercise science, recreation and sport studies, as well as careers in Kinesiology.

### **NUTRITION FOR HEALTHY LIVING 120**

Informative class which provides the student with accurate details on healthy food choices and proper nutrition throughout the lifecycle. This course also looks at social concerns regarding food including the problems arising from living in an affluent society as well as the devastation of hunger. Foods labs supplement course content and provide healthy alternatives to conventional meals and snacks. They also allow students the opportunity for a hands – on approach to healthier lifestyle choices without compromising taste. Students interested in pursuing careers in nutrition, dietetics, Kinesiology or personal training, or those wishing to improve their personal knowledge of a healthy lifestyle and overall fitness, should strongly consider this course.

### **OUTDOOR PURSUITS 110**

The focus of this course is to develop personal outdoor recreation skills based on environmental ethics. Class outings are compulsory and may take place during class or for an extended period of time. The class will participate in several half day and full day outings as well as a **mandatory overnight camping excursion**. The course will take advantage of local outdoor adventure areas; activities may include hiking, canoeing, rock climbing, and swimming. (Many of these activities have a high risk of injury when safety guidelines are not followed.) Students must be prepared to plan, lead and evaluate outing experiences from a personal and group perspective.

Students are admitted to the course based on:

1. Strong attendance during the previous academic year.

2. Ability to work independently and collaboratively with minimal supervision.
3. Mature and responsible work ethic.

Students must also be recommended by two teachers who have taught them in the past and know them well enough to comment on the qualities identified in #2 and #3

**Application and recommendation forms are available on the FHS website.**

**Course fee: \$75** payable at the beginning of the course. This fee is to help offset costs associated with transportation, equipment rental, facility rental, supplies, etc.

### **PHYSICAL EDUCATION LEADERSHIP 120**

The focus of this course is to develop leadership skills through the medium of physical education and recreation. The following inter-related units will be considered throughout the semester: Leadership Theory, Sports Administration, Teaching, Officiating, Coaching and sports Medicine. Students will also be required to teach specific lessons/skills as part of their developmental experience. Students will be expected to participate in public speaking and frequently conduct presentations to the class.

In addition to the academic requirements in the classroom, students must also commit to volunteering 30 hours of extracurricular involvement outside the normal classroom setting. Some of this time may be assigned at lunch time (extra-murals, for example) or after school. Twenty-two hours must occur at school and directly benefit Fredericton High School or FHS teams. **Students failing to complete this mandatory component of the course will not receive the credit.**

Students are admitted to the course based on:

1. Strong attendance during the previous academic year.
2. Ability to work independently and collaboratively with minimal supervision.
3. Mature and responsible work ethic.

Students must also be recommended by two teachers who have taught them in the past and know them well enough to comment on the qualities identified in #2 and #3.

**Application and Recommendation forms are available on the FHS website.**

### **WELLNESS PHYS ED 110**

This course is intended to allow students an opportunity to be active, while further enhancing their decision-making skills towards personal wellness. This course will be offered to grade 11 and 12 students only. 40% of the course will be

**Health &  
Physical  
Education  
Continued**

theoretical in a classroom setting with the remaining 60% spent on practical work in an active setting. This course will help students increase their awareness of the role of physical activity towards a healthy, active lifestyle.

**Course fee: \$50** payable at the beginning of the course. This fee is to help offset costs associated with transportation, equipment rental, etc.

**YOGA 110 (*Local Option, see page 8*)**

Yoga 110 will explore the physical and mental aspects of yoga – develop the acquisition and development of skills including strength, flexibility, cardiovascular endurance, balance, regulation of energies through breath and mental focus. The Yoga 110 course will allow students to participate in various activities including the yoga physical practice, personal reflection, partner assessment, group discussions and classroom theory. 40% of the course will be classroom based – topics will include: the history of yoga, the essentials of nutrition, ethical principles (kindness, generosity, mutual respect, and humanity). Explore exercise that help empower students, foster positive mental health and mental fitness and help produce purposeful members of our school communities and society.

**Applications forms are required and are available on the FHS website.**

## Mathematics

Mathematics is a useful, exciting and creative area of study that can be appreciated and enjoyed by all students. It helps them develop their ability to solve problems and to reason logically. Mathematics offers to these curious, energetic students a way to explore and make sense of their world.

### **FINANCIAL & WORKPLACE MATH 110**

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

**Pre-requisite:** Geometry, Measurement & Finance 10.

### **FOUNDATIONS OF MATHEMATICS 110 FI FOUNDATIONS OF MATHEMATICS 110**

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

**Pre-requisites:** Geometry, Measurement and Finance 10 and Number, Relations and Functions 10.

### **PRE-CALCULUS 110 FI PRE-CALCULUS 110**

This course, followed by later courses in Pre-Calculus and Calculus, is designed for entry into post-secondary programs requiring Pre-Calculus. Students demonstrate an understanding of absolute value of real numbers and solve problems that involve radicals, radical

expressions, and radical equations. Students determine equivalent forms, simplify rational expressions, and solve problems that involve rational equations. They develop an understanding of angles in standard position ( $0^\circ$  to  $360^\circ$ ) and solve for these angles using the three primary trigonometric ratios. Polynomial expressions are factored and absolute value functions and quadratic functions are analyzed and graphed.

Students solve problems that involve quadratic equations and solve, algebraically and graphically, problems that involve systems of linear-quadratic and quadratic-quadratic equations in two variables. They also solve problems that involve linear and quadratic inequalities in two variables, and quadratic inequalities in one variable.

**Pre-requisite:** Foundations 110 is a pre-requisite or co-requisite for Pre-Calculus 11.

### **FINANCIAL & WORKPLACE MATH 120**

This is the second of two courses in the Financial and Workplace pathway designed for entry into post-secondary trades and technical programs or for direct entry into the work force. Topics include measuring, sine and cosine laws, properties of polygons, transformations of 2-D and 3-D shapes, small business finance, linear relationships, data interpretation, and probability. Opportunity is given to research and present an historical event or an area of interest that involves mathematics.

**Pre-requisite:** Financial and Workplace Math 110 or Foundations of Mathematics 110.

### **FOUNDATIONS OF MATHEMATICS 120**

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

**Pre-requisite:** Foundations of Mathematics 110

**Mathematics  
Continued**

**PRE-CALCULUS A 120**

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

**Prerequisite:** Pre-Calculus 110

**PRE-CALCULUS B 120**

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

**Pre-/Co-requisite:** Pre-Calculus A 120

**CALCULUS 120**

This is the last course offered in the Pre-Calculus Pathway, and follows *Pre-Calculus B 120*. This course develops the concepts of average and instantaneous rates of change. Derivatives are determined by applying the definition of a derivative and the derivative rules including the Chain Rule, and are determined for trigonometric functions. Limits and derivatives of exponential and logarithmic functions are found. Calculus techniques are used to sketch graphs of functions, and to solve optimization problems. Problems are solved involving inverse trigonometric functions, involving related rates and involving the application of the integral of a function from a variety of fields. The definite integral and the antiderivative of a function are determined.

**Pre-Requisites:** Pre-Calculus A 120 **AND** Pre-Calculus B 120.

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

**PRE-CALCULUS 121 AB & AP CALCULUS AB (3 credits)**

Students enrolling in this full-year course will receive credits for Pre-Calculus A 120, Pre-Calculus B 120 and AP Calculus AB 120. This course is an enriched program of study covering three semesters of work in two. It is designed to challenge students with a very high ability in mathematics who can handle work at an accelerated pace. Topics covered are described above.

**Recommended:** Minimum mark of 90% in Pre-Calculus 110.

**Pre-requisites:** Pre-Calculus 110 **AND** the recommendation from your grade 11 math teacher who will provide an application form for interested students.

## Science

**NOTE:** There is a **\$2 lab fee** for all grade 11 & 12 Science courses.

### **BIOLOGY 111**

This course is designed for the student who is self-motivated with a genuine interest in science. The course topics are the same as the Biology 112 course; however, they will be covered in greater depth.

### **BIOLOGY 112**

#### **FI BIOLOGY 112**

This course is geared to students in who have an interest in nature and living things. Laboratory work and demonstrations will supplement classes. Topics covered are cell biology, classification and a survey of the five kingdoms of living organisms.

### **BIOLOGY 121**

This course is designed for students who have demonstrated a high level of achievement in previous science courses. Topics covered include the nervous system, the endocrine system, the reproductive system, genetics, the structure of DNA, DNA synthesis, protein synthesis and an overview of the chordates. Students taking this course may elect to write the AP Biology exam. The Biology 111/112 and Chemistry 111/112 courses would be helpful but they are not pre- or co-requisites.

### **BIOLOGY 122**

This course is recommended for students who intend to study science at University. Topics covered include the nervous system, the endocrine system, the reproductive system, genetics, the structure of DNA, DNA replication, protein synthesis and evolution. The Biology 111/112 and Chemistry 111/112 courses would be helpful but they are not pre- or co-requisites.

### **CHEMISTRY 111**

This is an enriched chemistry course designed for students who are planning to take courses in science or engineering at the university level. Students selecting this course should have better than average ability in science and mathematics. The course covers all of the topics covered in Chemistry 112, with enrichment, and it also includes atomic and molecular orbital theory and gas laws.

**Pre- or Co-requisite:** Foundations or Mathematics 110

### **CHEMISTRY 112**

#### **FI CHEMISTRY 112**

This is an introductory course in chemistry. This course continues to build upon chemical concepts learned in grade 10. Students planning

on taking nursing, engineering or science (pure and applied) should consider taking this course. Topics covered are atomic bonding, chemical reactions, mathematical calculations related to reactions and solutions.

**Pre-or Co-requisite:** Foundations of Mathematics 110

### **CHEMISTRY 121**

A continuation of Chemistry 111 designed for serious science students who plan to further their science education at the post-secondary level. The course covers all of the topics covered in Chemistry 122, with enrichment, plus a unit on electrochemistry, solubility equilibrium, reaction mechanisms and rate laws. Students taking this course may elect to write the AP chemistry exam.

**Pre-requisite:** Chemistry 111/112 & Foundations of Mathematics 110

### **CHEMISTRY 122**

Students planning on taking science, engineering or nursing should take this course. It is a continuation of grade 11 Chemistry. Topics covered include organic chemistry, chemical equilibrium, acid-base chemistry and energy changes. A good background in chemistry 11 and Foundations of Mathematics 110 is an asset.

**Pre-requisite:** Chemistry 111/112 & Foundations of Mathematics 110

### **HUMAN PHYSIOLOGY 110**

The goal of this course is to build an understanding of the physiology of the human body. This course focuses on developing an understanding of the structure and functioning of each human body system, including the causes, symptoms, and treatments of diseases and conditions. This includes the ways in which the health of each system impacts on, and is impacted by the health of the whole body. 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.

### **INTRO 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 and analysis to others.

Students will:

1. Identify the impact of personal behaviours on the environment, and recognize that caring for and sustaining natural environments is an element of responsible global citizenship.

**Science  
Continued**

2. Investigate, analyze and compare historical to current land and water use in New Brunswick and the factors that impact our sustainable development.

3. Analyze and propose solutions to current environmental issues through research, experimentation and a presentation of their findings with respect to the issue.

**NOTE: All students will participate in a School Sustainability Project and/or a Wetland Centre of Excellence project that will comprise 25% of their final mark. Project presentations will take place on the exam date and will replace a written exam.**

**ADVANCED ENVIRONMENTAL SCIENCE 120**

The dynamics of living systems will be explored through an exploration of population dynamics, community ecology, biodiversity, ecosystems and responses to changing environments and environmental stress.

Students will explore different perspectives and different world views of the environment and examine how this affects community policies and legislation.

The class will investigate a representative terrestrial, aquatic and human community ecosystem and the economic, social, cultural and environmental impacts locally, regionally and beyond. They will understand the importance of considering world views, cultural perspectives, and community concerns and values for any given issue.

**NOTE: All students will complete a project on an issues of particular personal concern. This will develop and demonstrate their science inquiry skills: researching the issue and critically analyzing research methods, data collection and conclusions which have been made; designing and carrying out an original research project related to the issue; researching the effectiveness of current solutions; and exploring possible new solutions. Projects will comprise 50% of their final mark. Presentations will take place on the exam date and will replace a written exam.**

**Pre-requisite:** One of the following: Biology 111-112, Chemistry 111-112, Physical Geography 110 or Introduction to Environmental Science 120

**OCEANOGRAPHY 120 (Local Option, see page 8)**

Oceanography 120 is a comprehensive course that focuses on the scientific study of the ocean. This course explores the biological, physical, and environmental aspects of marine science in a real world context. Course content includes: an introduction to marine science, the physical environment of the ocean, marine biology and

habitat, coastal zones, ocean industries and resources, and marine hazards and pollution. Students will be expected to complete projects and assignments, participate in various learning activities, including labs, and maintain a high standard of work ethic.

**Prerequisite: Biology 112**

**PHYSICAL GEOGRAPHY 110**

The course provides a general introduction to physical geography and includes such topics as: The Earth as a rotating planet, Weather and Climate systems, Systems and Cycles of the solid Earth, Volcanoes, Tectonics, Landform Evolution, Soils, the Environment and the Biosphere. This course is recommended to those who are planning on pursuing university or college programs in geology, forestry, civil engineering, urban or rural planning or any field related to the mining industry. We recommend that students have a strong showing in Science 10 as we will be covering topics related to both physics and chemistry.

**CONCEPTUAL PHYSICS 110 (Local Option, see page 8)**

This course is open to any grade 11/12 student. Conceptual Physics will place less emphasis on mathematics and cover topics such as astronomy, space travel, fluids, weather/climate, and electrical power generation. There will be several labs/projects including field trips to Mactaquac Dam and Point Lepreau, model rocket construction/launching, model boat building as well as the physics of telescopes and construction. *Not to replace Physics 111/112 or Physics 121/122. It cannot be counted as a science elective for graduation.*

**Prerequisites: Math 10 & Science 10**

**PHYSICS 111**

An enriched physics course for the motivated science student. Students electing to take this course should have better than average ability in mathematics and science. Topics covered are the same as those in Physics 112 plus optics and interference of light.

**Pre- or Co-requisite:** Foundations of Mathematics 110

**PHYSICS 112**

An introductory physics course designed for students intending to go to university or technical school following graduation. Topics include kinematics and dynamics in one dimension, momentum, work, energy and power, waves, light and sound.

**Pre- or Co-requisite:** Foundations of Mathematics 110

**Science  
Continued**

**PHYSICS 121**

A continuation of Physics 111 designed for above-average physics students. The course covers the same topics as Physics 122 plus torque and rotational motion. Students who take Physics 111/112, Physics 121 and AP Physics 2 120 will complete all of the content of a first year university course. Students may elect to write the AP Physics 1 exam.

**Pre-requisite:** Physics 112/111 and Foundations of Mathematics 110.

**Recommended:** Final mark of 85% in the pre-requisite courses.

**PHYSICS 122**

Students planning to take science or engineering at university should take this course. It is a continuation of Physics 112. Topics covered include 2-dimensional kinematics and dynamics, circular motion, gravitation, electric and magnetic fields, static and current electricity. It is highly recommended to students who are considering taking this course that they have successfully completed Pre-Calculus /FI Pre-Calculus 110.

**Pre-requisite:** Physics 112 & Foundations of Mathematics 110

**AP PHYSICS 2 120**

This course is offered to above-average science students who intend to take science or engineering at the university level. Topics covered include the study of magnetism, electromagnetism, atomic structure, quantum mechanics, nuclear physics, thermodynamics and fluid mechanics. This course is designed to supplement previous chemistry and physics courses. It is highly recommended that students intending to write the AP Physics 1, AP Physics 2 and the AP Chemistry exams take this course.

**Pre-requisites:** Physics 111/112, Chemistry 111/112, Physics 121/122 & Foundations of Mathematics 110

**Co-requisites:** Chemistry 122/121

**Second  
Languages/  
Modern  
Languages**

**Registration criteria for FI, Core and PIF**

Students who have taken French Immersion courses are not eligible for PIF Courses

Students who have taken French first language Courses (ie Ecole Ste Anne transfer students) are not eligible for French Immersion Courses or PIF Language Arts courses.

**Oral Proficiency Assessment: Grade 12**

An oral proficiency assessment will be administered to all Grade 12 students enrolled in a French course (ie. Immersion or PIF). Students will receive a certificate of oral proficiency at the end of the grade 12.

**POST INTENSIVE FRENCH**

During Intensive and Post-Intensive French, students engage in interesting activities and projects that foster conversations among students while developing reading and writing skills.

Both Intensive and Post-Intensive French promote learning French through language-based activities versus learning subjects, such as science and social studies in French.

Intensive French incorporates some of the instructional strategies used to teach English in the primary grades. Listening, speaking, reading, viewing, writing and representing are modeled and developed in an integrated fashion through learning experiences which revolve around a theme or a project that require authentic communication.

Intensive French focuses first on speaking (fluently and accurately) supported by reading and writing. In the course of a day students read and write about topics that they can speak about easily and correctly.

**PIF (Post Intensive French) 110**

This course is designed for students who have successfully completed Post-Intensive French in grades 9 and 10. Different themes are explored to improve students' understanding (reading and listening) and production (speaking and writing) of French.

**PIF (Post Intensive French) 120**

The course is designed for students who have successfully completed Post-Intensive French in grade 11. Different themes are explored to improve students' understanding (reading and listening) and production (speaking and writing) in French.

**FRENCH LANGUAGE (Immersion)**

Becoming bilingual or multilingual leads to valuable personal enrichment.

Upon entering high school, students in immersion should have the following skills:

- 1) a good ability enabling them to understand the language in a variety of subject areas.
- 2) the ability to speak freely and without hesitation, although sometimes inaccurately.
- 3) the ability to understand written text relating to a variety of subjects and to be able to read short stories and novels of a moderate degree of difficulty.
- 4) the ability to write compositions, make notes and summaries (although with language errors)

**FI LANGUAGE ARTS 110**

Students taking this course must have successfully completed Grade 10 FI Language Arts. This course is designed to maintain and further develop French linguistic skills by taking into consideration the four aspects of the language (reading, writing, listening, speaking). Oral participation is essential. There will be a complete study of one play.

**FI LANGUAGE ARTS 120**

This course is designed to maintain and further develop French linguistic skills by taking into consideration the four aspects of the language (reading, writing, listening, and speaking). Oral participation is essential.

**Pre-requisite:** FI Language Arts 10

**FI TECHNIQUES DE COMMUNICATIONS 110  
(Local Option, see page 8)**

This course is open to grade 11/12 students who wish to improve their oral and written skills in French. The program includes a variety of communication activities. The oral component is a very important aspect of the course.

**Pre-requisite:** FILA 10 or PIF 10

**FI TECHNIQUES DE COMMUNICATIONS 120  
(Local Option, see page 8)**

This course is open to grade 11/12 students who wish to improve their oral and written skills in French. The program includes a variety of communication activities. The oral component is a very important aspect of the course.

**Pre-requisite:** FILA 10 or PIF 10

**MANDARIN 120 (Local Option, see page 8)**

This course is open to grade 11 and 12 students. The course is designed to develop Mandarin skills. The program includes a variety of activities to learn Mandarin. This course will greatly benefit students seeking employment in



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languages and for personal development and growth.

**SPANISH 110**

The primary objective of this introductory course is to develop initial communicative abilities in the Spanish language. Students taking this course will experience continual practice in communicating and will become familiar with common Hispanic customs and traditions. This course is open to grade 11 and 12 students.

**SPANISH 120**

Spanish 120 builds on students' competence and provides students with opportunities to develop their competence to a Basic level as defined by the New Brunswick Second Language Oral Proficiency Scale.

Students completing this course will be able to satisfy minimum courtesy requirements and maintain very simple face-to-face conversations on familiar topics. The student will be able to ask for help and to verify comprehension of native speech in face-to-face interaction.

Students interested in post-secondary Spanish courses are encouraged to take this class as it permits a more in-depth study of the language.

**Recommended:** Spanish 110

## Social Studies

**NOTE:** French Immersion students should choose FI Modern History and FI World Geography. It is suggested that all students include at least three Social Studies courses in their course selection especially if they intend to follow an Arts program at university.

### **CANADIAN HISTORY 122**

This is a Canadian History course for grade 11/12 students interested in history and wanting to learn more about the five key relationships that make up Canadian History and how they have evolved over time. Emphasis will be on relationships between English and French, Aboriginal peoples, Immigrants and individuals and the State and our relationships with the United States and the United Kingdom.

**Recommended:** Final mark of 70% in History 112/111

### **ECONOMICS 120**

This course is an introductory economics course aimed at familiarizing students with economic principles and providing them with an appreciation of the major economic issues in our society such as unemployment, inflation, GDP, provincial and federal budgets, as well as with programs, strategies, and regulations created to deal with these issues. Units include introductory concepts, supply & demand, the stock market, economic indicators, money and the Canadian banking system and stabilization policy.

### **FI WORLD GEOGRAPHY 120 (Local Option, see page 8)**

While learning new geography concepts, students will improve their oral and written skills in French. The students will have a better understanding of how geography – climates, populations, natural resources, etc. – influences the relationships between environment, populations, politics and the world power of a country. Speaking French in class and taking part in class discussion are an important part of this course.

### **LAW 120**

This course will provide students with a basic knowledge of the Canadian legal system and its operations as well as an awareness of the impact of the law on their lives. It will provide an introduction to the concepts and principles of civil and criminal law. Major topics include foundations of the legal system, criminal law, human rights, torts, and family law. Students will experience practical exposure to the law through guest speakers, a courtroom visit and daily current event discussions.

### **MODERN HISTORY 111**

#### **FI MODERN HISTORY 111**

This is an enriched course for students wishing an in depth approach to history. Beginning with the reasons for the French Revolution and ending with the impact of the Cold War, students will use historical thinking, research and analysis to examine events and their consequences. Extensive use is made of the seminar method and Socratic circles. For the university bound student, for the student who reads avidly and for the student who likes to express himself/herself both orally and in writing, this course should interest you.

**Recommended:** Final mark of 80% in Social Studies 10

### **MODERN HISTORY 112**

#### **FI MODERN HISTORY 112**

This course is designed for students who plan to attend post-secondary institutions. Students will learn about the most significant events and forces in the western world over the last 300 years which will include rights and revolution, nationalism and war. Students will become increasingly proficient in historical thinking, research and analysis and will demonstrate a competence in written and oral expression.

**Recommended:** Final mark of 70% in Social Studies 10

### **MODERN HISTORY 113**

This course will enable the student to examine and become aware of the causes and impact of certain historical events and forces that have shaped the modern world. Topics include the French and Industrial Revolutions, war and nationalism, totalitarianism and total war, crimes against humanity, and war by proxy. Students will practice historical thinking skills and be able to make connections between historical events and the present.

This course will appeal to students with various learning styles.

### **NATIVE STUDIES 120**

This course is designed to help students gain an understanding of the Micmac and Maliseet cultures in the Maritime provinces (past, present and future) and to see how First Nations and non-First Nations views have influenced the course of events in the Maritimes. Units include: language and culture, religion and spirituality, ancient times, arts and crafts, community and colonial relations with a focus on native culture and traditions. This elective is open to all grade 11/12 students who are interested in developing an understanding of First Nations culture and their perspectives on various native issues.

**Social  
Studies  
Continued**

**POLITICAL SCIENCE 120**

This course is designed as an introduction to basic principles of the study of politics. Emphasis is placed on the student's development of analytical and critical thinking skills. Use is made of historical and current documents. Individual seminars and group projects form a significant part of the learning experience. Time will be spent in learning the basic concepts and terminology of political science and in developing the basic skills of political science research. Topics include Canadian and American government systems, characteristics of political systems and current political happenings.

**Recommended:** Final Grade of 70% in Modern History 112/111

**PSYCHOLOGY 110 (Local option, see page 8)**

This course is an introduction to psychology. Students will begin to explore psychology as a science that seeks to answer all sorts of questions about us all – how we think, feel and act. Students will learn to think critically as they explore human nature in depth. The field of psychology explores many topics such as – careers in psychology, how research is collected and used, the psychology of culture and gender, how our consciousness is altered through sleep, dreams and hypnosis, psychological disorders, such as schizophrenia and other personality disorders. This is a great introductory course for students interested in pursuing psychology or any other related field or for anyone interested in learning more about human nature.

**PSYCHOLOGY 120 (Local Option, see page 8)**

This is an elective course open to students in grade 11/12. This course is a continuation of Psychology 110. Students will continue to explore psychology as a science that seeks to answer all sorts of questions about human behavior – why we think, feel and act the way we do. Students will explore motivation and emotion, perspectives on personality development, how we learn, memory, the nature of intelligence, stress and health, social relations and treatments for psychological disorders.

**Recommended:** Psychology 110

**ADVANCED PLACEMENT PSYCHOLOGY 120**

AP Psychology is designed to introduce students to the systematic and scientific study of the behavior and mental processes of human beings. Students are exposed to the psychological facts, principles and phenomena associated with psychology. Content areas include – research methods, behavior, sensation & perception, states of consciousness, and developmental, abnormal and social psychology.

This course is equivalent to an introductory university course in psychology. Students taking this course may elect to write the AP Psychology exam. Entrance to the course is based on previous academic performance.

**SOCIOLOGY 120**

This course is an introduction to sociology. Students will develop the ability to both examine and question the world around them. They will explore the links between society and individual experiences. Through various teaching and learning methods, students will learn about such topics as culture, socialization, social control, social movements, and a special interest topic through a seminar presentation. This is an excellent course for anyone interested in social issues, social inequities, and social justice.

**Recommended:** Final mark of 70% in Grade 111/112 Modern History

**AP WORLD HISTORY 120**

This is an enriched history course designed for students who are interested in exploring how the histories of different parts of the world are interconnected. If the AP exam is written, this may be used as a University credit. Discussion and research study along with development of analytical and critical thinking skills will be emphasized. Individual and group seminars will be a part of the learning experience

**Recommended:** Final grade of 80% or higher in 111/112 Modern History

**WORLD ISSUES 120**

This course is a study of global issues. It focuses on current world problems with emphasis on current events, their historical background, present situation, attempted solutions and ongoing problems. Students investigate current issues and country conflicts, with seminar presentation, Socratic circles and discussion.

### Alphabetical Listing of Courses

Aboriginal Art 110	17	FI Chemistry 112	22	Oceanography 120	23
Advanced Environmental Science 120	23	FI Foundations Math 110	20	Outdoor Pursuits 110	18
Advanced Keyboarding 110	11	FI Language Arts 110	25	Parenting 110	13
AP Calculus 120	21	FI Language Arts 120	25	PCMT Co-op 120	11
AP Physics 2 120	24	FI Modern History 111	27	Phys. Ed. Leadership 120	18
AP Psychology 120	28	FI Modern History 112	27	Physical Geography 110	23
AP World History	28	FI Pre-Calculus 110	20	Physics 111	23
Automotive Electrical Systems 120	9	FI Techniques de Communication 110	25	Physics 112	23
Biology 111	22	FI Techniques de Communication 120	25	Physics 121	24
Biology 112	22	FI World Geography	27	Physics 122	24
Biology 121	22	Financial & Workplace Math 110	20	Physics 2 AP 120	24
Biology 122	22	Financial & Workplace Math 120	20	Political Science 120	28
Business Organization and Management 120	11	Foundations of Mathematics 110	20	Post Intensive French 110	25
Calculus 120	21	Foundations of Mathematics 120	20	Post Intensive French 120	25
Canadian History 122	27	Framing & Sheathing 110	9	Power Chain & Chassis 110	10
Care & Maintenance Auto 110	9	Graphic Art & Design 110	17	Pre-Calculus 110	20
Career Exploration 110	11	Graphic Art & Design 120	17	Pre-Calculus A 120	21
Chemistry 111	22	Hospitality & Tourism	12	Pre-Calculus B 120	21
Chemistry 112	22	Housing & Design	9	Pre-Calculus AB & AP Calculus 121	21
Chemistry 121	22	Human Physiology 110	22	Psychology 110	28
Chemistry 122	22	Independent Living 110	13	Psychology 120	28
Child Studies 120	12	Individual & Family Dynamics 120	13	Psychology AP 120	28
Computer Aided Basic Design 110	9	Information Technology 120	13	Reading Tutor 120	15
Computer Science 110	12	Internal Combustion Engines 110	9	Recording & Sound Design 120	17
Computer Science 120	12	Intro to Environmental Science 120	22	Residential Electrical Wiring 10	10
Conceptual Physics 110	23	Introduction to Accounting 120	13	Residential Finish 120	10
Co-operative Education 120	11	Introduction to Electronics 110	10	Robotics & Technology 120	10
Culinary Technology 110/120	9	Introduction to Kinesiology 120	18	Skilled Trades Co-op 120	11
Digital Media Production Co-op 120	12	Journalism 120	14	Sociology 120	28
Drafting-Computer Aided Graphics 120	9	Law 120	27	Spanish 110	26
EAL 110 A & B	16	Maintenance Auto 110	9	Spanish 120	26
EAL 120 A & B	16	Mandarin 120	25	Tech Support 110	13
EAL Writing 110	16	Marketing 120	13	Techniques de Communication 110	25
Early Childhood Services 120	12	Media Studies 120	15	Techniques de Communication 120	25
Economics 120	27	Metals Fabrication (Welding) 110	10	Theatre Arts 120	15
English Language Arts 111	14	Metals Processing (Machine Shop) 110	10	Tune-up & Emission 120	10
English Language Arts 112	14	Mill & Cabinet Work 120	10	Visual Arts 110	17
English Language Arts 113	14	Modern History 111	27	Visual Arts 120	17
English Language Arts 121	14	Modern History 112	27	Wellness Physical Education 110	18
English Language Arts 122	14	Modern History 113	27	Women & Culture 120	15
English Language Arts 123	14	Music 111 (Instrumental/Voice/Piano)	17	World History AP 120	28
Entrepreneurship 110	12	Music 111/112 (General Piano/Guitar)	17	World Issues 120	28
Fashion Design 120	12	Music 122 (Instrumental)	17	Writing 110	15
Fashion Technology 110	12	Native Studies 120	27	Yoga 110	19
FI Biology 112	22	Nutrition for Healthy Living 120	18		