



**Course Selections &
Descriptions Guidebook**
High School Students

2017-2018

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INTRODUCTION:

The 2017-2018 High School Course Selection and Description Guidebook contains course descriptions and information to assist you in selecting your courses for next year. As you determine your academic program you should always plan with the end in mind. First consider which university programs might interest you, and then which Grade 12 courses would best serve you in applying to these programs. Next, select your Grade 11 and then Grade 10 courses, as appropriate. That is, for example, if you require Grade 12 Chemistry for your undergraduate program at University you will need to choose Chemistry in Grade 11. If you are uncertain about your university goals, that is not unusual. In this case, do your best in every subject and your academic strengths and interests will eventually reveal themselves.

On page 4, you will find a Personal Education Planner. The purpose of the Personal Education Planner is to help you select and plan your High School Courses and assist in the development of an Individual Pathways Plan. It is highly encouraged that students and parents complete the Personal Education Planner together and set strong goals for a successful future.

ST-LAURENT ACADEMY SECONDARY SCHOOL PROGRAM:

The St-Laurent Academy Secondary School Program provides students with small classes where each course is taught by a specialist in the field. The Secondary program flows seamlessly from the Elementary School Program and provides consistency in an enriched learning environment as well as continued emphasis on Physical Education/Health and the Environment.

Students are provided with supportive, rigorous and meaningful preparation for their postsecondary pursuits. In addition to the benefits stated above, daily tutorials provide the support required to allow students to meet their potential while ensuring stress levels are minimized. Students are provided the necessities to build a solid academic foundation along with excellent work habits and skills.

St-Laurent Academy is a school where strong academics go hand in hand with learning that is both engaging and fun. It is a great place to grow and learn.

HIGH SCHOOL PERSONAL EDUCATION PLANNER:

Use the following chart to plan your course selection for obtaining your OSSD:

What do you need to graduate?

18 compulsory credits

Subject	Grade 9	Grade 10	Grade 11	Grade 12	Additional
1	English	English	English	English	
2	Mathematics	Mathematics	Mathematics		
3	Science	Science			
4	Phys. Ed/Health	Phys. Ed/Health			
5	Integrated Arts	Media or Visual Arts			
6	Canadian Geo.	Green Industries			
7	Canadian History	Civics/Careers			
8	French (option 1)	Regional Geography			
9	Business(option 2)	French/Business (Optional Full year credit)			

Students must earn the following compulsory credits to obtain the Ontario Secondary School Diploma:

- 4 credits in English (1 credit per grade)*
- 3 credits in mathematics (1 credit in Grade 11 or 12)
- 2 credits in science
- 1 credit in Canadian history
- 1 credit in Canadian geography
- 1 credit in the arts
- 1 credit in health and physical education
- 1 credit in French as a second language
- 0.5 credit in career studies
- 0.5 credit in civics

1 Credit from each of the following groups:

Group 1:

- English or French as a second language**
- a Native language
- a Classical or an international language
- Social Sciences and the humanities
- Canadian and world studies
- Guidance and Career education
- Cooperative Education***

Group 2:

- Health and Physical education
- the Arts
- Business Studies
- French as a second language**
- Cooperative Education***

Group 3:

- Science (Grade 11 or 12)
- Technological education
- French as a second language**
- Computer studies
- Cooperative Education***

Additional Requirements

- 12 Optional Credits
- 40 Community Involvement Hours
- Completion of the provincial literacy requirement OSSLT or OSSLC

Notes:

*A maximum of 3 credits in English as a second language (ESL) or English literacy development (ELD) may be counted towards the 4 compulsory credits in English, but the fourth must be a credit earned for a Grade 12 compulsory English course.

**In groups 1, 2, and 3, a maximum of 2 credits in French as a second language can count as compulsory credits, one from group 1 and one from either group 2 or group 3.

***A maximum of 2 credits in cooperative education can count as compulsory credits.

†The 12 optional credits may include up to 4 credits earned through approved dual credit courses.

ST-LAURENT ACADEMY 2017-2018 COURSE SELECTIONS: Grade 9 - 12

Area of Study	Grade 9	Grade 10	Grade 11	Grade 12
English or English as a Second Language	ENG1D Or ESLAO	ENG2D Or ELSBO	ENG3U Or ESLCO	ENG4U EWC4U – Writer’s Craft Note: You may not substitute ESL for Grade 12 Eng to achieve the OSSD
French As A Second Language	FSF1D (option 1) Or FEF1D (Extended)	FSF2D (9 th credit option 1) Or FEF2D (Extended)	FSF3U - French	FSF4U - French
Canadian and World Studies	CGC1D - Geography CHC2D - History	CHC2D - History	CGR4M** - The Environment and Resource Management CLU3M – Understanding Canadian Law	CGW4U** – World Issues: A geographic Analysis CHI4U- Canada, History, Identity and Culture CLN4U – Canadian and Integrated Law
Social Sciences and Humanities			HSP3M – Intro to Anthropology, Psychology & Sociology	HSB4U – Challenge and Change in Society
Science	SNC1D	SNC2D	SBI3U** - Biology SCH3U - Chemistry SPH3U - Physics	SBI4U** – Biology SCH4U - Chemistry SPH3U – Physics
Mathematics	MPM1D	MPM2D	MCR3U-Functions	MHF4U – Advanced Functions MCV4U- Calculus & Vectors MDM4U – Data Management
Art	ASM2O – Media Art	ASM2O – Media Art	ASM3M – Media Art	ASM4M – Media Art AVI4M – Visual Art
Computer Studies			ICS3U – Intro Computer Science - online	ICS4U – Computer Science
Business Studies (Online)		BBI2O- Intro Business	BDI3C - Entrepreneurship	BBB4M- International Business
Guidance and Career Education				
Health & Physical Education	PPL1O - Healthy and Active Living	PPL2O - Healthy and Active Living	PPL3O** - Healthy and Active Living	PPL4O** PSE4U – Exercise Science
Technology Education	TGJ3M – Comm. Tech	TGJ3M – Comm. Tech	TGJ3M – Comm. Tech	THJ4M** – Green Ind.

Compulsory courses at St-Laurent Academy highlighted in red

**Required to receive specialty certificates (Environmental and/or Healthy and Active Living Certificate).

UNIVERSITY PROGRAMS OF STUDY-SPECIFIC SUBJECT REQUIREMENTS:

Since the entrance requirements for Post-Secondary Institutions vary, please consult us when making grade 11 choices to ensure your child's individual needs are met.

Bachelor of Applied Science

Major	Specific Subject Requirements
Applied Human Nutrition	ENG4U, 1 4U Math course, SBI4U, SCH4U, 2 additional 4U courses

Bachelor of Arts

Anthropology	ENG4U, 5 additional 4U courses
Art History	
Classical Studies	
Criminal Justice and Public Policy	
Economics	MHF4U highly recommended
English	
Environmental Governance	
European Studies	
Food, Agricultural and Resource Economics	MHF4U highly recommended
French Studies	
Geography	
History	
Information Systems and Human Behaviour	
International Development	
Mathematical Economics	MHF4U highly recommended
Mathematical Science	MHF4U highly recommended
Philosophy	
Political Science	
Psychology	
Sociology	
Spanish and Hispanic Studies	
Theatre Studies	

Bachelor of Bio-Resource Management

Environmental Management	ENG4U, SBI4U, SCH4U, a 4U Math, 2 Additional 4U courses
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Bachelor of Computing

Computer Science	ENG4U, MCV4U, MDM4U, ICS4U, 2 additional 4U courses
Software Engineering	

Bachelor of Commerce

High School Course Selections & Descriptions Specific Subject Requirements

Major

Accounting
Food and Agricultural Business
Leadership and Organizational Management
Management Economics and Finance
Marketing Management
Real Estate and Housing
Hotel and Food Administration
Public Management
Tourism Management

ENG4U, MHF4U, 1 additional 4U Math
3 additional 4U courses

Bachelor of Engineering

Biological Engineering
Biomedical Engineering
Computer Engineering
Engineering Systems and Computing
Environmental Engineering
Mechanical Engineering
Water Resources Engineering

ENG4U, MHF4U, MCV4U, SBI4U,
SCH4U, SPH4U

Bachelor of Science

Biological Sciences

Animal Biology
Biochemistry
Biodiversity
Biological Science
Bio-Medical Science
Biomedical Toxicology
Environmental Biology
Food Science
Human Kinetics
Marine and Freshwater Biology
Mathematical Science
Microbiology
Molecular Biology and Genetics
Nutritional Science
Plant Science
Psychology
Wildlife Biology

ENG4U, MHF4U, SBI4U, SCH4U,
SPH4U, 1 additional 4U course

Physical Sciences



Biological and Pharmaceutical Chemistry
Biological and Medical Physics
Chemical Physics
Chemistry
Environmental Geoscience and Geomatics
Nanoscience
Physical Science
Physics
Theoretical Physics

High School Course Selections & Descriptions
ENG4U, MCV4U, SBI4U, SCH4U,
SPH4U, 1 additional 4U course
preferably MHF4U

Bachelor of Science in Environmental Science

Majors

Ecology
Environmental Economics and Policy
Environment and Resource Management
Environmental Sciences

Specific Subject Requirements

ENG4U, MHF4U, SBI4U, SCH4U
SPH4U, 1 additional 4U course

SAMPLE COURSE SELECTIONS:

Interest in Green Technologies leading to Various Area of Study in University

Working Backwards:

Grade 12:

ENG 4U, SBI 4U, SCH 4U, SPH 4U, MHF 4U, MCV 4U, THJ 4M, plus an option

Grade 11:

ENG 3U, SBI 3U, SCH 3U, SPH 3U, MCR 3U, THJ 3M, plus 2 options

Possible Areas of Study in University:

Any of the areas in Science, Engineering or Environmental Studies

Interest in Physical Education

Grade 12:

ENG 4U, SBI 4U, SCH 4U, SPH 4U, MHF 4U, MCV 4U, PPL 4O, 1 option

Grade 11:

ENG 3U, SBI 3U, SCH 3U, SPH 3U, MCR 3U, PPL 3O, 2 options

Possible Areas of Study in University:

Human Kinetics, Nutritional Science, any areas of Science and Engineering

ST-LAURENT ACADEMY COURSE DESCRIPTIONS:

English

English, Grade 9, Academic (ENG1D)

This course is designed to develop the oral communication, reading, writing, and media literacy skills that students need for success in their secondary school academic programs and in their daily lives. Students will analyze literary texts from contemporary and historical periods, interpret informational and graphic texts, and create oral, written, and media texts in a variety of forms. An important focus will be on the use of strategies that contribute to effective communication. The course is intended to prepare students for the Grade 10 academic English course, which leads to university or college preparation courses in Grades 11 and 12.

Prerequisite: None

English, Grade 10, Academic (ENG2D)

This course is designed to extend the range of oral communication, reading, writing, and media literacy skills that students need for success in their secondary school academic programs and in their daily lives. Students will analyse literary texts from contemporary and historical periods, interpret and evaluate informational and graphic texts, and create oral, written, and media texts in a variety of forms. An important focus will be on the selective use of strategies that contribute to effective communication. This course is intended to prepare students for the compulsory Grade 11 university or college preparation course.

Prerequisite: Grade 9 English, Academic or Applied

English, Grade 11, University (ENG3U)

High School Course Selections & Descriptions

This course emphasizes the development of literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. Students will analyse challenging literary texts from various periods, countries, and cultures, as well as a range of informational and graphic texts, and create oral, written, and media texts in a variety of forms. An important focus will be on using language with precision and clarity and incorporating stylistic devices appropriately and effectively. The course is intended to prepare students for the compulsory Grade 12 university or college preparation course.

Prerequisite: Grade 10 English, Academic

English, Grade 12, University (ENG4U)

This course emphasizes the consolidation of the literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. Students will analyze a range of challenging literary texts from various periods, countries, and cultures; interpret and evaluate informational and graphic texts; and create oral, written, and media texts in a variety of forms. An important focus will be on using academic language coherently and confidently, selecting the reading strategies best suited to particular texts and particular purposes for reading, and developing greater control in writing. The course is intended to prepare students for university, college, or the workplace.

Prerequisite: Grade 11 English, University preparation

The Writer's Craft, Grade 12, University (EWC4U)

This course emphasizes knowledge and skills related to the craft of writing. Students will analyse models of effective writing; use a workshop approach to produce a range of works; identify and use techniques required for specialized forms of writing; and identify effective ways to improve the quality of their writing. They will also complete a major paper as part of a creative or analytical independent study project, and investigate opportunities for publication and for writing careers.

Prerequisite: Grade 11 English, University preparation

French As a Second Language

Core French, Grade 9, Academic (FSF1D)

This course emphasizes the further development of oral communication, reading, and writing skills. Students will build on and apply their knowledge of French while exploring a variety of themes, such as relationships, social trends, and careers. Thematic readings, which include a selection of short stories, articles, and poems, will serve as stepping stones to oral and written activities.

Prerequisite: Minimum of 600 hours of French instruction, or equivalent

Core French, Grade 10, Academic (FSF2D)

This course enables students to increase their knowledge of the French language, further develop their language skills, and deepen their understanding and appreciation of francophone culture around the world. Exploring a variety of themes, students will develop and apply critical thinking skills in discussion, in their analysis and interpretation of texts, and in their own writing.

Prerequisite: Grade 9 Core French, Academic or Applied

Core French, Grade 11, University (FSF3U)

This course draws on a variety of themes to promote extensive development of reading and writing skills and to reinforce oral communication skills. Students will gain a greater understanding of French-speaking cultures in Canada and around the world through their reading of a variety of materials, including a short novel or a play. Students will produce various written assignments, including a formal essay. The use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: Grade 10 Core French, Academic

Core French, Grade 12, University (FSF4U)

This course draws on a variety of themes to promote extensive development of French-language skills. Students will consolidate their oral skills as they discuss literature, culture, and current issues. They will read a variety of texts and will write a formal essay. The use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: Grade 11 Core French, University preparation

Extended French, Grade 9, Academic (FEF1D)

This course provides opportunities for students to speak and interact in French in a variety of real-life and personally relevant contexts. Students will develop their skills in listening, speaking, reading, and writing by using language learning strategies introduced in the elementary Extended French program. They will develop their creative and critical thinking skills through independently responding to and interacting with a variety of oral and written texts. They will also enhance their understanding and appreciation of diverse French-speaking communities, and will develop skills necessary for lifelong language learning.

Prerequisite: Minimum of 1260 hours of French instruction, or equivalent

Extended French, Grade 10, Academic (FEF2D)

This course provides extensive opportunities for students to use their communication skills in French and to apply language learning strategies. Students will develop their skills in listening, speaking, reading, and writing by responding to and interacting with French oral and written texts in a variety of real-life contexts, using their creative and critical thinking skills to explore and evaluate information and ideas in the texts. Students will increase their knowledge of the French language through the study of French authors. They will also increase their understanding and appreciation of diverse French-speaking communities, and will develop skills necessary for lifelong language learning.

Prerequisite: Extended French, Grade 9, Academic

Extended French, Grade 11, University (FEF3U)

This course focuses on developing French-language skills through the study of Canadian francophone authors. Students will analyse a range of works and produce written assignments in a variety of genres, including the formal essay. The use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: Extended French, Grade 10, Academic

Extended French, Grade 12, University (FEF4U)

This course emphasizes the refinement of French-language skills through the study of Canadian and international francophone literature. Students will interpret literary works, produce written assignments in a variety of genres, and conduct research on a major topic for a written and oral presentation. The use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: Extended French, Grade 11, University Preparation

Canadian and World Studies

Geography of Canada, Grade 9, Academic (CGC1D)

This course explores Canada's distinct and changing character and the geographic systems and relationships that shape it. Students will investigate the interactions of natural and human systems within Canada, as well as Canada's economic, cultural, and environmental connections to other countries. Students will use a variety of geotechnologies and inquiry and communication methods to analyse and evaluate geographic issues and present their findings.

Prerequisite: None

Canadian History Since World War I, Grade 10, Academic (CHC2D)

This course explores the local, national, and global forces that have shaped Canada's national identity from World War I to the present. Students will investigate the challenges presented by economic, social, and technological changes and explore the contributions of individuals and groups to Canadian culture and society during this period. Students will use critical-thinking and communication skills to evaluate

Prerequisite: None

The Environment and Resource Management, Grade 11, University/College (CGR4M)

This course investigates interactions between natural and human systems, with a particular emphasis on the impacts of human activity on ecosystems and natural processes. Students will use the geographic inquiry process, apply the concepts of geographic thinking, and employ a variety of spatial skills and technologies to analyse these impacts and propose ways of reducing them. In the course of their investigations, they will assess resource management and sustainability practices, as well as related government policies and international accords. They will also consider questions of individual responsibility and environmental stewardship as they explore ways of developing a more sustainable relationship with the environment.

Prerequisite: Any university, university/college, or college preparation course in Canadian and world studies, English, or social sciences and humanities

Canadian and World Issues: A Geographic Analysis, Grade 12, University (CGW4U)

In this course, students will address the challenge of creating a more sustainable and equitable world. They will explore issues involving a wide range of topics, including economic disparities, threats to the environment, globalization, human rights, and quality of life, and will analyse government policies, international agreements, and individual responsibilities relating to them. Students will apply the concepts of geographic thinking and the geographic inquiry process, including the use of spatial technologies, to investigate these complex issues and their impacts on natural and human communities around the world.

Prerequisite: Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities

World History to the End of the Fifteenth Century, Grade 11, University/College (CHW3M)

This course explores the history of various societies and civilizations around the world, from earliest times to around 1500 CE. Students will investigate a range of factors that contributed to the rise, success, and decline of various ancient and pre-modern societies throughout the world and will examine life in and the cultural and political legacy of these societies. Students will extend their ability to apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, when investigating social, political, and economic structures and historical forces at work in various societies and in different historical eras.

Prerequisite: Canadian History since World War I, Grade 10, Academic or Applied

World History since the Fifteenth Century, Grade 12, University (CHY4U)

This course traces major developments and events in world history since approximately 1450. Students will explore social, economic, and political changes, the historical roots of contemporary issues, and the role of conflict and cooperation in global interrelationships. They will extend their ability to apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, as they investigate key issues and ideas and assess societal progress or decline in world history.

Prerequisite: Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities

Canada: History, Identity, and Culture, Grade 12, University (CHI4U)

This course traces the history of Canada, with a focus on the evolution of our national identity and culture as well as the identity and culture of various groups that make up Canada. Students will explore various developments and events, both national and international, from precontact to the present, and will examine various communities in Canada and how they have contributed to identity and heritage in Canada. Students will investigate the development of culture and identity, including national identity, in Canada and how and why they have changed throughout the country's history. They will extend their ability to apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, as they investigate the people, events, and forces that have shaped Canada.

Prerequisite: Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities

Understanding Canadian Law, Grade 11, University/College (CLU3M)

This course explores Canadian law, with a focus on legal issues that are relevant to the lives of people in Canada. Students will gain an understanding of laws relating to rights and freedoms in Canada; our legal system; and family, contract, employment, tort, and criminal law. Students will develop legal reasoning skills and will apply the concepts of legal thinking and the legal studies inquiry process when investigating a range of legal issues and formulating and communicating informed opinions about them.

Prerequisite: Canadian History since World War I, Grade 10, Academic or Applied

Canadian Law and Integrated Law, Grade 12, University (CLN4U)

High School Course Selections & Descriptions

This course explores a range of contemporary legal issues and how they are addressed in both Canadian and international law. Students will develop an understanding of the principles of Canadian and international law and of issues related to human rights and freedoms, conflict resolution, and criminal, environmental, and workplace law, both in Canada and internationally. Students will apply the concepts of legal thinking and the legal studies inquiry process, and will develop legal reasoning skills, when investigating these and other issues in both Canadian and international contexts.

Prerequisite: Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities.

Social Sciences and Humanities

Introduction to Anthropology, Psychology, and Sociology, Grade 11, University/College (HSP3M)

This course introduces the theories, questions, and issues that are the major concerns of anthropology, psychology, and sociology. Students will develop an understanding of the way social scientists approach the topics they study and the research methods they employ. Students will be given opportunities to explore theories from a variety of perspectives and to become familiar with current thinking on a range of issues that have captured the interest of classical and contemporary social scientists in the three disciplines.

Prerequisite: None

Challenge and Change in Society, Grade 12, University/College (HSB4U)

This course examines the theories and methodologies used in anthropology, psychology, and sociology to investigate and explain shifts in knowledge, attitudes, beliefs, and behaviour and their impact on society. Students will analyse cultural, social, and biological patterns in human societies, looking at the ways in which those patterns change over time. Students will also explore the ideas of classical and contemporary social theorists, and will apply those ideas to the analysis of contemporary trends.

Prerequisite: Any university, university/college, or college preparation course in social sciences and humanities, English, or Canadian and world studies

Sciences

Science, Grade 9, Academic (SNC1D)

This course enables students to develop their understanding of basic concepts in biology, chemistry, earth and space science, and physics, and to relate science to technology, society, and the environment. Throughout the course, students will develop their skills in the processes of scientific investigation. Students will acquire an understanding of scientific theories and conduct investigations related to sustainable ecosystems; atomic and molecular structures and the properties of elements and compounds; the study of the universe and its properties and components; and the principles of electricity.

Prerequisite: None

Science, Grade 10, Academic (SNC2D)

This course enables students to enhance their understanding of concepts in biology, chemistry, earth and space science, and physics, and of the interrelationships between science, technology, society, and the environment. Students are also given opportunities to further develop their scientific investigation skills. Students will plan and conduct investigations and develop their understanding of scientific theories related to the connections between cells and systems in animals and plants; chemical reactions, with a particular focus on acid–base reactions; forces that affect climate and climate change; and the interaction of light and matter.

Prerequisite: Grade 9 Science, Academic or Applied

Biology, Grade 11, University (SBI3U)

This course furthers students' understanding of the processes that occur in biological systems. Students will study theory and conduct investigations in the areas of biodiversity; evolution; genetic processes; the structure and function of animals; and the anatomy, growth, and function of plants. The course focuses on the theoretical aspects of the topics under study, and helps students refine skills related to scientific investigation.

Prerequisite: Grade 10 Science, Academic

Biology, Grade 12, University (SBI4U)

This course provides students with the opportunity for in-depth study of the concepts and processes that occur in biological systems. Students will study theory and conduct investigations in the areas of biochemistry, metabolic processes, molecular genetics, homeostasis, and population dynamics. Emphasis will be placed on the achievement of detailed knowledge and the refinement of skills needed for further study in various branches of the life sciences and related fields.

Prerequisite: Grade 11 Biology, University preparation

Chemistry, Grade 11, University (SCH3U)

This course enables students to deepen their understanding of chemistry through the study of the properties of chemicals and chemical bonds; chemical reactions and quantitative relationships in those reactions; solutions and solubility; and atmospheric chemistry and the behaviour of gases. Students will further develop their analytical skills and investigate the qualitative and quantitative properties of matter, as well as the impact of some common chemical reactions on society and the environment.

Prerequisite: Grade 10 Science, Academic

Chemistry, Grade 12, University (SCH4U)

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This course enables students to deepen their understanding of chemistry through the study of organic chemistry, the structure and properties of matter, energy changes and rates of reaction, equilibrium in chemical systems, and electrochemistry. Students will further develop their problem-solving and investigation skills as they investigate chemical processes, and will refine their ability to communicate scientific information. Emphasis will be placed on the importance of chemistry in everyday life and on evaluating the impact of chemical technology on the environment.

Prerequisite: Grade 11 Chemistry, University preparation

Physics, Grade 11, University (SPH3U)

This course develops students' understanding of the basic concepts of physics. Students will explore kinematics, with an emphasis on linear motion; different kinds of forces; energy transformations; the properties of mechanical waves and sound; and electricity and magnetism. They will enhance their scientific investigation skills as they test laws of physics. In addition, they will analyse the interrelationships between physics and technology, and consider the impact of technological applications of physics on society and the environment.

Prerequisite: Grade 10 Science, Academic

Physics, Grade 12, University (SPH4U)

This course enables students to deepen their understanding of physics concepts and theories. Students will continue their exploration of energy transformations and the forces that affect motion, and will investigate electrical, gravitational, and magnetic fields and electromagnetic radiation. Students will also explore the wave nature of light, quantum mechanics, and special relativity. They will further develop their scientific investigation skills, learning, for example, how to analyse, qualitatively and quantitatively, data related to a variety of physics concepts and principles. Students will also consider the impact of technological applications of physics on society and the environment.

Prerequisite: Grade 11 physics, University preparation

Mathematics

Principles of Mathematics, Grade 9, Academic (MPM1D)

This course enables students to develop an understanding of mathematical concepts related to algebra, analytic geometry, and measurement and geometry through investigation, the effective use of technology, and abstract reasoning. Students will investigate relationships, which they will then generalize as equations of lines, and will determine the connections between different representations of a linear relation. They will also explore relationships that emerge from the measurement of three-dimensional figures and two-dimensional shapes. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Prerequisite: None

Principles of Mathematics, Grade 10, Academic (MPM2D)

This course enables students to broaden their understanding of relationships and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and abstract reasoning. Students will explore quadratic relations and their applications; solve and apply linear systems; verify properties of geometric figures using analytic geometry; and investigate the trigonometry of right and acute triangles. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Prerequisite: Grade 9 Mathematics, Academic, or Grade 9 Mathematics Transfer, Applied to Academic

Functions, Grade 11, University (MCR3U)

This course introduces the mathematical concept of the function by extending students' experiences with linear and quadratic relations. Students will investigate properties of discrete and continuous functions, including trigonometric and exponential functions; represent functions numerically, algebraically, and graphically; solve problems involving applications of functions; investigate inverse functions; and develop facility in determining equivalent algebraic expressions. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Prerequisite: principles of Mathematics, Grade 10, Academic

Advanced Functions, Grade 12, University (MHF4U)

This course extends students' experience with functions. Students will investigate the properties of polynomial, rational, logarithmic, and trigonometric functions; develop techniques for combining functions; broaden their understanding of rates of change; and develop facility in applying these concepts and skills. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. This course is intended both for students taking the Calculus and Vectors course as a prerequisite for a university program and for those wishing to consolidate their understanding of mathematics before proceeding to any one of a variety of university programs.

Prerequisite: Functions, Grade 11, University preparation, or Mathematics for College Technology, Grade 12, College preparation

Calculus and Vectors, Grade 12, University (MCV4U)

This course builds on students' previous experience with functions and their developing understanding of rates of change. Students will solve problems involving geometric and algebraic representations of vectors and representations of lines and planes in three-dimensional space; broaden their understanding of rates of change to include the derivatives of polynomial, sinusoidal, exponential, rational, and radical functions; and apply these concepts and skills to the modelling of real-world relationships. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. This course is intended for students who choose to pursue careers in fields such as science, engineering, economics, and some areas of business, including those students who will be required to take a university-level calculus, linear algebra, or physics course.

Prerequisite: Note: Advanced Functions, Grade 12, University preparation, must be taken prior to or concurrently with Calculus and Vectors.

Mathematics of Data Management, Grade 12, University (MDM4U)

This course broadens students' understanding of mathematics as it relates to managing data. Students will apply methods for organizing and analysing large amounts of information; solve problems involving probability and statistics; and carry out a culminating investigation that integrates statistical concepts and skills. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. Students planning to enter university programs in business, the social sciences, and the humanities will find this course of particular interest.

Prerequisite: Functions, Grade 11, University preparation, or Functions and Applications, Grade 11, University/College preparation

Arts

Media Arts, Grade 10, Open (ASM2O)

This course enables students to create media art works by exploring new media, emerging technologies such as digital animation, and a variety of traditional art forms such as film, photography, video, and visual arts. Students will acquire communications skills that are transferable beyond the media arts classroom and develop an understanding of responsible practices related to the creative process. Students will develop the skills necessary to create and interpret media art works

Prerequisite: None

Media Arts, Grade 11, University/College Preparation (ASM3M)

This course focuses on the development of media arts skills through the production of art works involving traditional and emerging technologies, tools, and techniques such as new media, computer animation, and web environments. Students will explore the evolution of media arts as an extension of traditional art forms, use the creative process to produce effective media art works, and critically analyse the unique characteristics of this art form. Students will examine the role of media artists in shaping audience perceptions of identity, culture, and values.

Prerequisite: Media Arts, Grade 10, Open

Media Arts, Grade 12, University/College Preparation (ASM4M)

This course emphasizes the refinement of media arts skills through the creation of a thematic body of work by applying traditional and emerging technologies, tools, and techniques such as multimedia, computer animation, installation art, and performance art. Students will develop works that express their views on contemporary issues and will create portfolios suitable for

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use in either career or postsecondary education applications. Students will critically analyse the role of media artists in shaping audience perceptions of identity, culture, and community values.

Prerequisite: Media Arts, Grade 11, University/College preparation

Visual Arts, Grade 12, University/College Preparation (AVI4M)

This course focuses on enabling students to refine their use of the creative process when creating and presenting two- and three-dimensional art works using a variety of traditional and emerging media and technologies. Students will use the critical analysis process to deconstruct art works and explore connections between art and society. The studio program enables students to explore a range of materials, processes, and techniques that can be applied in their own art production. Students will also make connections between various works of art in personal, contemporary, historical, and cultural contexts.

Prerequisite: Visual Arts, Grade 11, University/College preparation

Business Studies

Entrepreneurship: The Venture - BD13C

This course focuses on ways in which entrepreneurs recognize opportunities, generate ideas, and organize resources to plan successful ventures that enable them to achieve their goals. Students will create a venture plan for a school-based or student-run business. Through hands-on experiences, students will have opportunities to develop the values, traits, and skills most often associated with successful entrepreneurs.

International Business Fundamentals, Grade 12, University/College (BBB4M)

This course provides an overview of the importance of international business and trade in the global economy and explores the factors that influence success in international markets. Students will learn about the techniques and strategies associated with marketing, distribution, and managing international business effectively. This course prepares students for postsecondary programs in business, including international business, marketing, and management.

Prerequisite: None

Computer Studies

Introduction to Computer Science, Grade 11, University (ICS3U), online

This course introduces students to computer science. Students will design software independently and as part of a team, using industry-standard programming tools and applying the software development life-cycle model. They will also write and use subprograms within computer programs. Students will develop creative solutions for various types of problems as their understanding of the computing environment grows. They will also explore environmental and ergonomic issues, emerging research in computer science, and global career trends in computer-related fields.

Prerequisite: None

Computer Science, Grade 12, University (ICS4U)

This course enables students to further develop knowledge and skills in computer science. Students will use modular design principles to create complex and fully documented programs, according to industry standards. Student teams will manage a large software development project, from planning through to project review. Students will also analyse algorithms for effectiveness. They will investigate ethical issues in computing and further explore environmental issues, emerging technologies, areas of research in computer science, and careers in the field.

Prerequisite: Introduction to Computer Science, Grade 11, University preparation

various interpretations of the issues and events of the period and to present their own points of view.

Prerequisite: None

Health and Physical Education

Healthy Active Living Education, Grade 9, Open (PPL10)

This course emphasizes regular participation in a variety of enjoyable physical activities that promote lifelong healthy active living. Students will learn movement skills and principles, ways to improve personal fitness and physical competence, and safety and injury prevention. They will investigate issues related to healthy sexuality and the use and abuse of alcohol, tobacco, and other drugs, and will participate in activities designed to develop goal-setting, communication, and social skills.

Prerequisite: None

Healthy Active Living Education, Grade 10, Open (PPL20)

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This course emphasizes regular participation in a variety of enjoyable physical activities that promote lifelong healthy active living. Student learning will include the application of movement principles to refine skills; participation in a variety of activities that enhance personal competence, fitness, and health; examination of issues related to healthy sexuality, healthy eating, substance use and abuse; and the use of informed decision-making, conflict resolution, and social skills in making personal choices.

Prerequisite: None

Healthy Active Living Education, Grade 11, Open (PPL30)

This course focuses on the development of a healthy lifestyle and participation in a variety of enjoyable physical activities that have the potential to engage students' interest throughout their lives. Students will be encouraged to develop personal competence in a variety of movement skills and will be given opportunities to practice goal-setting, decision-making, social, and interpersonal skills. Students will also study the components of healthy relationships, reproductive health, mental health, and personal safety.

Prerequisite: None

Healthy Active Living Education, Grade 12, Open (PPL40)

This course focuses on the development of a personalized approach to healthy active living through participation in a variety of sports and recreational activities that have the potential to engage students' interest throughout their lives. Students will develop and implement personal physical fitness plans. In addition, they will be given opportunities to refine their decision-making, conflict-resolution, and interpersonal skills, with a view to enhancing their mental health and their relationships with others.

Prerequisite: None

Exercise Science, Grade 12, University (PSE4U)

This course focuses on the study of human movement and of systems, factors, and principles involved in human development. Students will learn about the effects of physical activity on health and performance, the evolution of physical activity and sports, and the factors that influence an individual's participation in physical activity. The course prepares students for university programs in physical education, kinesiology, recreation, and sports administration.

Prerequisite: Any Grade 11 university or university/college preparation course in science, or any Grade 11 or 12 open course in health and physical education

Technology Education

Communications Technology – TGJ2O, open

This course introduces students to building materials and processes through opportunities to design and build various construction projects. Students will learn to create and read working drawings; become familiar with common construction materials, components, and processes; and perform a variety of fabrication, assembly, and finishing operations. They will use a variety of hand and power tools and apply knowledge of imperial and metric systems of measurement, as appropriate. Students will develop an awareness of environmental and societal issues related to construction technology, and will explore secondary and postsecondary pathways leading to careers in the industry.

Prerequisite: None

Communications Technology – TGJ3M, College/University

This course examines communications technology from a media perspective. Students will develop knowledge and skills as they design and produce media projects in the areas of live, recorded, and graphic communications. These areas may include TV, video, and movie production; radio and audio production; print and graphic communications; photography; digital imaging; broadcast journalism; and interactive new media. Students will also develop an awareness of related environmental and societal issues, and will explore college and university programs and career opportunities in the various communications technology fields.

ADDITIONAL INFORMATION FOR REFERENCE:

ONTARIO SECONDARY SCHOOL PROGRAM LEVELS OF STUDY

Grade 9/10 Levels

Students in grades 9 and 10 will take their core courses (English, Mathematics, Science, French, and Geography and History) in one of three streams - Applied, Academic or Locally Developed. All other courses will be taken at the open level.

Academic Courses (D)

Academic courses focus on the essential concepts of the discipline plus additional related concepts. Academic courses develop students' knowledge and skills by emphasizing theoretical, abstract applications of the essential concepts while incorporating practical applications.

Applied Courses (P)

Applied courses focus on the essential concepts of the discipline. Applied courses develop students' knowledge and skills by emphasizing practical, concrete applications of the essential concepts while

incorporating theoretical applications.

Open (O)

Open level courses offered in subjects have one set of expectations for each subject, and are appropriate for all students. Open level courses are for all subjects other than those offered as applied or academic.

Grade 11/12 Levels

Students in Grades 11 and 12 will take their core courses (English, Mathematics, Science) in one of four streams - University, University/College, College, Workplace. These streams relate to a student's destination after high school - work, college, or university. Some courses will be offered at the open level and M level. Additional elective courses are also offered at the various levels.

University Preparation Courses (U)

These courses are designed to equip students with the knowledge and skills they need to meet the entrance requirements for university programs. Teaching and learning will emphasize theoretical aspects of the course content, but will also include concrete applications.

University/College Preparation Courses (M)

These courses include content that is relevant for both university and college programs. These courses provide students with the knowledge and skills they need to meet the entrance requirements for specific university and college programs.

Course Changes

It is very important that students select their subjects and course streams wisely. Opportunities to make timetable changes are limited. Guidelines and dates for timetable and level changes are available in the guidance office and will be published in the student handbook.

INDIVIDUAL PATHWAYS PLAN

All students are required to develop and maintain an Individual Pathways Plan which helps them to set goals and priorities and to make future decisions. Students set these goals and review their progress towards them on an ongoing basis. As part of this plan, students also research career and educational opportunities and alternatives. It is expected that parents will play an active role along with students and teachers in the development and ongoing review of this plan.

COMMUNITY INVOLVEMENT

As part of the Ontario Secondary School Diploma requirements, every student must complete 40 hours of Community Involvement prior to graduation. The purpose of this requirement is to help students to understand how they can make a positive difference within the community and increase student awareness of community needs. Students will also develop a positive self image, and a greater sense of

identity within the community. All students receive a handout for completing community involvement. Students can begin working on community involvement hours in the summer prior to beginning Grade 9.

ONTARIO SECONDARY SCHOOL LITERACY TEST

All students are required to successfully complete the Ontario Secondary School Literacy Test. This test measures basic levels of literacy and is based on the reading and writing expectations up until the end of Grade 9. Secondary school diplomas will only be awarded to students who successfully complete the test. Students who have had at least one opportunity to write the OSSLT and have been unsuccessful are eligible to take the Ontario Literacy Course. Successful completion of this course gives the student a credit and meets the requirements of the OSSLT.

Accommodations

The necessary accommodations are made to ensure that students who have an Individual Education Plan (IEP) have a fair and equal opportunity to successfully complete the Ontario Secondary School Literacy Test. The accommodations made will be the same as those that are set out in the student's I.E.P. and/or those available to the student in the course of his or her regular school work, including examinations and other forms of evaluation. While accommodations such as alternative forms of print and extra time are acceptable, the actual content of the secondary school literacy test can not be altered.

Deferrals

Students who might benefit from a deferral of the test may include those who have been identified as exceptional and students registered in English as a second language/English literacy development (ELL/ELD) courses, who have not yet acquired the level of proficiency in English required for successfully completing the test.

Exemptions

Students whose IEP indicates that the student is not working towards the attainment of a secondary school diploma may, with parental consent and the approval of the principal, be exempted from participating in the secondary school literacy test. Students who do not successfully complete the literacy test will not be able to receive a secondary school diploma. Should the learning expectations contained in the student's IEP be revised at some point to allow the student to work towards the attainment of the secondary school diploma, the student would be expected to successfully complete the secondary school literacy test.

GRADE 9 ASSESSMENT OF MATHEMATICS

Students will be required to take the Grade 9 Numeracy Test. Students will be assessed on each of the strands in the Grade 9 mathematics program, including analytic geometry, number sense and algebra, relationships, and measurement and geometry. Teachers will prepare students in their classes to familiarize them with the multiple-choice, short answer and task oriented questions that will appear on the test.

FULL DISCLOSURE

All students taking Grade 11 and 12 courses are subject to a Full Disclosure policy. All courses taken from the full disclosure date on will be recorded on a student's transcript, whether the course has been successfully completed or not. The full disclosure period begins five school days after the mid-term report cards are distributed. This information is to be made available to community colleges and universities for them to consider when making admission and scholarship decisions. Parents and students who have further questions about this policy should contact a guidance counsellor.

SUBSTITUTIONS FOR COMPULSORY COURSES

In order to allow flexibility in designing a student's program and to ensure that all students can qualify for the secondary school diploma, substitutions may be made for a limited number of compulsory credit courses using courses from the remaining courses offered by the school that meet the requirements for compulsory credits. To meet individual students' needs, principals may replace up to three of these courses (or the equivalent in half courses) with courses from the remainder of those that meet the compulsory credit requirements. In all cases, however, the sum of compulsory and optional credits will not be less than thirty for students aiming to earn the Ontario Secondary School Diploma.

The decision to make a substitution for a student should be made only if the student's educational interests are best served by such substitution. If a parent or an adult student requests a substitution, the principal will determine whether or not a

substitution should be made. A principal may also initiate consideration of whether a substitution should be made. The principal will make his or her decision in consultation with the parent or adult student and appropriate school staff. In cases where the parent or adult student disagrees with the decision of the principal, the parent or adult student may ask the appropriate Supervisory Officer to review the matter. Each substitution will be noted on the student's Ontario Student Transcript.

THE ONTARIO STUDENT TRANSCRIPT

The Ontario Student Transcript (OST) provides a comprehensive record of a student's overall achievement in high school.

The credits that a secondary school student has earned towards fulfilment of the requirements for the graduation diploma will be recorded on the OST. The transcript, which is part of the Ontario Student Record (OSR), will include the following information:

- all courses successfully completed by the student, with percentage grades obtained and credits earned;
- identification of compulsory credits, including credits that are substitutions for compulsory credits identified by the Ministry as diploma requirements;
- confirmation that the student has completed the 40 hours of community involvement;
- confirmation that the student has successfully completed the Ontario Secondary School Literacy Test.

Exceptional Students

The OST will also be used to record the achievement of students who have alternative learning expectations in an individualized, non-credit program. In the case of an Exceptional Student, the Ontario Student Transcript (OST) includes the following information:

- courses successfully completed (year completed, grade level, course title, course code and level of difficulty, mark and credit value)
- total number of credits earned
- Certificate of Education or Ontario Secondary School Diploma or Certificate if earned
- Community Involvement Hours completed
- Ontario Secondary Literacy Test completed

This document is available to students, upon request, for a nominal fee. This transcript is used by all secondary schools in Ontario.