

# Credit Course Descriptions

## Canadian & World Studies

### **CHV201/CHV20F\*– Civics and Citizenship, Grade 10, Open (0.50 credit)**

This course explores rights and responsibilities associated with being an active citizen in a democratic society. Students will explore issues of civic importance such as healthy schools, community planning, environmental responsibility, and the influence of social media, while developing their understanding of the role of civic engagement and of political processes in the local, national, and/or global community. Students will apply the concepts of political thinking and the political inquiry process to investigate, and express informed opinions about, a range of political issues and developments that are both of significance in today's world and of personal interest to them. **\*CHV20F is delivered in French.** *Prerequisite: None*

## English

### **ENG1D1 – English, Grade 9, Academic (1.0 credit)**

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 analyse 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. *Prerequisite: None*

### **ENG1P1 – English, Grade 9, Applied (1.0 credit)**

This course is designed to develop the key oral communication, reading, writing, and media literacy skills students need for success in secondary school and daily life. Students will read, interpret, and create a variety of informational, literary, and graphic texts. An important focus will be on identifying and using appropriate strategies and processes to improve students' comprehension of texts and to help them communicate clearly and effectively. *Prerequisite: None*

### **ENG2D1 – English, Grade 10, Academic (1.0 credit)**

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. *Prerequisite: English, Grade 9, Academic*

### **ENG2P1 – English, Grade 10, Applied (1.0 credit)**

This course is designed to extend the range of oral communication, reading, writing, and media literacy skills that students need for success in secondary school and daily life. Students will study and create a variety of informational, literary, and graphic texts. An important focus will be on the consolidation of strategies and processes that help students interpret texts and communicate clearly and effectively. *Prerequisite: English, Grade 9, Academic or Applied*

### **ENG3C1 – English, Grade 11, College Preparation (1.0 credit)**

This course emphasizes the development of literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. Students will study the content, form, and style of a variety of informational and graphic texts, as well as literary texts from Canada and other countries, and create oral, written, and media texts in a variety of forms for practical and academic purposes. An important focus will be on using language with precision and clarity. *Prerequisite: English, Grade 10, Academic or Applied*

### **ENG3U1 – English, Grade 11, University Preparation (1.0 credit)**

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. *Prerequisite: English, Grade 10, Academic*

### **ENG4C1 – English, Grade 12, College Preparation (1.0 credit)**

This course emphasizes consolidation of literacy, critical thinking, and communication skills. Students will analyse informational texts and literary works from various time periods, countries, and cultures; write research reports, summaries, and short analytical essays; complete an independent study project; and analyse the interactions among media forms, audiences, and media industry practices.

An important focus will be on establishing appropriate style and using business and technical language effectively. *Prerequisite: English, Grade 11, College Preparation or University Preparation*

#### **ENG4U1 – English, Grade 12, University Preparation (1.0 credit)**

This course emphasizes the consolidation of literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. Students will analyse a variety of informational and graphic texts, as well as literary texts from various countries and cultures, and create oral, written, and media texts in a variety of forms for practical and academic purposes. An important focus will be on using language with precision and clarity and developing greater control in writing. *Prerequisite: English, Grade 11, University Preparation*

#### **OLC4O1 – Ontario Secondary School Literacy Course, Grade 12, Open (1.0 credit)**

This course is designed to help students acquire and demonstrate the cross-curricular literacy skills that are evaluated by the Ontario Secondary School Literacy Test (OSSLT). Students who complete the course successfully will meet the provincial literacy requirement for graduation. Students will read a variety of informational, narrative, and graphic texts and will produce a variety of forms of writing, including summaries, information paragraphs, opinion pieces, and news reports. Students will also maintain and manage a portfolio containing a record of their reading experiences and samples of their writing. **Eligibility requirement: Students who have been eligible to write the OSSLT at least twice and who have been unsuccessful at least once are eligible to take the course. A student may be allowed to enrol in the OSSLC before he or she has had a second chance to write the OSSLT, if the principal determines that it is in the best educational interests of the student.**

### **Guidance and Career Education**

#### **GLC2O1/GLC2OF\* – Career Studies, Grade 10, Open (0.50 credit)**

This course gives students the opportunity to develop the skills, knowledge, and habits that will support them in their education and career/life planning. Students will learn about global work trends, and seek opportunities within the school and community to expand and strengthen their transferable skills and their ability to adapt to the changing world of work. On the basis of exploration, reflective practice, and decision-making processes, students will make connections between their skills, interests, and values and their postsecondary options, whether in apprenticeship training, college, community living, university, or the workplace. They will set goals and create a plan for their first postsecondary year. As part of their preparation for the future, they will learn about personal financial management – including the variety of saving and borrowing tools available to them and how to use them to their advantage – and develop a budget for their first year after secondary school. **\*GLC2OF is delivered in French.** *Prerequisite: None*

### **Health and Physical Education**

#### **PPL1O1 – Healthy Active Living, Grade 9, Open (1.0 credit)**

This course equips students with the knowledge and skills they need to make healthy choices now and lead healthy, active lives in the future. Through participation in a wide range of physical activities, students develop knowledge and skills related to movement competence and personal fitness that provide a foundation for active living. Students also acquire an understanding of the factors and skills that contribute to healthy development and learn how their own well-being is affected by, and affects, the world around them. Students build their sense of self, learn to interact positively with others, and develop their ability to think critically and creatively. *Prerequisite: None* **Note: Candidates for this program MUST be recommended by their previous elementary school Principal and approved students will be registered by the elementary school administration. Registrations will not be accepted in any other manner.**

### **Mathematics**

#### **MPM1D1 – Principles of Mathematics, Grade 9, Academic (1.0 credit)**

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*

**MFM1P1 – Foundations of Mathematics, Grade 9, Applied (1.0 credit)**

This course enables students to develop an understanding of mathematical concepts related to introductory algebra, proportional reasoning, and measurement and geometry through investigation, the effective use of technology, and hands-on activities. Students will investigate real life examples to develop various representations of linear relations and will determine the connections between the representations. They will also explore certain relationships that emerge from measurement of three-dimensional figures and two-dimensional shapes. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

*Prerequisite: None*

**MPM2D1 – Principles of Mathematics, Grade 10, Academic (1.0 credit)**

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: Mathematics, Grade 9, Academic*

**MFM2P1 – Foundations of Mathematics, Grade 10, Applied (1.0 credit)**

This course enables students to consolidate their understanding of linear relations and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and hands-on activities. Students will develop and graph equations in analytic geometry; solve and apply linear systems, using real-life examples; and explore and interpret graphs of quadratic relations. Students will investigate similar triangles, the trigonometry of right triangles, and the measurement of three-dimensional figures. Students will consolidate their mathematical skills as they solve problems and communicate their thinking. *Prerequisite: Mathematics, Grade 9, Academic or Applied*

**MBF3C1 – Foundations for College Mathematics, Grade 11, College Preparation (1.0 credit)**

This course enables students to broaden their understanding of mathematics as a problem-solving tool in the real world. Students will extend their understanding of quadratic relations; investigate situations involving exponential growth; solve problems involving compound interest; solve financial problems connected with vehicle ownership; develop their ability to reason by collecting, analysing, and evaluating data involving one variable; connect probability and statistics; and solve problems in geometry and trigonometry. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

*Prerequisite: Mathematics, Grade 10, Applied*

**MCF3M1 – Functions, Grade 11, University/College Preparation (1.0 credit)**

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: Mathematics, Grade 10, Academic or Applied*

**MCR3U1 – Functions & Relations, Grade 11, University Preparation (1.0 credit)**

This course introduces some financial applications of mathematics, extends students' experiences with functions, and introduces second-degree relations. Students will solve problems in personal finance involving applications of sequences and series; investigate properties and applications of trigonometric functions; develop facility in operating with polynomials, rational expressions, and exponential expressions; develop an understanding of inverses and transformations of functions; and develop facility in using function notation and in communicating mathematical reasoning. Students will also investigate loci and the properties and applications of conics. *Prerequisite: Mathematics, Grade 10, Academic*

**MAP4C1 – Foundations for College Mathematics, Grade 12, College Preparation (1.0 credit)**

This course enables students to broaden their understanding of real-world applications of mathematics. Students will analyse data using statistical methods; solve problems involving applications of geometry and trigonometry; simplify expressions; and solve equations. Students will reason mathematically and communicate their thinking as they solve multi-step problems. This course prepares students for college programs in areas such as business, health sciences, and human services, and for certain skilled trades.

*Prerequisite: Mathematics, Grade 11, College Preparation*

#### ***MCT4C1 – Mathematics for College Technology, Grade 12, College Preparation (1.0 credit)***

This course enables students to extend their knowledge of functions. Students will investigate and apply properties of polynomial, exponential, and trigonometric functions; continue to represent functions numerically, graphically, and algebraically; develop facility in simplifying expressions and solving equations; and solve problems that address applications of algebra, trigonometry, vectors, and geometry. Students will reason mathematically and communicate their thinking as they solve multi-step problems. This course prepares students for a variety of college technology programs. *Prerequisite: Mathematics – Functions and Applications, Grade 11, University/College Preparation*

#### ***MCV4U1 – Calculus and Vectors, Grade 12, University Preparation (1.0 credit)***

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, rational, exponential, and sinusoidal 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 plan to study mathematics in university and who may choose to pursue careers in fields such as physics and engineering. *Prerequisite: Mathematics – Advanced Functions, Grade 12, University Preparation (must be taken prior to or concurrently with Calculus and Vectors)*

#### ***MDM4U1 – Mathematics of Data Management, Grade 12, University Preparation (1.0 credit)***

This course broadens students' understanding of mathematics as it relates to managing data. Students will apply methods for organizing large amounts of information; solve problems involving probability and statistics; and carry out a culminating project 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: Mathematics – Functions, Grade 11, University Preparation OR Mathematics – Functions and Applications, Grade 11, University/College Preparation*

#### ***MHF4U1 – Advanced Functions, Grade 12, University Preparation (1.0 credit)***

This course extends students' experience with functions. Students will investigate the properties of polynomial, rational, logarithmic, and trigonometric 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 who plan to study mathematics in university and for those wishing to consolidate their understanding of mathematics before proceeding to any one of a variety of university programs. *Prerequisite: Mathematics – Functions, Grade 11, University Preparation OR Mathematics for College Technology, Grade 12, College Preparation*

## **Science**

#### ***SNC1D1 – Science, Grade 9, Academic (1.0 credit)***

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*

#### ***SNC1P1 – Science, Grade 9, Applied (1.0 credit)***

This course enables students to develop their understanding of basic concepts in biology, chemistry, earth and space science, and physics, and to apply their knowledge of science to everyday situations. They are also given opportunities to develop practical skills related to scientific investigation. Students will plan and conduct investigations into practical problems and issues related to the impact of human activity on ecosystems; the structure and properties of elements and compounds; space exploration and the components of the universe; and static and current electricity. *Prerequisite: None*

#### ***SNC2D1 – Science, Grade 10, Academic (1.0 credit)***

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: Science, Grade 9, Academic*

**SNC2P1 – Science, Grade 10, Applied (1.0 credit)**

This course enables students to develop a deeper understanding of concepts in biology, chemistry, earth and space science, and physics, and to apply their knowledge of science in real-world situations. Students are given opportunities to develop further practical skills in scientific investigation. Students will plan and conduct investigations into everyday problems and issues related to human cells and body systems; chemical reactions; factors affecting climate change; and the interaction of light and matter.

*Prerequisite: Science, Grade 9, Academic or Applied*

**SBI3C1 – Biology, Grade 11, College Preparation (1.0 credit)**

This course focuses on the processes that occur in biological systems. Students will learn concepts and theories as they conduct investigations in the areas of cellular biology, microbiology, genetics, the anatomy of mammals, and the structure of plants and their role in the natural environment. Emphasis will be placed on the practical application of concepts, and on the skills needed for further study in various branches of the life sciences and related fields. *Prerequisite: Science, Grade 10, Academic or Applied*

**SBI3U1 – Biology, Grade 11, University Preparation (1.0 credit)**

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: Science, Grade 10, Academic*

**SCH3U1 – Chemistry, Grade 11, University Preparation (1.0 credit)**

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: Science, Grade 10, Academic*

**SPH3U1 – Physics, Grade 11, University Preparation (1.0 credit)**

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: Science, Grade 10, Academic*

**SBI4U1 – Biology, Grade 12, University Prep. (1.0 credit)**

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: Biology, Grade 11, University Preparation*

**SCH4C1 – Chemistry, Grade 12, College Preparation (1.0 credit)**

This course enables students to develop an understanding of chemistry through the study of matter and qualitative analysis, organic chemistry, electrochemistry, chemical calculations, and chemistry as it relates to the quality of the environment. Students will use a variety of laboratory techniques, develop skills in data collection and scientific analysis, and communicate scientific information using appropriate terminology. Emphasis will be placed on the role of chemistry in daily life and the effects of technological applications and processes on society and the environment. *Prerequisite: Science, Grade 10, Academic or Applied*

**SCH4U1 – Chemistry, Grade 12, University Preparation 1.0 credit)**

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: Chemistry, Grade 11, University Preparation*

***SPH4C1 – Physics, Grade 12, College Preparation (1.0 credit)***

This course develops students' understanding of the basic concepts of physics. Students will explore these concepts with respect to motion; mechanical, electrical, electromagnetic, energy transformation, hydraulic, and pneumatic systems; and the operation of commonly used tools and machines. They will develop their scientific investigation skills as they test laws of physics and solve both assigned problems and those emerging from their investigations. Students will also consider the impact of technological applications of physics on society and the environment. *Prerequisite: Science, Grade 10, Academic or Applied*

***SPH4U1 – Physics, Grade 12, University Preparation (1.0 credit)***

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: Physics, Grade 11, University Preparation*