

## COURSE OPTIONS GRADE 12

### ENGLISH

#### ENG4C1

English, College Preparation  
Prerequisite: ENG3C1

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.

#### ENG4U1

English, University Preparation  
Prerequisite: ENG3U1

Students will analyse 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.

#### ENG4E1

English, Workplace Preparation  
Prerequisite: None

Students will analyse informational, graphic, and literary texts and create oral, written, and media texts in a variety of forms for workplace-related and practical purposes. An important focus will be on using language accurately and organizing ideas and information coherently.

#### EWC4C/4U1

The Writer's Craft  
Prerequisite: ENG3C1/U1

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.

#### ETS4U1

Film Studies

Prerequisite: ENG3U1

ETS 4U1 is for students with a special interest in literature and literary criticism. The course may focus on themes, genres, time periods, or countries. Students will analyse a range of forms and stylistic elements of literary texts and respond personally, critically, and creatively to them. They will also assess critical interpretations, write analytical essays, and complete an independent study project. Students can expect to consider films in the frameworks of historical and cultural influences, aesthetic theory, and technology. Students will analyze films as visual texts, and will respond personally, critically, and creatively to them.

#### OLC4O1/9

Literacy

Prerequisite: Unsuccessful on OSSLT

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.

### MATHEMATICS

#### MAP4C1

College and Apprenticeship Math

Prerequisite: MBF3C1

Students will analyse data using statistical methods; solve problems involving applications of geometry and trigonometry; solve financial problems connected with annuities, budgets, and renting or owning accommodation; simplify expressions; and solve equations. This course prepares students for college

programs in areas such as business, health sciences, and human services, and for certain skilled trades.

#### MEL4E1

Math for Work and Everyday

Prerequisite: None

Students will investigate questions involving the use of statistics; apply the concept of probability to solve problems involving familiar situations; investigate accommodation costs, create household budgets, and prepare a personal income tax return; use proportional reasoning; estimate and measure; and apply geometric concepts to create designs.

#### MCV4U1

Calculus and Vectors

Prerequisite: MHF4U1

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. 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.

#### MDM4U1

Math of Data Management

Prerequisite: MCR3U1 or MCF3M1

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 planning to enter university 100 programs in business, the social sciences, and the humanities will find this course of particular interest.

#### MHF4U1

Advance Functions

Prerequisite: MCR3U1

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. 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.

### FRENCH

#### FSF4U1

Core French

Prerequisite: FSF3U1

This course provides extensive opportunities for students to speak and interact in French independently. Students will develop their listening, speaking, reading, and writing skills, apply language learning strategies in a wide variety of real-life situations, and develop their creative and critical thinking skills through responding to and interacting with a variety of oral and written texts. They will also enrich their understanding and appreciation of diverse French speaking communities, and will develop skills necessary for lifelong language learning.

### SCIENCE

#### SBI4U1

Biology, University Prep

Prerequisite: SBI3U1

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.

**SCH4U1**

Chemistry, University Prep

Prerequisite: SCH3U1

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.

**SCH4C1**

Chemistry, College Prep

Prerequisite: SNC2P1/SNC2D1

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

**SES4U1**

Earth and Space Science, University Prep

Prerequisite: SNC2D1

Students will investigate the properties of and forces in the universe and solar system and analyse techniques scientists use to generate knowledge about them. Students will closely examine the materials of Earth, its internal and surficial processes, and its geological history, and will learn how Earth's systems interact and how they have changed over time. Throughout the course, students will learn how these forces, processes, and materials affect their daily lives. The course draws on biology, chemistry, physics, and mathematics in its consideration of geological and astronomical processes

that can be observed directly or inferred from other evidence.

**SPH4U1**

Physics, University Prep

Prerequisite: SPH3U1

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.

**SPH4C1**

Physics, College Prep

Prerequisite: SNC2P1

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.

**ICS4U/OB**

Biotechnology, University Prep/Open

Prerequisite: SBI3U1 or SBI3C1

This course will help students to investigate biotechnology developments, theories, products, careers and practical applications with particular reference to laboratory work. Students will use diverse resources and an interdisciplinary approach to understand how the biotechnology industry operates; particularly how industry, government and other stakeholders create partnerships (successful and unsuccessful) and how companies research and develop a product

from concept to market. In addition, students will explore models (successful and unsuccessful), innovative thinkers and their texts. Using diverse resources and research methods, they will also evaluate the economical, political, social, cultural, environmental and ethical issues raised in this developing field. Students will be asked to demonstrate the essential skills required in the workplace, as this course builds on the interdisciplinary expectations.

**HEALTH AND PHYSICAL EDUCATION****PPL4OF/M:** Healthy Active Living – Female/Male

OR

**PAF4OF/M:** Personal Fitness – Female/Male

OR

**PAL4O1:** Large Group Activities – Co-Ed

Prerequisite: None

This course enables students to further develop the knowledge and skills they need to make healthy choices. It places special emphasis on how students can maintain the habits of healthy, active living throughout their lives as they make the transition to adulthood and independent living. Through participation in a wide range of physical activities in a variety of settings, students can enhance their movement competence, personal fitness, and confidence. 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.

**PLF4M1**

Recreation and Healthy Active Living Leadership

Prerequisite: Any Grade 11/12 course in health or physical education

This course enables students to explore the benefits of lifelong participation in active recreation and healthy leisure and to develop the leadership and coordinating skills needed to plan, organize, and safely implement recreational events and other activities related to healthy, active living. Students will also learn how to promote the benefits of healthy, active living to others through mentoring and assisting them in making

informed decisions that enhance their well-being. The course will prepare students for university programs in physical education and health and kinesiology and for college and university programs in recreation and leisure management, fitness and health promotion, and fitness leadership.

**PSK4U1**

Exercise Science (Kinesiology)

Prerequisite: Any Grade 11/12 course in health or physical education OR any grade 11 U or U/C science course

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 sport, and the physiological, psychological, and social factors that influence an individual's participation in physical activity and sport. The course prepares students for university programs in physical education and health, kinesiology, health sciences, health studies, recreation, and sports administration.

**THE ARTS****ADA4M1**

Dramatic Arts

Prerequisite: ADA3M1

This course requires students to experiment individually and collaboratively with forms and conventions of both drama and theatre from various cultures and time periods. Students will interpret dramatic literature and other texts and media sources while learning about various theories of directing and acting. Students will examine the significance of dramatic arts in various cultures, and will analyse how the knowledge and skills developed in drama are related to their personal skills, social awareness, and goals beyond secondary school.

**AMI4M1**

Music – Band

Prerequisite: AMI3M1

A performance-based course open to woodwind, brass, and percussion instrument players who have 4+ years of experience. It is highly recommended that anyone enrolled in AMI also take AMR in conjunction.

**AMK4M1**

Music – Keyboards

Prerequisite: AMK3M1

Students have the opportunity to learn piano at the equivalent of Royal Conservatory grade 4, or continue their piano studies at a more advanced level.

**AMR4M1**

Music Repertoire

(after school)

Prerequisite: AMR3M1

An after school instrumental band course for any student who has previously taken any level of AMR, or has 4+ years of experience on their main band instrument.

**AVI4M1**

Visual Arts

Prerequisite: AVI3M1

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.

**AWD4M1**

Visual Arts – Graphic Design

Prerequisite: AWD3M1

This course builds on the concepts learned in AWD 3M1 and supports students who are considering a career in a design related field. Understanding the concepts and medium of visual communication is its goal and students will build skills in the areas of illustration, typography, computer graphics and graphic design. Projects involving the school and community will be encouraged. Technical proficiency as well as creative problem-solving should be evident in their expanded portfolio of assignments.

**AWQ4M1**

Photography

Prerequisite: AWQ3M1

This is an advanced course for students who would like to further develop their photographic practice. Through the course students will strengthen their image creation skills, continue to explore digital techniques and expand their artistic expression. Students are to create a range of photographic images drawing upon personal experience and community engagement. Photographic history, cultural contexts, and analyzing photographs are an important component of the course. Emphasis in this course is on developing unique creative and personal expression through the photographic medium.

**BUSINESS STUDIES****BAT4M1**

Financial Accounting Principles

Prerequisite: BAF3M1

This course introduces students to advanced accounting principles that will prepare them for postsecondary studies in business. Students will learn about financial statements for various forms of business ownership and how those statements are interpreted in making business decisions. This course expands students' knowledge of sources of financing, further develops accounting methods for assets, and introduces accounting for partnerships and corporations.

**BBB4M1**

Intro to International Business

Prerequisite: None

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.

**BOH4M1**

Business Leadership: Management Fundamentals

Prerequisite: None

This course focuses on the development of leadership skills used in managing a successful business. Students will analyse the role of a leader in business, with a focus on decision making, management of group dynamics, workplace stress and conflict, motivation of employees, and planning. Effective business communication skills, ethics, and social responsibility are also emphasized.

**CANADIAN AND WORLD STUDIES**

Prerequisite for ALL courses: Any U, U/C or C course in Canadian and world studies, English, or social sciences and humanities.

**CHY4U1**

History of the West & the World

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.

**CGW4U1**

Canadian and World Issues

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 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.

**CIA4U1**

Economics

This course examines current Canadian and international economic issues, developments, policies, and practices from diverse perspectives. Students will explore the decisions that individuals and institutions,

including governments, make in response to economic issues such as globalization, trade agreements, economic inequalities, regulation, and public spending. Students will apply the concepts of economic thinking and the economic inquiry process, as well as economic models and theories, to investigate, and develop informed opinions about, economic trade-offs, growth, and sustainability and related economic issues.

**CLN4U1**

Canadian and International Law

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.

**IDC4U1**

Visual History: Exploring the Past Through Film

A picture is worth a thousand words. A moving picture is even better! Explore themes in history from ancient times to the 20th century by seeing how they are portrayed in Hollywood films. Is the movie Troy historically accurate? Just how much truth is in a Hollywood blockbuster like Gladiator? This course is designed for students with an interest in history, film and media. Students will study major themes in World History by examining relevant Hollywood films and creating innovative media projects. It's a history course for people who don't think they're into history courses!

**COMPUTER STUDIES****ICS4U1**

Computer Science

Prerequisite: ICS3U1

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.

### **SOCIAL SCIENCES AND THE HUMANITIES**

Prerequisite for ALL courses: Any U, U/C or C course in Canadian and world studies, English, or social sciences and humanities.

#### **HIP401**

Personal Life Management (Shaping Your Future)

This course focuses on preparing students for living independently and working successfully with others. Students will learn to manage their personal resources to meet their basic needs for food, clothing, and housing. They will also learn about their personal, legal, and financial responsibilities and develop and apply interpersonal skills in order to make wise and responsible personal and occupational choices. Students will apply research and inquiry skills while investigating topics related to personal life management. The course emphasizes the achievement of expectations through practical experiences.

#### **HFA4C1/U1**

Nutrition and Health

This course examines the relationships between food, energy balance, and nutritional status; the nutritional needs of individuals at different stages of life; and the role of nutrition in health 120 and disease. Students will evaluate nutrition-related trends and will determine how food choices can promote food security and environmental responsibility. Students will learn about healthy eating, expand their repertoire of food-preparation techniques, and develop their social science research skills by investigating issues related to nutrition and health.

#### **HPD4C1**

Working with Families and Small Children

This course prepares students for occupations involving school-age children and adolescents. Students will study a variety of theories about child behaviour and

development, and will have opportunities for research and observation and for practical experiences with older children. Students will become familiar with occupational opportunities and requirements related to working with older children and adolescents. They will develop research skills used in investigating child and adolescent behaviour and development.

#### **HSB4U1**

Challenge and Change in Society

This course focuses on the use of social science theories, perspectives, and methodologies to investigate and explain shifts in knowledge, attitudes, beliefs, and behaviour and their impact on society. Students will critically analyse how and why cultural, social, and behavioural patterns change over time. They will explore the ideas of social theorists and use those ideas to analyse causes of and responses to challenges such as technological change, deviance, and global inequalities. Students will explore ways in which social science research methods can be used to study social change.

#### **HSE4M1**

Equity and Social Justice: From Theory to Practice

This course enables students to develop an understanding of the theoretical, social, and historical underpinnings of various equity and social justice issues and to analyse strategies for bringing about positive social change. Students will learn about historical and contemporary equity and social justice issues in Canada and globally. They will explore power relations and the impact of a variety of factors on equity and social justice. Students will develop and apply research skills and will design and implement a social action initiative relating to an equity or social justice issue.

#### **HZT4U1**

Philosophy: Questions and Theories

This course enables students to acquire an understanding of the nature of philosophy and philosophical reasoning skills and to develop and apply their knowledge and skills while exploring specialized branches of philosophy (the course will cover at least three of the following branches: metaphysics, ethics, epistemology, philosophy of science, social and political philosophy, aesthetics). Students will develop critical

thinking and philosophical reasoning skills as they formulate and evaluate arguments related to a variety of philosophical questions and theories. They will also develop research and inquiry skills related to the study and practice of philosophy.

### **TECHNOLOGICAL EDUCATION**

#### **TTJ4C1**

Transportation Technology

Prerequisite: TTJ3C1

This course enables students to further develop technical knowledge and skills as they study, test, service, and repair engine management systems; powertrains; steering/control, suspension, brake, and body systems on vehicles, aircraft, and/or watercraft; and/or smallengine products. Students will refine communication and teamwork skills through practical tasks, using a variety of tools and equipment. Students will expand their awareness of environmental and societal issues related to transportation and their knowledge of apprenticeship and college programs leading to careers in the transportation industry.

#### **TCJ4C1**

Construction Technology

Prerequisite: TCJ3C1

This course enables students to further develop knowledge and skills related to residential construction and to explore light commercial construction. Students will gain hands-on experience using a variety of materials, processes, tools, and equipment, and will learn more about building design and project planning. They will continue to create and interpret construction drawings and will extend their knowledge of construction terminology and of relevant building codes and regulations, as well as health and safety standards and practices. Students will also focus on environmental and societal issues related to construction engineering technology, and will explore career opportunities in the field.

#### **TEJ4M1**

Computer Engineering Technology

Prerequisite: TEJ3M1

This course extends students' understanding of computer systems and computer interfacing with

external devices. Students will assemble computer systems by installing and configuring appropriate hardware and software, and will learn more about fundamental concepts of electronics, robotics, programming, and networks. Students will examine related environmental and societal issues, and will explore postsecondary pathways leading to careers in computer technology.