

GRADE 12 COURSE DESCRIPTIONS

English, University Preparation

ENG4U

This course emphasizes consolidation of literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. 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. The course is intended to prepare students for university, college, or the workplace.

Prerequisite: ENG3U Grade 11 English, University Preparation

The Writer's Craft, University Preparation

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 the creative or analytical independent study project and investigate opportunities for publication and for writing careers.

Prerequisite: ENG3U Grade 11 English, University Preparation

Advanced Functions, University Preparation

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

Calculus and Vectors, University Preparation

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.

Note: The new Advanced Functions course (MHF4U) must be taken prior to or concurrently with Calculus and Vectors (MCV4U).

Prerequisite: Functions, Grade 11, University Preparation

Mathematics of Data Management, University Preparation

MDM4U

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 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 programmes in business, the social sciences, and the humanities will find this course of particular interest.

Prerequisite: Functions, Grade 11, University Preparation (MCR3U), or Functions and Applications (MCF3M), Grade 11, University/College Preparation

Philosophy: Questions and Theories, University Preparation

HZT4U

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.

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

Biology, University Preparation

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: Biology, Grade 11, University Preparation

Chemistry, University Preparation

SCH4U

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

Physics, University Preparation

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: Physics, Grade 11, University Preparation

Core French, University Preparation

FSF4U

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.

Prerequisite: Core French, Grade 11, University Preparation

Religious Studies (Locally Developed Course: 0.50 credit)

HRE43

This course focuses on three areas of Christian thought. First, students will examine the methodology of Bible study. Topics of Bible interpretation include contextual analysis of text, theological analysis of text, word studies, figurative language, types of Biblical literature, and Bible study tools available. Second, students will focus on explanation of the Christian faith and apologetics. Third, students will be examine the major worldviews of the twenty-first century.

Prerequisite: None

Business Leadership: Management Fundamentals, University/College Prep

BOH4M

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.

Prerequisite: None

Computer Science, University Preparation

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

Visual Arts, 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.

Material fee: \$20

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

Music, University/College Preparation

AMU4M

This course enables students to enhance their musical literacy through the creation, appreciation, analysis, and performance of music. Students will perform traditional, commercial, and art music, and will respond with insight to live and recorded performances. Students will enhance their understanding of the function of music in society and the impact of music on themselves and various communities and cultures. Students will analyse how to apply skills developed in music to their life and careers.

Prerequisite: Music, Grade 11, University/College Preparation

Introductory Kinesiology, University Preparation

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 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.

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

Human Development throughout the Lifespan, University/College Preparation

HHG4M

This course offers a multidisciplinary approach to the study of human development throughout the lifespan. Students will learn about a range of theoretical perspectives on human development. They will examine threats to healthy development as well as protective factors that promote resilience. Students will learn about physical, cognitive, and social-emotional development from the prenatal period through old age and will develop their research and inquiry skills by investigating issues related to human development.

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

Classical Greek, Academic, Level 1 (Half credit)

LVGBD

This (part two) course introduces students to the achievements of the classical world through the study of ancient Greek. Students will learn vocabulary and grammatical concepts essential for reading and

translating adapted classical texts. English is the language of instruction, and students will develop their oral communication, reading, and writing skills in both English and ancient Greek. Through a variety of enrichment activities, students will explore aspects of life in the ancient world, including trade, commerce, education, arts, sports, ecology, daily life, and social practices, and will make connections across the curriculum between the classical world and the world around them.

Prerequisite: None

Latin, Academic, Level 1 (Half credit)

LVLBD

This (part two)course introduces students to the achievements of the classical world through the study of Latin. Students will learn vocabulary and grammatical concepts essential for reading and translating adapted classical texts. English is the language of instruction, and students will develop their oral communication, reading, and writing skills in both English and Latin. Through a variety of enrichment activities, students will explore aspects of life in the ancient world, including trade, commerce, education, arts, sports, ecology, daily life, and social practices, and will make connections across the curriculum between the classical world and the world around them.

Prerequisite: None