Pre-University
Grade 12 Short Course Descriptions

ART

Visual Art
The Pre-U Visual Art course is devoted to an individualize programme reflecting the unique strengths and needs of each student. There is a strong focus on the understanding and application of the creative process to produce original works of art. Each student will produce a body of studio work for exhibition. However, there is also a required drawing component that places a strong emphasis on developing and strengthening drawing skills in a variety of drawing media and styles. Working outside of class is encouraged. This course has a prerequisite of Secondary V level art or equivalent. A portfolio submission may also be required for admission, which is at the discretion of the Art Department Head.

COMPUTER STUDIES

Communications Technology
This course examines communication systems and design and production processes in the areas of electronic, live, recorded, and graphic communications. With a focus on an original business concept, students will create, manage, and distribute complex electronic, graphic, recorded, or audio-visual projects independently and in project teams. Students will also explore the impact of communications technology and social media upon society and the environment.

ENGLISH

Overview
All students begin the year by taking a common expository writing course. The contents of this initial offering are designed to harmonize the transition to college-level writing. By the end of the course, students will produce a personal essay or statement for their college applications.

Based on the student's college profile and results in the common writing course, s/he will be placed in one of the following writing courses (November-January): Personal Expression (creative writing) or College Preparatory Writing (expository writing).

In the spring (February-May), students will choose from one of the following literature courses: Contemporary American Novel and The Short Story.

Personal Expression
Personal Expression explores strategies and techniques that writers employ to create fiction and fosters the growth and independence of the creative writer. The course's emphasis is on discovering one's writing 'voice' while developing a serious approach to the art and practice of creative writing. As distinct from College Preparatory Writing, which concentrates on the technical aspects of expository writing, Personal Expression focuses on the creative modes of discourse: short fiction, journals, creative non-fiction and poetry.

College Preparatory Writing
College Preparatory Writing focuses largely on research-based writing, which will prepare students for the rigours of college- or university-level writing, especially for the sciences, social sciences and commerce. The course includes a brief review of the common writing course, in addition to a refresher on mechanics, syntax and an ongoing vocabulary-building segment. Written work may include reports, précis/summaries, letter writing, editorials and research methodology.

Contemporary American Novel
Contemporary American Novel examines three to four works published in the last twenty-five years. Although the themes in the course are largely American, the books chosen do contain universal ideas. In addition to a thematic interpretation of each text, the student is required to practice close reading and textual analysis. Assignments range from essays of literary analysis to student-led seminars to in-class writing samples. Authors studied may include John Kennedy Toole, Ernest J. Gaines, Dorothy Allison, David Guterson, Russell Banks and Toni Morrison.

The Short Story
The Short Story will examine the elements of fiction, cultural contexts, and critical approaches of the short story in English. Through reading, discussion, analysis, writing, and research, students will gain appreciation for the art and craft of short fiction. The stories and authors will range from classic tales through to modern masterpieces, and contemporary selections. Students will examine writers' commentaries, as well as to practice in-depth critical analysis of the short fiction we study.

Français

Objectif général
Ce cours met l'accent sur l'amélioration des compétences langagières à travers de nombreux débats ainsi que par le biais de l'étude des contextes sociohistoriques entourant les œuvres littéraires canadiennes-françaises et internationales. Les élèves sont amenés à interpréter différents textes, produire une variété de travaux écrits et effectuer des recherches sur un sujet choisi pour les présenter oralement. L'utilisation appropriée des conventions de la langue orale et écrite sera soulignée tout le long de ce cours.

Ainsi, l'analyse des textes produits dans une langue particulière est fondamentale pour

l'étude de la langue et de la culture et, par conséquent, pour définir la manière dont nous percevons et comprenons le monde dans lequel nous vivons. L'un des objectifs fondamentaux du cours de français préuniversitaire est d'inciter les élèves à s'interroger sur le sens généré par la langue et les textes, sens qui, si l'on peut dire, est rarement simple et sans équivoque.

Objectifs généraux en expression orale
À la fin de ce cours, l'étudiant pourra :
- discuter et de débattre de sujets basés sur les discussions en classe, la recherche individuelle et les intérêts personnels;
- répondre à un large éventail de textes parlés et relatés dans les médias;
- utilisez les règles de grammaire et les conventions linguistiques appropriées lors d'activités de communication orale.

Objectifs généraux en lecture
À la fin de ce cours, l'étudiant pourra :
- démontrer une compréhension des textes à partir d'une variété de genres étudiés dans ce cours;
- interpréter un large éventail de textes et d'appliquer les connaissances acquises dans d'autres contextes;
- étendre leur compréhension de la culture des peuples de langue française à travers le monde par la lecture des œuvres littéraires et des textes d'information;
- identifier et comprendre les conventions linguistiques utilisées dans leurs matériels de lecture.

Objectifs généraux en écriture
À la fin de ce cours, l'étudiant pourra :
- exprimer ses idées et opinions dans une variété de formes écrites, ce qui démontre la capacité d'extraire et analyser les informations provenant de sources diverses;
- ajuster la langue utilisée dans leur écriture en fonction de l'objectif et le public;
- organiser leur écriture afin que les idées et l'information soient clairement présentées de manière cohérente;
- utilisez les règles de grammaire et les conventions linguistiques appropriées dans leurs travaux écrits.

MATHEMATICS

Calculus and Vectors
This is an introductory course in calculus and is intended for students interested in pursuing science and business programs in university. This course builds on students' experience with advanced functions in Secondary V scientific math and introduces the basic concepts and skills of differential calculus.

Over the course of the year, students will learn the concepts and skills of differential calculus as applied to polynomial, exponential, and trigonometric functions. They will explore geometric and algebraic representations of vectors, lines and planes in three-dimensional space. Students will use these concepts and skills for problem solving in a range of realistic applications.

The use of technology is an integral part of this course. The graphing calculator (TI-83 or better) is used on a daily basis to investigate and test hypotheses. Computer software and/or the internet are used at times to provide a better visual representation of the concepts. Technology is never used as a replacement of algebraic methods, but rather as an enhancement of the understanding of differential calculus concepts.

**** Advanced Placement AB Calculus or Advanced Placement BC Calculus exam is an option for students at teacher's discretion.***

Mathematics of Data Management
Data Management is a college-level, non-calculus based course that will broaden a students' understanding of mathematics as it relates to managing information. Students planning to pursue university programs in business, the social sciences, or the humanities will find this course of particular interest.
This course is designed to present strategies for collecting, organizing, analyzing, and drawing conclusions from data while modeling and solving real-world problems. The first section of the course deals with Descriptive Statistics where students are introduced to terminology in statistics, sampling techniques, and tools used to describe data. The second section deals with Inferential Statistics whereby students will make use of the normal distribution to test a variety of parameters by conducting appropriate hypothesis tests in order to interpret, judge and reach viable conclusions on the statistical information in the world around them. Special emphasis is placed on tests of correlation and chi-square. In the last section students will look at probability distributions using an assortment of simulations scenarios.
This course is dependent on the use of technology. Online explorations, simulations, and animations will be used to motivate, instruct, and illustrate concepts. Upon completion, students will be able to conduct an independent analysis of one-sample or two-sample data sets following statistical reasoning and read statistical reports with a critical mind and understanding.

SCIENCE

Biology
This general biology course is geared towards a post-secondary level, in-depth study of cell biology and energetics, molecular genetics, heredity and a selection of topics such as physiology of major systems, evolution and ecology. Laboratory exercises are planned around the particular topics under study. Successful completion of Secondary IV science is required and successful completion of Secondary V chemistry and biology (or their equivalent) are beneficial but not required. Talented students are encouraged to write the Advanced Placement exam at the end of the program with additional preparation.

Advanced Chemistry
This course emphasizes modern structural theory, elementary thermodynamics, colligative properties, chemical equilibrium and chemical kinetics. A formal introduction to organic chemistry and the relationships between structure and physical properties is also presented. Successful completion of Secondary V physics and chemistry (or equivalents) are prerequisites. Calculus should be taken concurrently as it builds upon

concepts taught in Secondary V chemistry and follows the Advanced Placement curriculum. Problem-solving and good communication skills, as well as research and laboratory techniques, are developed through seminars, original research and peer-led workshops. Students are evaluated by regular class tests, as well as term exams. Talented students are encouraged to write the Advanced Placement exam at the end of the course.

Advanced Physics

This is a continuation course for potential engineering and physical science students that emphasizes classical mechanics, and includes selected topics from special relativity and electricity and magnetism. Laboratory work consists of set exercises designed to complement the theoretical work and to broaden the student's experience. Computers are used as tools for collecting and analyzing experimental data. Extensive discussion of statistical uncertainty is integrated into the lab analysis. Student participation is evaluated by their performance on assignments and investigation reports. The formal evaluation is based on the student's performance on a series of tests and one exam in December and one in May. Tests and exams are subjective in style. Successful completion of Secondary V physics and mathematics-science option(or their equivalents) are prerequisites. Advanced Calculus must be taken concurrently. Talented students are encouraged to write the Advanced Placement exam at the end of the course.

SOCIAL SCIENCE

Political Science
This course examines Canadian and world politics from a variety of perspectives. Students will investigate the ways in which individuals, groups, and states work to influence domestic and world events, the role of political ideologies in national and international politics, and the dynamics of international cooperation and conflict resolution. They will research, debate and share their opinions on issues in national and international politics including: the state of political leadership; voter apathy in democratic countries; the role of women in politics; the influence of government on the economy and standards of living; and the state of world security. Students will apply critical thinking and communication skills to develop and support informed opinions about current political conflicts, events, and issues. They will be encouraged to analyze problems, propose creative solutions, communicate effectively through a variety of mediums and manage their own time.

Economics
Economics is both a practical and academic discipline. As a result, economic theories are affected by changes in world events as well as by advances in economic research. In this course, students will be introduced to those economic theories and concepts that are basic in acquiring a solid understanding of the discipline. Topics of study include fundamental economic concepts, their microeconomic underpinnings and how these relate to and affect our macro economy. Students will also learn how to adapt models in the social sciences to understand human behavioral phenomena. Furthermore, they will understand technical information, examine major issues affecting Canadian and world economies, apply theoretical concepts to real-world situations, analyze economic problems and assess solutions to these economic issues. To achieve this goal, students will be expected to play an active role in the classroom, participate in group discussions, keep up with

required readings and be critically informed of current economic events. Student progress will be evaluated through class tests, assigned work and class participation. Although most economic concepts investigated are complex by their very nature, every attempt will be made to ensure simplicity without compromising the integrity of the discipline.
Upon successful completion of the course requirements, students are encouraged to sit for the Advanced Placement Exam in May.

**** Advanced Placement Economics exam is an option for students at teacher's discretion.***

Philosophy
It was Plato who said that the unexamined life is not worth living. The aim of this course is not only to provide students with the groundwork for further study in philosophy, but also to provide an opportunity for personal intellectual exploration and growth. Students will be introduced to the principal philosophical problems and currents of thought that have dominated the western tradition from the ancient Greeks to the modern era.

The academic competencies emphasized in philosophy (critical thinking, writing with clarity and precision, close reading of texts, concise oral communication and listening skills) possess universal relevance and applicability. Although there are no specific pre-requisites, students must possess strong reading and writing skills, as well as the capacity to work independently, in order to enroll in this course.

Canada and World Issues
The course will examine the challenges and opportunities facing Canadians in an increasingly interdependent world. Students will use historical, political and geographic analysis to examine the evolution of current social, economic and environmental structures. The challenges of creating an equitable and sustainable future will be analyzed through a wide range of topics including peacekeeping, geopolitical conflict, food security and resource scarcity.

Psychology
The AP Psychology course is designed to introduce students to the systematic and scientific study of the behaviour and mental processes of human beings and other animals. Students are exposed to the psychological facts, principles, and phenomena associated with each of the major subfields within psychology. They also learn about the ethics and methods psychologists use in their science and practice.

An example of the content areas covered in AP Psychology include: biological basis of behaviour, research methods, sensory and perception, states of consciousness, learning, cognition, motivation and emotion, developmental psychology, personality, abnormal behaviour, and social psychology.