
This Course Guide reflects a combination of Ministry of Education Guidelines, Toronto District School Board Policy, and practical applications to an adult learning environment.
**BUSINESS (WITH COMPUTERS)**

**BBI2O1 Introduction to Business, Grade 10, Open**
This course introduces students to the world of business. Students will develop an understanding of the functions of business, including accounting, marketing, information, and communication technology, human resources, and production, and the importance of ethics and social responsibility. This course builds a foundation for further studies in business, and helps students develop the business knowledge and skills they need in their everyday lives.

Prerequisite: None

**BTT2O1 Information and Communication Technology in Business, Grade 10, Open**
This course introduces students to information and communication technology in a business environment, and builds a foundation of digital literacy skills necessary for success in a technologically driven society. Students will develop word processing, spreadsheet, database, desktop publishing, presentation software and website design skills. Throughout the course, there is an emphasis on digital literacy, effective electronic research and communication skills, and current issues related to the impact of information and communication technology.

Prerequisite: None

**BTA3O1 Information and Communication Technology: The Digital Environment, Grade 11, Open**
This course prepares students for the digital environment. Using a hands-on approach, students will further develop information and communication technology skills through the use of common business software applications. The concept and operation of e-business will be explored, and students will design and create an e-business website. The skills developed in this course will prepare students for success in the workplace and/or post-secondary studies.

Prerequisite: None

**BAF3M1 Financial Accounting Fundamentals, Grade 11, University/College**
This course introduces students to the fundamental principles and procedures of accounting with emphasis on accounting. Students will develop financial analysis and decision-making skills that will assist them in future studies and/or career opportunities in business. Students will acquire an understanding of accounting for a service and a merchandising business, computerized accounting, financial analysis, and ethics and current issues in accounting.

Prerequisite: None

**BAT4M1 Financial Accounting Principles, Grade 12, University/College**
This course introduces students to advanced accounting principles that will prepare them for post-secondary 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 further develops accounting methods for assets and introduces accounting for partnerships, corporations, and sources of financing.

Prerequisite: Financial Accounting Fundamentals, Grade 11, University/College Preparation

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**CANADIAN & WORLD STUDIES/SOCIAL SCIENCES & HUMANITIES**

**CGC1P1 Issues in Canadian Geography, Grade 9, Applied**
This course focuses on current geographic issues that affect Canadians. Students will draw on their personal and everyday experiences as they explore issues relating to food and water supplies, competing land uses, interactions with the natural environment, and other topics relevant to sustainable living in Canada. They will also develop an awareness that issues which affect their lives in Canada are interconnected with issues in other parts of the world. Throughout the course, students will use the concepts of geographic thinking, the geographic inquiry process, and spatial technologies to guide and support their investigations.

Prerequisite: None

**CHC2P1 Canadian History Since World War I, Grade 10, Applied**
This course focuses on the social context of historical developments and events and how they have affected the lives of people in Canada since 1914. Students will explore interactions between various communities in Canada as well as contributions of individuals and groups to Canadian heritage and identity. Students will develop their ability to apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, when investigating the continuing relevance of historical developments and how they have helped shape communities in present-day Canada.

Prerequisite: None

**CGG3O1 Travel and Tourism: A Regional Geographic Perspective, Grade 11, Open**
This course focuses on travel and tourism as the vehicle for studying selected world regions. Using a variety of geotechnologies and inquiry and communication methods, students will conduct and present case studies that develop their understanding of unique characteristics of selected world regions; the environmental, cultural, economic, and political factors that influence travel and tourism; and the impact of the travel industry on communities and environments around the world.

Prerequisite: Issues in Canadian Geography, Grade Applied or Academic or Recommended Preparation: ENG2P/D, or Assessment
CGW4U1 Canadian and World Issues: A Geographic Analysis, Grade 12, University
This course looks at the global challenge of creating a more sustainable and equitable world. Students will explore a range of issues involving environmental, economic, social, and geopolitical interrelationships, and will examine governmental policies related to these issues. Students will apply the concepts of geographic thinking and the geographic inquiry process, including spatial technologies, to investigate these complex issues, including their impact 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, or Assessment

CHI 4U1 Canada: History, Identity, and Culture, Grade 12, University
This course explores the challenges associated with the formation of a Canadian national identity. Students will examine the social, political, and economic forces that have shaped Canada from the pre-contact period to the present and will investigate the historical roots of contemporary issues from a variety of perspectives. Students will use critical-thinking and communication skills to consider events and ideas in historical context, debate issues of culture and identity, and present their own views.
Prerequisite: Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities

CHY4C1 World History – Since the Fifteenth Century, Grade 12, College
This course explores the history of the world since the sixteenth century, emphasizing the interaction between the emerging West and other regions of the world. Students will learn about a variety of economic, social, and political systems and the changes they have undergone over time. Students will apply their developing skills of historical inquiry to understand and communicate ideas about the forces that have formed our modern world.
Prerequisite: Any university, university/college, or college preparation course in Canadian and world studies, English, or social sciences and humanities

CHY4U1 World History - Since the Fifteenth Century, Grade 12, University
This course investigates the major trends in Western civilization and world history from the sixteenth century to the present. Students will learn about the interaction between the emerging West and other regions of the world and about the development of modern social, political, and economic systems. They will use critical-thinking and communication skills to investigate the historical roots of contemporary issues and present their conclusions.
Prerequisite: Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities

CLN4U1 Canadian and International Law, Grade 12, University
This course examines elements of Canadian and international law in social, political, and global contexts. Students will study the historical and philosophical sources of law and the principles and practices of international law and will learn to relate them to issues in Canadian society and the wider world. Students will use critical-thinking and communication skills to analyse legal issues, conduct independent research, and present the results of their inquiries in a variety of ways.
Prerequisite: Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities

HRT3M1 World Religions and Belief Traditions: Perspectives, Issues, and Challenges, Grade 11 University/College Preparation
This course provides students with opportunities to explore various world religions and belief traditions. Students will develop knowledge of the terms and concepts relevant to this area of study, will examine the ways in which religions and belief traditions meet various human needs, and will learn about the relationship between belief and action. They will examine sacred writings and teachings, consider how concepts of time and place influence different religions and belief traditions, and develop research and inquiry skills related to the study of human expressions of belief.
Prerequisite: None

HSP3C1 Introduction to Anthropology, Psychology, and Sociology, Grade 11 College Preparation
This course introduces students to theories, questions, and issues related to anthropology, psychology, and sociology. Students learn about approaches and research methods used by social scientists. Students will be given opportunities to apply theories from a variety of perspectives, to conduct social science research, and to become familiar with current issues within the three disciplines.
Prerequisite: None
HSP3U1 **Introduction to Anthropology, Psychology, and Sociology, Grade 11, University**
This course provides students with opportunities to think critically about theories, questions, and issues related to anthropology, psychology, and sociology. Students will develop an understanding of the approaches and research methods used by social scientists. They will be given opportunities to explore theories from a variety of perspectives, to conduct social science research, and to become familiar with current thinking on a range of issues within the three disciplines.

Prerequisite: The Grade 10 academic course in English, or the Grade 10 academic history course (Canadian and world studies)

HSB4U1 **Challenge and Change in Society, Grade 12, University**
This course focuses on the use of social science theories, perspectives, and the 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.

Prerequisite: Any University, University/College, or College course in Social Sciences and Humanities, English or Canadian and World Studies, or Assessment

HSC4M1 **World Cultures, Grade 12 University/College**
This course examines the nature of culture; how cultural identities are acquired, maintained, and transformed; and theories used to analyse cultures. Students will explore world cultures, with an emphasis on the analysis of religious and spiritual beliefs, art forms, and philosophy. They will study the contributions and influence of a range of cultural groups and will critically analyse issues facing ethno-cultural groups within Canada and around the world. Students will develop and apply research skills and will design and implement a social action initiative relating to cultural diversity.

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

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**ENGLISH**

ENG1P1 **English, Grade 9, Applied**
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: Assessment

ENG1D1 **English, Grade 9, Academic**
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. 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: Assessment

ENG2P1 **English, Grade 10, Applied**
This course extends the range of key reading, writing, oral communication, and media literacy skills that students need for success in all areas of the curriculum. 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 Applied- ENG1P1 or Assessment

ENG2D1 **English, Grade 10, Academic**
This course extends the range of analytic, reading, writing, oral communication and thinking skills that students need for success in secondary school academic programs. 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 the thoughtful use of spoken and written language.

Prerequisite: English, Grade 10, Applied - ENG2P1, English, Grade 9 Academic – ENG1D1 or Assessment

ENG3C1 **English, Grade 11, College**
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. The course is intended to prepare students for the compulsory Grade 12 college preparation course.

Prerequisite: English, Grade 10, Applied or assessment
**ENG3U1**  
**English, Grade 11, University**
This course emphasizes the development of literacy, 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: English Grade 10, Academic - ENG2D1 or assessment

**ENG4C1**  
**English, Grade 12, College**
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 range 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 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 college or the workplace.

Prerequisite: English, Grade 11, College Preparation or assessment

**ENG4U1**  
**English, Grade 12, University**
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 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: English, Grade 11, University Preparation or assessment

**ETS4C1**  
**Studies in Literature, Grade 12, University**
This course is for students with a special interest in literature. The course may focus on themes, genres, time periods, or countries. Students will study a variety of forms and stylistic elements of literary texts and respond personally, critically, and creatively to them. They will also investigate critical interpretations and complete an independent study project.

Prerequisite: English, Grade 11, College Preparation

**ETS4U1**  
**Studies in Literature, Grade 12, University**
This course 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 study a variety 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.

Prerequisite: English, Grade 11, University Preparation or assessment

**EWC4C1**  
**The Writer’s Craft, Grade 12, College**
This course emphasizes knowledge and skills related to the craft of writing. Students will investigate models of effective writing; use a workshop approach to write a variety of works; and make considered decisions for improving the quality of their writing. They will also complete a creative or analytical independent study project and investigate opportunities for publication and for writing careers.

Prerequisite: English, Grade 11, College - ENG3C1, English, Grade 11, University - ENG3U1 or assessment

**EWC4U1**  
**The Writer’s Craft, Grade 12, University**
This course emphasizes knowledge and skills related to the craft of writing. Students will analyse models of effective writing; 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: English Grade 11, University Preparation – ENG3U1, or assessment

**OLC4O1**  
**Ontario Secondary School Literacy Course, Open**
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 will read a variety of informational, narrative and other 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. Students who complete the course successfully will meet the provincial literacy requirement for graduation.

Prerequisite: English, Grade 9 Applied - ENG1P1 or English, Grade 9, Academic - ENG1D1, or assessment
Credit courses in English as a Second Language (ESL) assist students
- To learn English, the language of instruction
- To develop the skills they need in order to continue their education
- To integrate successfully into secondary school English and other college and/or university course

**BTT108 Information and Communication Technology in Business, ESL**
This course introduces students to information and communication technology in a business environment and builds a foundation of digital literacy skills necessary for success in a technologically driven society. Students will develop word processing, spreadsheet, database, desktop publishing, presentation software, and website design skills. Throughout the course, there is an emphasis on digital literacy, effective electronic research and communication skills, and current issues related to the impact of information and communication technology.

**ESLBO8 English as a Second Language, Level 2, Open**
The course expands students' listening, speaking, reading, and writing skills in English for everyday and academic purposes. Students will participate in conversations, in structured situations, on a variety of familiar and new topics; link English sentences to compose paragraphs; read a variety of texts designed, or adapted for English language learners; and expand their knowledge of English grammatical structures and sentence patterns. The course also supports students' continuing adaptation to the Ontario school system by expanding their cultural knowledge of their new province and country.

Prerequisite: English as a Second Language, Level 1, or Assessment.

**EPS308 Presentation and Speaking Skills, ESL**
This course emphasizes the knowledge and skills required to plan and make effective presentations and to speak effectively in both formal and informal contexts, using such forms as reports, speeches, debates, panel discussions, storytelling, recitations, interviews, and multimedia presentations. Students will research and analyse the content and characteristics of convincing speeches and the techniques of effective speakers; design and rehearse presentations for a variety of purposes and audiences; select and use visual and technological aids to enhance their message; and assess the effectiveness of their own and others’ presentations.

**ESLCO8 English for School and Work, ESL Level 3, Open**
This course is further extends students' listening, speaking, reading, and writing skills in English for a variety of everyday and academic purposes. Students will make short classroom presentations; read a variety of adapted and original texts in English; and write using a variety of text forms. As well, students will expand their academic vocabulary and their study skills to facilitate their transition to the mainstream school program. This course also introduces students to the rights and responsibilities inherent in Canadian citizenship, and to a variety of current Canadian issues.

Prerequisite: English in Daily Life, ESL Level 2 - ESLBO8 or Assessment

**ELS208 ESL Literacy Skills: Reading and Writing, Grade 10, ESL**
This course is designed to help students strengthen essential reading and writing skills, providing them with the extra literacy support they need in order to graduate. Students will read informational, graphic, and literary texts, with a focus on locating information, identifying main ideas and supporting details, building vocabulary, and consolidating skills in the application of key comprehension strategies.

Prerequisite: Assessment, Study Skills in English – ESLDO8; Co-requisite: Bridge to English – ESEO8

**ESLDO8 Study Skills in English, ESL Level 4, Open**
This course prepares students to use English with increasing fluency and accuracy in classroom and social situations and to participate in Canadian society as informed citizens. Students will develop the reading, writing and oral presentation skills required for success in all subjects. They will extend listening and speaking skills through participation in discussions and seminars; study and interpret a variety of grade-level texts; write narratives, articles, and summaries in English; and respond critically to a variety of print and media texts.

Prerequisite: English for School and Work - ESLCO8 or Assessment

**CGC1P8 Issues in Canadian Geography, Grade 9 Applied, ESL**
This course focuses on current geographic issues that affect Canadians. Students will draw on their personal and everyday experiences as they explore issues relating to food and water supplies, competing land uses, interactions with the natural environment, and other topics relevant to sustainable living in Canada. They will also develop an awareness that issues that affect their lives in Canada are interconnected with issues in other parts of the world. Throughout the course, students will use the concepts of geographic thinking, the geographic inquiry process, and spatial technologies to guide and support their investigations.
ESLEO8 Bridge to English ESL Level 5, Open
This course provides students with the skills and strategies they need to make the transition to college and university preparation courses in English and other secondary school disciplines. Students will be encouraged to develop independence in a range of academic tasks. They will participate in debates and lead classroom workshops; read and interpret literary works and academic texts; write essays, narratives and reports; and apply a range of learning strategies and research skills effectively. Students will also learn to respond critically to print and media.

Prerequisite: Study Skills in English, ESL Level 4 - ESLDO8 or assessment

CHC2P8 Canadian History Since World War 1, Grade 10 Applied, ESL
This course focuses on the social context of historical developments and events and how they have affected the lives of people in Canada since 1914. Students will explore interactions between various communities in Canada as well as contributions of individuals and groups to Canadian heritage and identity. Students will develop their ability to apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, when investigating the continuing relevance of historical developments and how they have helped shape communities in present-day Canada.

MFM1P Foundations of Mathematics, Grade 9, Applied
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 the measurement of three-dimensional figures and two-dimensional shapes. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Prerequisite: Assessment

MPM1D Principals of Mathematics, Grade 9, Academic
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: Assessment

MFM2P Foundations of Mathematics, Grade 10, Applied
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: Principles of Mathematics Grade 9 Applied - MFM1P1 or Principles of Mathematics Grade 9 Academic - MPM1D1 or assessment
PM2D1  **Principles of Mathematics, Grade 10, Academic**  
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: Principles of Mathematics Grade 9 Academic - MPM1D1 or assessment  

MBF3C1  **Foundations for College Mathematics, Grade 11, College**  
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, analyzing, 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: Foundations of Mathematics Grade 10, Applied - MFM2P1 or assessment  

MCF3M1  **Functions and Applications, Grade 11, University/College**  
This course introduces basic features of the function by extending students’ experiences with quadratic relations. It focuses on quadratic, trigonometric, and exponential functions and their use in modelling real-world situations. Students will represent functions numerically, graphically, and algebraically; simplify expressions; solve equations; and solve problems relating to applications. Students will reason mathematically and communicate their thinking as they solve multi-step problems.  

Prerequisite: Foundations of Mathematics, Grade 10, Applied – MFM2P1, Principles of Mathematics, Grade 10, Academic – MPM2D1 or assessment  

MCR3U  **Functions, Grade 11, University**  
The 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 - MPM2D or assessment  

MEL3E1  **Mathematics for Everyday Life, Grade 11, Workplace Preparation**  
This course enables students to broaden their understanding of mathematics as it is applied in important areas of day-to-day living. Students will solve problems associated with earning money, paying taxes, and making purchases; apply calculations of simple and compound interest in saving, investing, and borrowing; and calculate the costs of transportation and travel in a variety of situations.  

Prerequisite: Mathematics, Grade 9, Academic or Applied.  

MAP4C1  **Foundations for College Mathematics, Grade 12, College**  
This course enables students to broaden their understanding of real-world applications of mathematics. Students will analyze 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. 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: Foundations for College Mathematics, Grade 11, College – MCF3M1 or assessment  

MCV4U1  **Calculus and Vectors, Grade 12, University**  
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 Advanced Functions course (MHF4U) must be taken prior to or concurrently with Calculus and Vectors (MVC4U).  
Prerequisite or Co requisite: Advanced Functions, Grade 12, University – MHF4U1 or assessment  

MDM4U1  **Mathematics of Data Management, Grade 12, University**  
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 – MCR3U1, or Functions & Applications, Grade 11, University/College - MCF3M1 or assessment
**MHF4U1 Advanced Functions, Grade 12, University**
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 – MCR3U1 or assessment

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**SNC2P1 Science, Grade 10, Applied**
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 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. Students are given opportunities to develop further practical skills in scientific investigation.

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

**SNC2D1 Science, Grade 10, Academic**
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 or Applied

**SBI3C1 Biology, Grade 11, College**
This course focuses on the processes that occur in biological systems. Students will learn concepts and theories as they conduct investigations in the area 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 or assessment

**SBI3U1 Biology, Grade 11, University**
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 or assessment

**SCH3U1 Chemistry, Grade 11, University**
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 or assessment

**SPH3U1 Physics, Grade 11, University**
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 or assessment

**SBI4U1 Biology, Grade 12, University**
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 or assessment
SCH4C1  Chemistry, Grade 12, College
This course enables students to develop and 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 or assessment

SCH4U1  Chemistry, Grade 12, University
This course enables students to deepen their understanding of chemistry through the study of organic chemistry, and 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 or assessment

SPH4U1  Physics, Grade 12, University
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, and 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 or assessment

COMMUNICATION & TECHNOLOGY INFORMATION

TGJ2O1  Communications Technology, Grade 10, Open
This course introduces students to communications technology from a media perspective. Students will work in the areas of TV/video and movie production, radio and audio production, print and graphic communications, photography, and interactive new media and animation. Student projects may include computer-based activities such as creating videos, editing photos, working with audio, cartooning, developing animations, and designing web pages. Students will also develop an awareness of environmental and societal issues related to communications technology, and will explore secondary and post secondary education and training pathways, and career opportunities in the various communications technology fields.

Prerequisite: None

Revised: June, 2015