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Course Guide 2017 – 2018

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

BURNHAMTHORPE ADULT LEARNING CENTRE

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**BUSINESS and COMPUTERS**

**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 thefundamental 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

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

**CGC1D1 Issues in Canadian Geography, Grade 9, Academic**

This course examines interrelationships within and between Canada’s natural and human systems and how these systems interconnect with those in other parts of the world. Students will explore environmental, economic, and social geographic issues relating to topics such as transportation options, energy choices, and urban development. Students will apply the concepts of geographic thinking and the geographic inquiry process, including spatial technologies, to investigate various geographic issues and to develop possible approaches for making Canada a more sustainable place in which to live.

Prerequisite: None

**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

# CHC2D1 Canadian History Since World War I, Grade 10, Academic

# This course explores social, economic, and political developments and events and their impact on the lives of different groups in Canada since 1914. Students will examine the role of conflict and cooperation in Canadian society, Canada’s evolving role within the global community, and the impact of various individuals, organizations, and events on Canadian identity, citizenship, and heritage. They 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 key issues and events in Canadian history since 1914.

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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

**CGW4C1** This course explores many difficult challenges facing Canada and the world today – challenges such as unequal access to food, water, and energy; urbanization; globalization; and meeting the needs of a growing world population while ensuring the sustainability of the natural environment. Students will explore these and other world issues from environmental, social, economic, and political perspectives, while applying the concepts of geographic thinking, the geographic inquiry process, and spatial technologies to guide and support their investigations.

Prerequisite: Issues in Canadian Geography, Grade 9, Academic or Applied 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, or Assessment

#  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 or University/College Preparation course in Canadian and World Studies, English, or Social Sciences and Humanities, or Assessment

 **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, or Assessment

**CLU3M1** This course explores Canadian law, with a focus on legal issues that are relevant to the lives of people in Canada. Students will gain an understanding of laws relating to rights and freedoms in Canada; our legal system; and family, contract, employment, tort, and criminal law. Students will develop legal reasoning skills and will apply the concepts of legal thinking and the legal studies inquiry process when investigating a range of legal issues and formulating and communicating informed opinions about them.

 Prerequisite: Canadian History since World War I, Grade 10, Academic or Applied or Assessment

**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, or Assessment

**HRF3O1 World Religions: Beliefs Traditions and Daily Life, Grade 11, Open**

This course enables students to study world religions and belief traditions in local, Canadian, and global contexts. Students will explore aspects of the human quest for meaning and will examine world religions and belief traditions as exemplified in various sacred teachings and principles, rites, and passages. They will also study the interaction throughout history between society and various belief traditions, and will have opportunities to develop research and inquiry skills related to the study of world religions and belief traditions.

Prerequisite:None

**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

Recommended Preparation: Grade 10 English, Academic – ENG2D1 or Applied – ENG2P1, or Assessment

**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

Recommended Preparation: Grade 10 English, Academic or Applied, or Assessment

**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)

Recommended Preparation: Grade 10 English, Academic or Applied, or Assessment

**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 or Assessment

**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 or ESLEO8

**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 or ESLEO8

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**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 – ENG2P1 or Grade 10 Academic – ENG2D 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 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. The course is intended to prepare students for college or the workplace.

Prerequisite: English, Grade 11, College Preparation – ENG3C or Grade 11, University Prep – ENG3U, 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 – 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 Academic - ENG1D1, or Assessment

**ENGLISH AS A SECOND LANGUAGE**

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

**BTT2O8 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.

Prerequisite: None

**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 – ESLAO8 or Assessment

**EPS3O8 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.

Prerequisite: None

Recommended Preparation: English as a Second Language Level 2 – ESLBO8 or Assessment

**ESLCO8 English as a Second Language, 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 as a Second Language Level 2 - ESLBO8 or Assessment

**ELS2O8 English as a Second Language Literacy Skills: Reading and Writing, Open**

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, English as a Second Language Level 4 – ESLDO8

 Co-requisite: English as a Second Language Level 5 – ELSEO8

**GLS1O8 Learning Strategies I: Skills for Success in Secondary School Grade 9 Open, ESL**

This course focuses on learning strategies to help students become better, more independent learners. Students will learn how to develop and apply literacy and numeracy skills, personal management skills, and interpersonal and teamwork skills to improve their learning and achievement in school, the workplace, and the community. The course helps students build confidence and motivation to pursue opportunities for success in secondary school and beyond.

Prerequisite: None

**ADA1O8 Drama, Grade 9 Open, ESL**

This course provides opportunities for students to explore dramatic forms and techniques, using material from a wide range of sources and cultures. Students will use the elements of drama to examine situations and issues that are relevant to their lives. Students will create, perform, discuss, and analyse drama, and then reflect on the experiences to develop an understanding of themselves, the art form, and the world around them.

**Prerequisite:** None

**ESLDO8 English as a Second Language 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 as a Second Language Level 3 - 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 of 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.

Recommended Preparation: English as a Second Language Level 2 – ESLBO8, or Assessment

**ESLEO8 English as a Second Language 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.

Recommended Preparation: English as a Second Language Level 2 – ESLBO8, or Assessment

**GLS4O8 Advanced Learning Strategies: Skills for Success After Secondary School, Grade 12, Open**

This course improves students’ learning and personal-management skills, preparing them to make successful transitions to work, training, and/or postsecondary education destinations. Students will assess their learning abilities and use literacy, numeracy, and research skills and personal-management techniques to maximize their learning. Students will investigate trends and resources to support their postsecondary employment, training, and/or education choices and develop a plan to help them meet their learning and career goals.

Prerequisite: None

**GUIDANCE AND CAREER EDUCATION**

**GLS4O1 Advanced Learning Strategies: Skills for Success After Secondary School, Grade 12, Open**

This course improves students’ learning and personal-management skills, preparing them to make successful transitions to work, training, and/or postsecondary education destinations. Students will assess their learning abilities and use literacy, numeracy, and research skills and personal-management techniques to maximize their learning. Students will investigate trends and resources to support their postsecondary employment, training, and/or education choices and develop a plan to help them meet their learning and career goals.

Prerequisite: None

**COOPERATIVE EDUCATION**

The Cooperative Education program helps students to gain valuable work experience and earn credits at the same time. Co-op students gain on-the-job experience required for entrance to many post-secondary programs and strengthen skills employers look for when hiring. This experience plus the references and contacts developed will be very useful when looking for work. It is necessary to take in-school linking credits to be eligible for Cooperative Education.

Co-op can be a four-credit package. There are two possible start dates for this package: September and February. Co-op embraces two successive sessions for a complete package of four credits. **We will tailor your co-op experience to meet your needs and skills.** Possible work placements and positions include office assistant, customer service, teaching, accountant/bookkeeper, police services, web page design, computer technology and many more. To apply for all Cooperative Education programs, please visit the Co-op office**.** *Prerequisite: Eligibility for ESLDO8 and/or one suitable senior credit as a linking subject*

**GLN4O1 Navigating the Workplace, Grade 12, Open**

This course provides students with opportunities to develop the workplace essential skills, and work habits required for success in all types of workplaces. Students will explore occupations and careers of interest through participation in real workplace experiences. They will make plans for continued learning and work, work with others to design learning experiences, and investigate the resources and support required to make a smooth transition to their post-secondary destination.

Prerequisite: None

Co-requisite: Cooperative Education

**MATHEMATICS**

**MFM1P1 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

**MPM1D1 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

**MFM2P1 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 - MFM1P or Academic - MPM1D or Assessment

**MPM2D1 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 - MPM1D 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, analysing, and evaluating data involving one variable; connect probability and statistics; and solve problems in geometry and trigonometry. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Prerequisite: Foundations of Mathematics Grade 10, Applied - MFM2P 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 – MFM2P or Academic – MPM2D or Assessment

**MCR3U1 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

## MAP4C1 Foundations for College Mathematics, Grade 12, College

This course enables students to broaden their understanding of real-world applications of mathematics. Students will analyse data using statistical methods; solve problems involving applications of geometry and trigonometry; solve financial problems connected with annuities, budgets, and renting or owing 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 – MBF3C 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 purse 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.

Prerequisite **or** Co-requisite: Mathematics Advanced Functions, Grade 12, University – MHF4U 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 – MCR3U, or Functions & Applications, Grade 11, University/College - MCF3M 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, Grade11, University – MCR3U or Assessment

**SCIENCE**

**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 – SNC1D1 or Applied – SNC1P 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 – SNC1D1 or Applied – SNC1P or Assessment

**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 – SNC2D1 or Applied – SNC2P 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 – SNC2D 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 – SNC2D 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 inter relationships between physics and technology, and consider the impact of technological applications of physics on society and the environment.

Prerequisite: Science, Grade 10 Academic – SNC2D 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 – SBI3U 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 – SNC2D1 or Applied – SNC2P 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 – SCH3U 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 – SPH3U or Assessment

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