

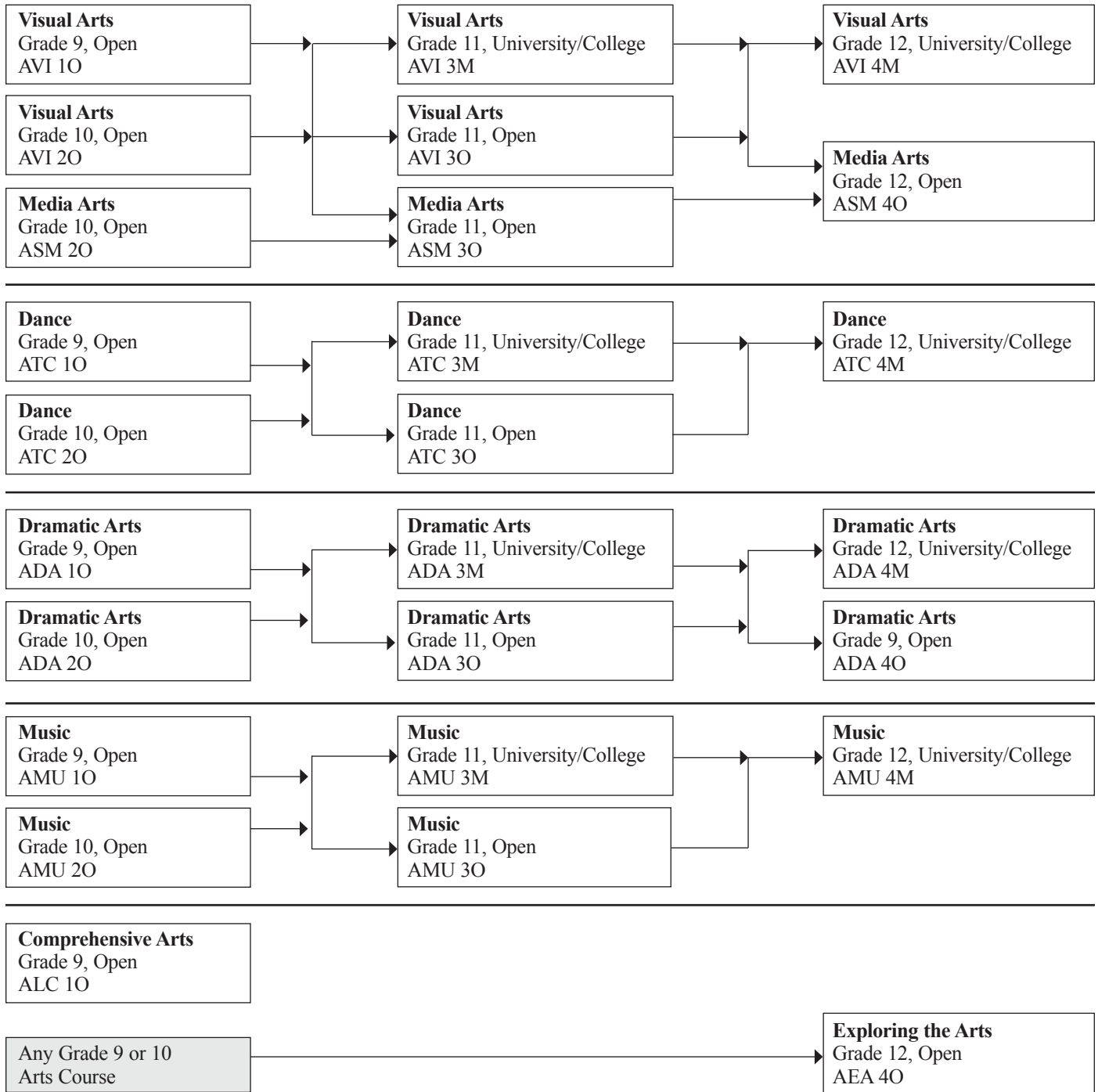
Chart Your Course



Course Descriptions and Prerequisites

Prerequisite Chart for The Arts

This chart maps out all the courses in the discipline and shows the link between courses and the possible prerequisites for them. It does not attempt to depict all possible movements from course to course.



Comprehensive Arts

Comprehensive Arts, Grade 9, Open (ALC 10)

This course integrates three or more of the arts (dance, dramatic arts, music and visual arts) and examines the similarities and differences among these subjects. Students will learn specialized arts vocabulary while investigating traditional concepts, stylistic elements, and principles unique to the various arts, as well as applications of new technologies.

Prerequisite: None

Dance

Dance, Grade 9, Open (ATC 10)

This course emphasizes the basic movements of one or more world dance forms, and the scientific and safety principles related to dance. Students will create movement vocabulary for dance compositions, express themselves through movement, and investigate the historical and cultural development of dance. They will also learn about creative influences on dancers and choreographers, and the role of criticism in the art of dance.

Prerequisite: None

Dance, Grade 10, Open (ATC 20)

This course requires students to develop their dance skills and learn the theoretical basis for working with anatomical structure in executing dance movements. Student learning will include the processes that form the basis for creating dance, the historical development of dance, students' own aesthetic appreciation of dance as they participate in dance class, rehearsals, and performances and the specialized vocabulary of dance criticism.

Prerequisite: None

Dance, Grade 11, University/College Preparation (ATC 3M)

This course emphasizes the development of technical, composition and presentation skills in one or more world dance forms. Students will acquire and refine dance skills, compose and present increasingly complex dance works, interpret and evaluate a variety of dance presentations, and study the historical development of various dance forms and the function of dance in specific cultures.

Prerequisite: Dance, Grade 9 or 10, Open

Dance, Grade 11, Open (ATC 3O)

This course will give students opportunities to express increasingly complex ideas through movement and to experiment with choreography. Students will develop technical skills, study the historical development of various dance forms and the function of dance in specific cultures, evaluate dance works, and investigate ways in which the study of dance can prepare them for various careers.

Prerequisite: Dance, Grade 9 or 10, Open

Dance, Grade 12, University/College Preparation (ATC 4M)

This course emphasizes the development of technical proficiency and the creation and presentation of complex compositions. Students will acquire increasingly difficult technical skills, assume leadership as dancers, choreographers, and production personnel, analyse and evaluate dance performances, and study historical and cultural aspects of dance, especially of dance in Canada.

*Prerequisite: Dance, Grade 11,
University/College Preparation or Open*

Options for grades 9-12: ATP Dance – Performance Practice

Dramatic Arts

Dramatic Arts, Grade 9, Open (ADA 1O)

This course emphasizes the active exploration of dramatic forms and techniques, using material from a wide range of authors, genres and cultures. Students will construct, discuss, perform, 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

Dramatic Arts, Grade 10, Open (ADA 2O)

This course requires students to actively explore dramatic forms and techniques, using their own ideas and concerns as well as sources selected from a wide range of authors, genres and cultures. Student learning will include identifying and using the principles of space, time, voice, and movement in creating, sustaining and communicating authentic roles within a drama. Students will assume responsibility for decisions made in the creation and presentation of the drama, and will analyse and reflect on the experience.

Prerequisite: None

The Arts

Dramatic Arts, Grade 11, University/College Preparation (ADA 3M)

This course requires students to put together and perform dramatic presentations that deal with a variety of issues from the past and present. Students will analyse, interpret, and perform works of drama from various cultures, including Western plays from around 1900. Students will also do research on different acting styles and conventions for their presentations, create original works, and analyse the functions of playwright, director, actor, technician and audience.

Prerequisite: Dramatic Arts, Grade 9 or 10, Open

Dramatic Arts, Grade 11, Open (ADA 3O)

This course requires students to create and to present dramatic works. Students will do research on and study such types of contemporary theatre as docudrama and forum theatre. They will interpret and present works in a variety of dramatic forms, create and script original works, analyse and reflect on dramatic works, and develop their communication skills and other skills useful in a variety of careers.

Prerequisite: Dramatic Arts, Grade 9 or 10, Open

Dramatic Arts, Grade 12, University/College Preparation (ADA 4M)

This course requires students to experiment with forms and conventions in dramatic literature, and to create/adapt and present dramatic works. Students will do research on dramatic forms, conventions, themes, and theories of acting and directing from different historical periods, and apply their knowledge of these in analysing and interpreting dramatic literature, including Canadian works and works from various cultures in the late 20th century. Students will also examine the significance of dramatic arts in various cultures.

Prerequisite: Dramatic Arts, Grade 11, University/College Preparation or Open

Dramatic Arts, Grade 12, Open (ADA 4O)

This course requires students to create and present a variety of dramatic works. Students will present works by Canadian and other playwrights, and develop original material based on personal narratives, local community issues, or global concerns. They will have hands-on experiences with various aspects of dramatic arts productions, including performance, set design, lighting, costumes, stage and technical management, and marketing. Students will also explore possible careers related to the dramatic arts.

Prerequisite: Dramatic Arts, Grade 11, University/College Preparation or Open

Options for grades 9-12:

ADD

Dramatic Arts – Production

ADC

Drama in the Community

ADB

Dramatic Arts –
Music Theatre

ADV

Dramatic Arts –
Film/Video

Options for grades 11-12:

ADF

Director's Craft

ADG

Dramatic Arts – Acting

ADP

Dramatic Arts –
Theatre Development

ADT

Dramatic Arts –
Canadian Theatre

Exploring the Arts

Exploring the Arts, Grade 12, Open (AEA 4O)

This course emphasizes the acquisition and application of knowledge and skills related to the creation, interpretation, and production of works involving dance, drama, media arts, music and/or visual arts. Students will study, evaluate, create, and promote art works and productions, and will use a variety of established and experimental techniques and various technologies in individual or group projects (e.g., the presentation of a theatrical scene or an art exhibit on a website).

Prerequisite: Any Grade 9 or 10 Course in The Arts

Media Arts

Media Arts, Grade 10, Open (ASM 2O)

This course will develop students' artistic knowledge and skills by introducing them to current media arts technologies and processes. Student learning will include the analysis, appreciation, and production of media art, using a variety of traditional techniques (e.g., photography, film, photocopy art, video, analog sound recording) and emergent technologies (e.g., computer, digital camera, scanner, multimedia, animation).

Prerequisite: None

The Arts

Media Arts, Grade 11, Open (ASM 30)

This course emphasizes the development of the knowledge and skills required for the production of media art works (e.g., robosculture, photocopy art, computer animation with synthesized sound). Students will develop an appreciation of the history of media arts through analyzing specific works, and will create media art works using a variety of technologies (e.g., digital camera, photo-imaging software, computer-modelling software, synthesizer, videotape, multi-track sound recording).

Prerequisite: Any Grade 9 or 10 course in The Arts

Media Arts, Grade 12, Open (ASM 40)

This course emphasizes the development of the knowledge and skills required for the production of interactive media art forms (e.g., interactive art installations, interactive videos, simulations, network art). Students will analyse and evaluate media art works, and will create their own works using a variety of technologies and processes (e.g., computer graphics, photo-imaging, digital video production techniques, electro-acoustics). Students will maintain a portfolio of their media art works.

Prerequisite: Any Grade 11 course in The Arts

Music

Music, Grade 9, Open (AMU 10)

This course emphasizes the performance of music at a level that strikes a balance between challenge and skill and is aimed at developing technique, sensitivity and imagination. Students will participate in creative activities that teach them to listen with understanding. They will also learn correct musical terminology and its appropriate use.

Prerequisite: None

Music, Grade 10, Open (AMU 20)

This course emphasizes performance of music at an intermediate level that strikes a balance between challenge and skill. Student learning will include participating in creative activities and listening perceptively. Students will also be required to develop a thorough understanding of the language of music, including the elements, terminology and history.

Prerequisite: None

Music, Grade 11, University/College Preparation (AMU 3M)

This course emphasizes the appreciation, analysis, and performance of various kinds of music, including baroque and classical music, popular music, and Canadian and non-Western music. Students will perform technical exercises and appropriate repertoire, complete detailed creative activities, and analyse and evaluate live and recorded performances. They will continue to increase their understanding of the elements of music while developing their technical and imaginative abilities.

Prerequisite: Music, Grade 9 or 10, Open

Music, Grade 11, Open (AMU 3O)

This course develops students' artistic knowledge and skills through the performance of music and the preparation of music productions. Students will perform appropriate works, particularly works in contemporary popular styles. Independently and in groups, they will also plan, market, and produce music productions, making use of appropriate technology, and will evaluate the results.

Prerequisite: Music, Grade 9 or 10, Open

Music, Grade 12, University/College Preparation (AMU 4M)

This course emphasizes the appreciation, analysis, and performance of music from the romantic period and the 20th century, including art music, jazz, popular music, and Canadian and non-Western music. Students will concentrate on developing interpretative skills and the ability to work independently. They will also complete complex creative projects.

Prerequisite: Music, Grade 11, University/College Preparation or Open

Options for grades 9-12:

AMB	Instrumental Music – Brass
AMC	Music for Creating
AMD	Electronic Music
AME	Small Ensemble
AMG	Guitar Music
AMH	Stage – Band Music
AMI	Instrumental Music – Band
AMJ	Vocal Jazz
AMK	Keyboard Music
AMM	Music and Computers
AMO	Instrumental Music – Orchestra
AMP	Instrumental Music – Percussion
AMQ	Steel Drum – Music
AMR	Repertoire

AMS
AMT
AMV
AMW

Instrumental Music – Strings
Music Theatre
Music Vocal/Choral
Music – Woodwinds

Visual Arts

Visual Arts, Grade 9, Open (AVI 10)

This course offers an overview of visual arts as a foundation for further study. Students will become familiar with the elements and principles of design and the expressive qualities of various materials through working with a range of materials, processes, techniques and styles. They will learn and use methods of analysis and criticism and will study the characteristics of particular historical art periods and a selection of Canadian art and the art of other cultures.

Prerequisite: None

Visual Arts, Grade 10, Open (AVI 20)

This course emphasizes learning through practice, building on what students know, and introducing them to new ideas, materials, and processes for artistic thinking and experimentation. Student learning will include the refined application of the elements and principles of design, incorporating the creative and design processes, and the relationship between form and content. Students will also learn about the connections between works of art and their historical contexts. Course objectives may be achieved either through a comprehensive program or through a program focused on a particular art form (e.g., drawing, painting).

Prerequisite: None

Visual Arts, Grade 11, University/College Preparation (AVI 3M)

This course provides students with opportunities to further develop their skills and knowledge in visual arts. Students will explore a range of subject matter through studio activities, and will consolidate their practical skills. Students will also analyse art works and study aspects of Western art history, as well as Canadian art forms and art forms from various parts of the world.

Prerequisite: Visual Arts, Grade 9 or 10, Open

Visual Arts, Grade 11, Open (AVI 30)

This course focuses on studio activities in one or more of the visual arts. Students will create art works that explore a wide range of subject matter, and will evaluate art works providing grounds for their aesthetic judgements using specific criteria. They will also examine historical and cultural contexts of Western art (including Canadian art) and art from various world cultures to support their study of specific media.

Prerequisite: Visual Arts, Grade 9 or 10, Open

Visual Arts, Grade 12, University/College Preparation (AVI 4M)

This course focuses on the refinement of students' skills and knowledge in visual arts. Students will analyse art forms, use theories of art in analysing and producing art, and increase their understanding of stylistic changes in modern and contemporary Western art, Canadian (including Native Canadian) art and art forms from various parts of the world. Students will produce a body of work demonstrating a personal approach.

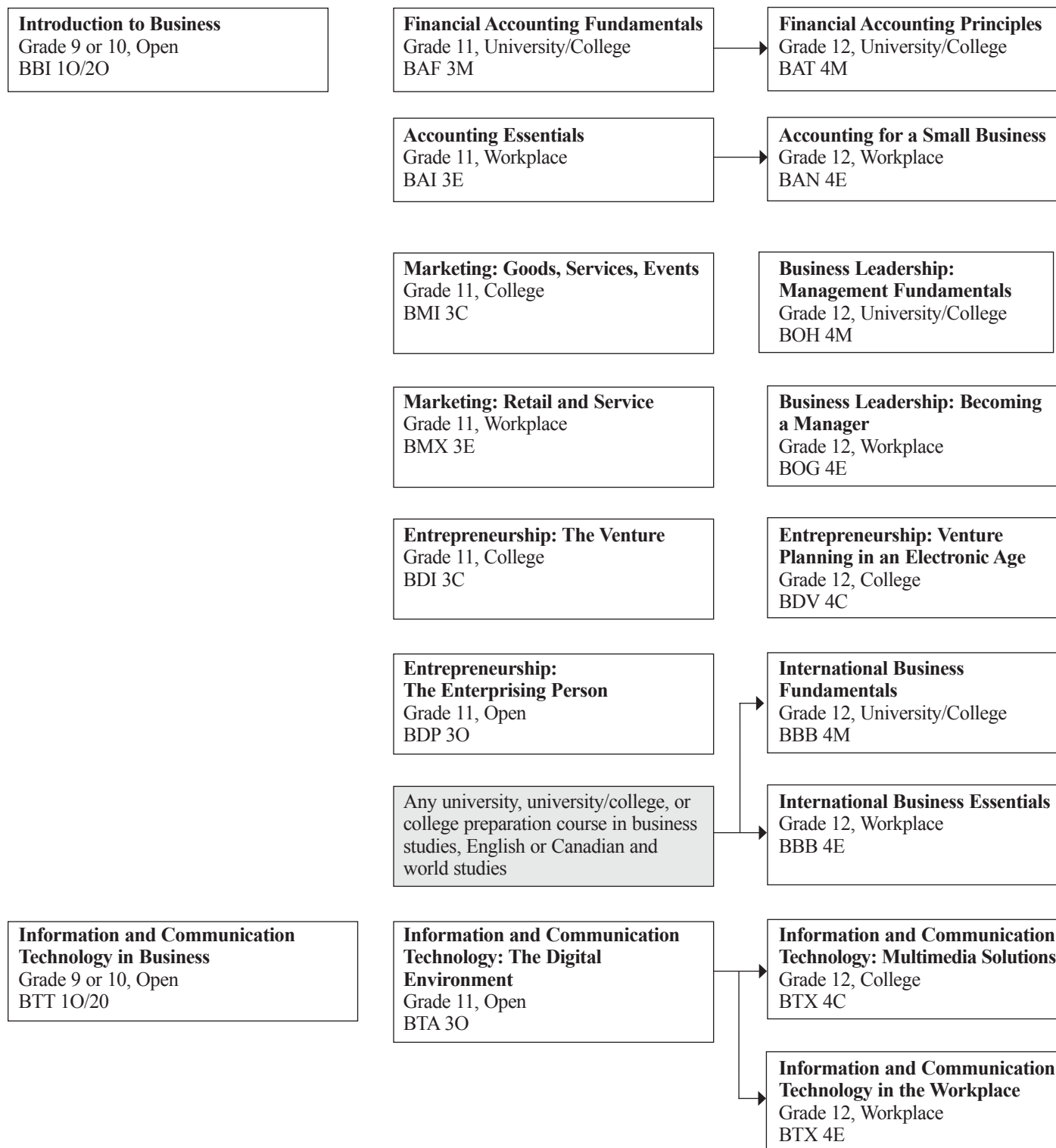
Prerequisite: Visual Arts, Grade 11, University/College Preparation or Open

Options for grades 9-12:

AWA	Crafts General
AWB	Textiles
AWC	Ceramics
AWD	Applied Design
AWE	Information/Consumer Design
AWF	Industrial Design
AWG	Environmental Design
AWH	Interior Design
AWI	Fashion Design
AWJ	Stage Design
AWK	Illustration
AWL	Drawing
AWM	Drawing and Painting
AWN	Painting
AWO	Printmaking
AWP	Sculpture
AWQ	Photography
AWR	Film/Video
AWS	Computer
AWT	Non-Traditional
AWU	Art History

Prerequisite Chart for Business Studies

This chart maps out all the courses in the discipline and shows the link between courses and the possible prerequisites for them. It does not attempt to depict all possible movements from course to course.



Business Studies

Introduction to Business, Grade 9 or 10, Open (BBI 10, BBI 20)

This course introduces students to the world of business. Students will develop an understanding of the functions of business, including accounting, marketing, information technology, human resources, and production, and of 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 will need in their everyday lives.

Prerequisite: None

Information and Communication Technology in Business, Grade 9 or 10, Open (BTT 10, BTT 20)

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

Accounting

Financial Accounting Fundamentals, Grade 11, University/College Preparation (BAF 3M)

This course introduces students to the fundamental principles and procedures of 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 current issues and ethics in accounting.

Prerequisite: None

Accounting Essentials, Grade 11, Workplace Preparation (BAI 3E)

This course introduces students to the accounting cycle of a service business. Students will use computer application software to record business transactions and to prepare financial statements. Students will also investigate banking and cash management, decision making, ethical behaviour, and career opportunities in the field of accounting.

Prerequisite: None

Financial Accounting Principles, Grade 12, University/College Preparation (BAT 4M)

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

Accounting for a Small Business, Grade 12, Workplace Preparation (BAN 4E)

This course further develops students' understanding of the fundamentals of accounting by having them examine each component of the accounting cycle, with an emphasis on the merchandising business. Students will use computer application software to learn how accounting is practised in the workplace. Students will acquire an understanding of payroll systems, inventory, specialized journals, subsidiary ledgers, income tax reporting, and budgeting.

Prerequisite: Accounting Essentials, Grade 11, Workplace Preparation

Entrepreneurial Studies

Entrepreneurship: The Venture, Grade 11, College Preparation (BDI 3C)

This course focuses on ways in which entrepreneurs recognize opportunities, generate ideas, and organize resources to plan successful ventures that enable them to achieve their goals. Students will create a venture plan for a student-run school-based or summer business. Through hands-on experiences, students will have opportunities to develop the values, traits, and skills most often associated with successful entrepreneurs.

Prerequisite: None

Entrepreneurship: The Enterprising Person, Grade 11, Open (BDP 3O)

This course examines the importance of enterprising employees in today's changing business environment. Students will learn about the skills and attributes of enterprising employees, the distinguishing features of their work environments, and the challenges and rewards of becoming an enterprising person. Students will also have an opportunity to demonstrate and develop enterprising skills by planning and organizing a school or community event.

Prerequisite: None

**Entrepreneurship: Venture Planning in an Electronic Age,
Grade 12, College Preparation (BDV 4C)**

This course provides students with the opportunity to develop and apply entrepreneurial skills through the creation of a venture plan that capitalizes on the potential of e-commerce. Students will research and identify an opportunity for a venture. They will then complete the components of a venture plan that includes a website.

Prerequisite: None

Information Technology

**Information and Communications Technology:
The Digital Environment,
Grade 11, Open (BTA 30)**

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

**Information and Communication Technology:
Multimedia, Solutions,
Grade 12, College Preparation (BTX 4C)**

This course provides students with the opportunity to apply their information and communication technology skills while working in a team environment. Through a project-based approach, students will have opportunities to integrate common business software applications and apply multimedia techniques. Students will further develop their understanding of electronic business and e-commerce environments. The skills acquired in this course will prepare students for success in post-secondary studies and in their future careers.

*Prerequisite: Information and Communications Technology:
The Digital Environment, Grade 11, Open*

**Information and Communication Technology
in the Workplace,
Grade 12, Workplace Preparation (BTX 4E)**

This course provides students with the opportunity to further develop essential workplace skills in information and communication technology while working in a team environment. Using a project-based approach, students will focus on integrating software applications and applying multimedia software features. Students will expand their understanding of e-business and e-commerce environments and workplace ethics. This course will prepare students for a successful transition from secondary school to the workplace.

*Prerequisite: Information and Communications Technology:
The Digital Environment, Grade 11, Open*

International Business

**International Business Fundamentals,
Grade 12, University/College Preparation (BBB 4M)**

This course provides an overview of the importance of international business and trade in the global economy and explores the factors that influence success in international markets. Students will learn about the techniques and strategies associated with marketing, distribution, and managing international business effectively. This course prepares students for postsecondary programs in business, including international business, marketing, and management.

Prerequisite: Any university, university/college, or college preparation course in business studies, English, or Canadian & World Studies

**International Business Essentials,
Grade 12, Workplace Preparation (BBB 4E)**

This course provides an introduction to international business. Students will explore the economic relationships that Canada has developed with other nations, and the impact of these relationships on productivity, prices, and variety of goods. This course also introduces students to a variety of career opportunities in international business.

Prerequisite: None

Marketing

Marketing: Goods, Services, Events, Grade 11, College Preparation (BMI 3C)

This course introduces the fundamental concepts of product marketing, which includes the marketing of goods, services, and events. Students will examine how trends, issues, global economic changes, and information technology influence consumer buying habits. Students will engage in marketing research, develop marketing strategies, and produce a marketing plan for a product of their choice.

Prerequisite: None

Marketing: Retail and Service, Grade 11, Workplace Preparation (BMX 3E)

This course focuses on marketing activities in the retail and service sectors. Students will examine trends and global influences on marketing decisions, and will learn about the importance of customer service in developing a customer base and maintaining customer loyalty. Through hands-on learning, students will develop personal selling and information technology skills that will prepare them for a variety of marketing-related positions in the workplace.

Prerequisite: None

Organizational Studies

Business Leadership: Management Fundamentals, Grade 12, University/College Preparation (BOH 4M)

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

Prerequisite: Any university, university/college, or college preparation course in business studies, English, or Canadian & World Studies

Business Leadership: Becoming a Manager, Grade 12, Workplace Preparation (BOG 4E)

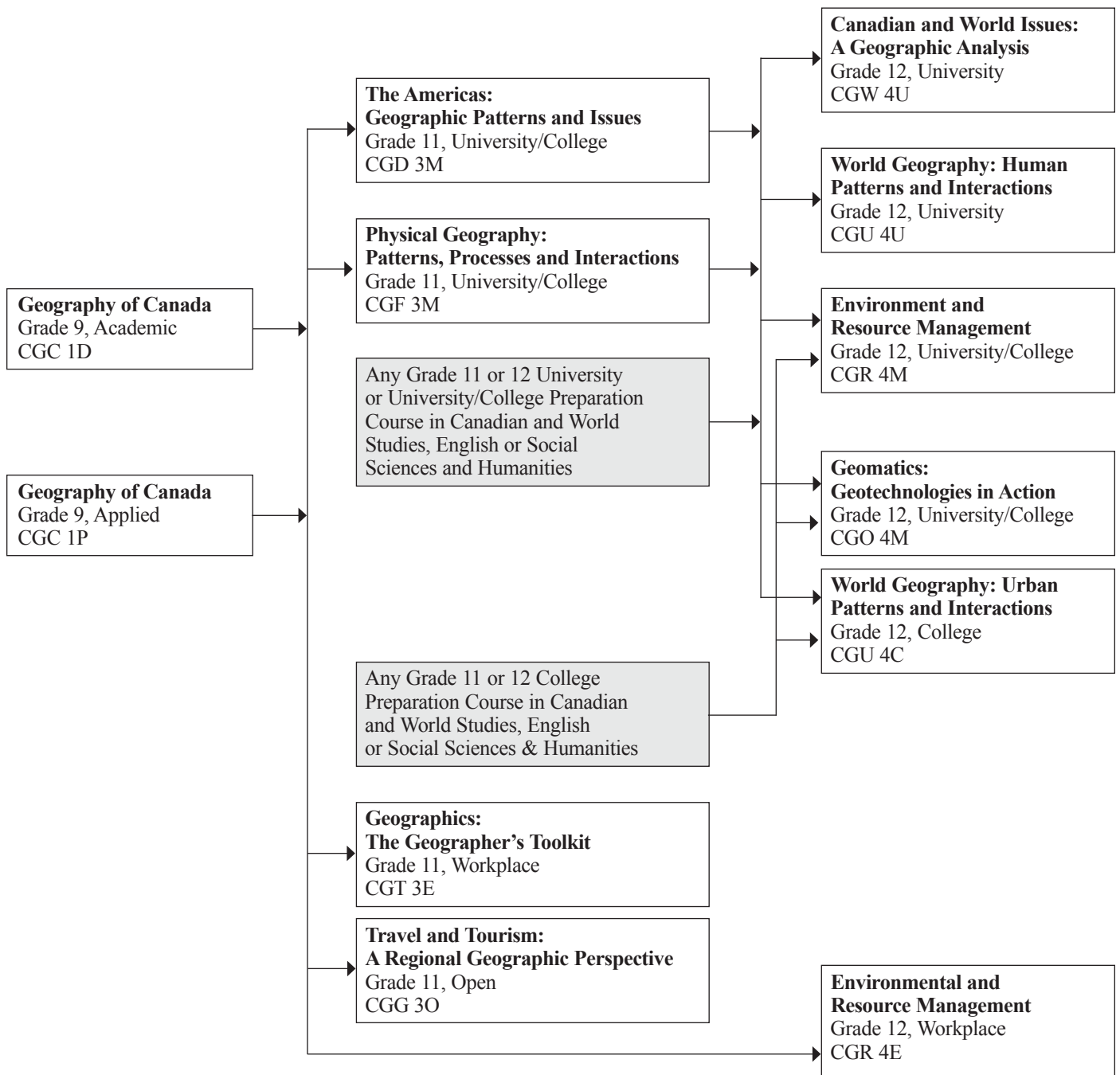
This course helps students prepare for managerial positions in their future careers. Students will focus on the development of core skills required to become a successful manager, including operations management, inventory control, marketing, financial planning, scheduling, and communication. Students will also explore the management challenges of hiring, training, and motivating employees, and complying with legal requirements.

Prerequisite: None

Prerequisite Chart for Canadian & World Studies

Geography

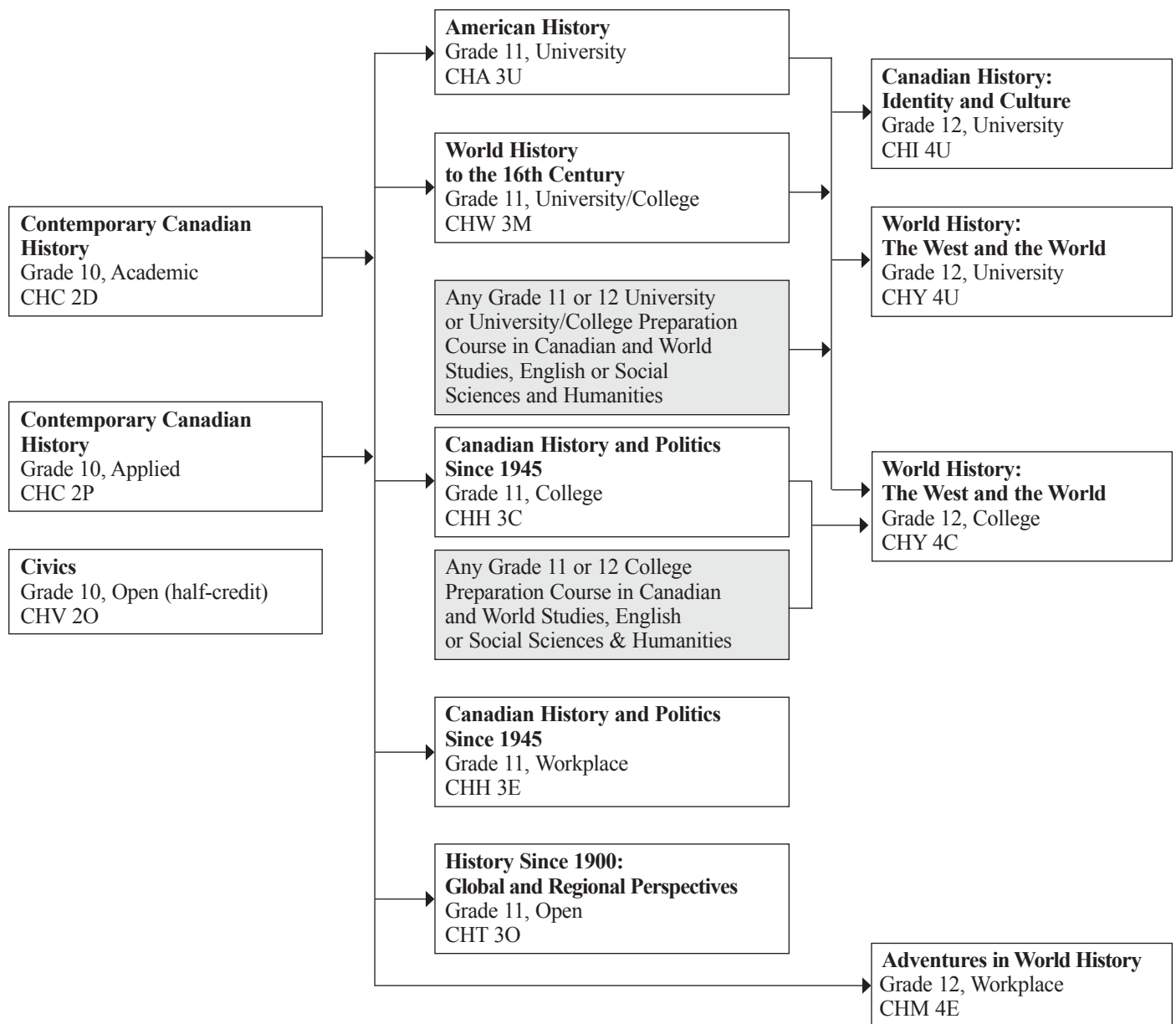
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Prerequisite Chart for Canadian & World Studies

History

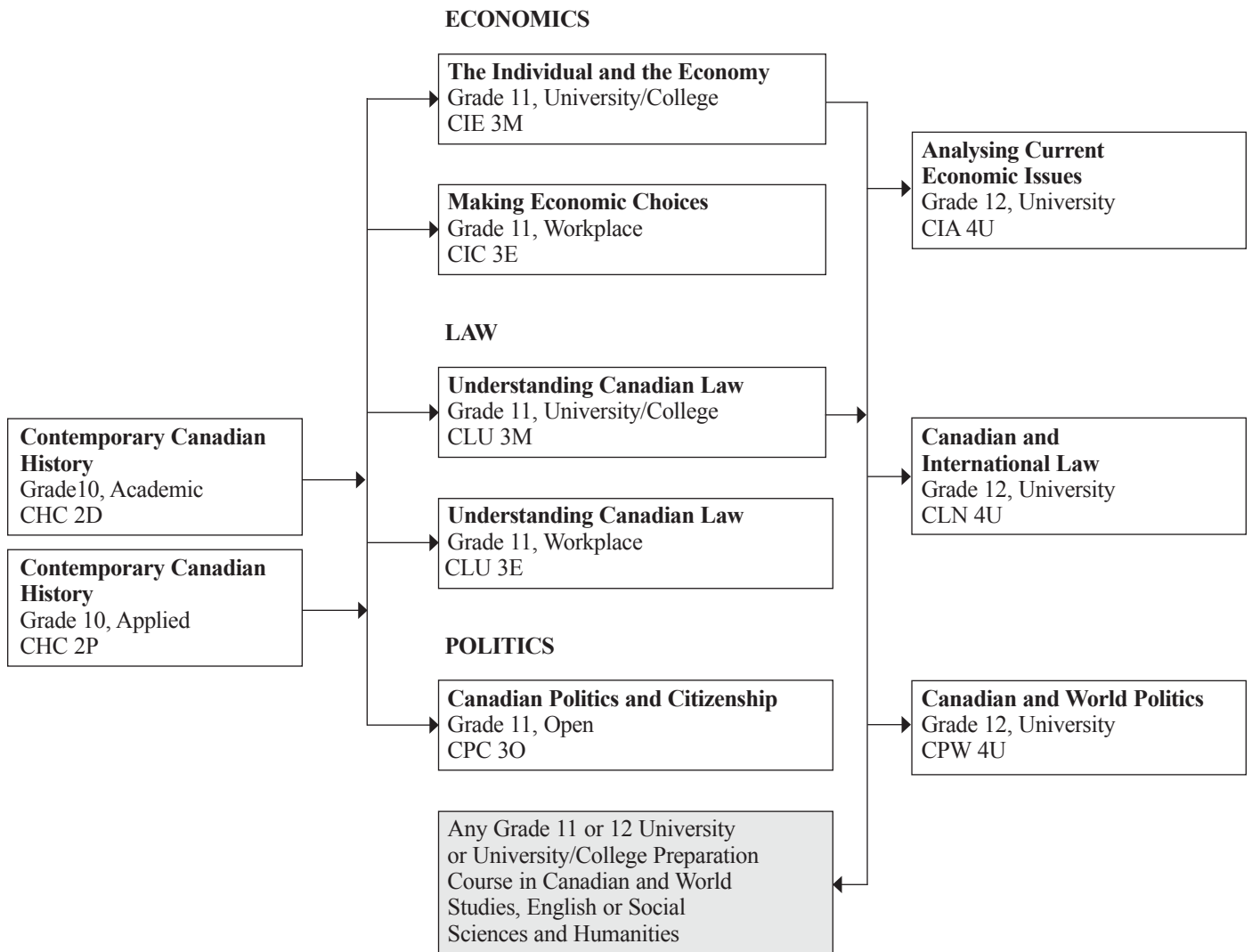
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Prerequisite Chart for Canadian & World Studies

Economics, Law and Politics

This chart maps out all the courses in the discipline and shows the link between courses and the possible prerequisites for them. It does not attempt to depict all possible movements from course to course.



Civics

Civics, Grade 10, Open (CHV 20)

This course explores what it means to be an informed, participating citizen in a democratic society. Students will learn about the elements of democracy in local, national, and global contexts, about political reactions to social change, and about political decision-making processes in Canada. They will explore their own and others' ideas about civics questions and learn how to think critically about public issues and react responsibly to them.

Prerequisite: None

Economics

The Individual and the Economy, Grade 11, University/College Preparation (CIE 3M)

This course examines the changing Canadian economy and helps students develop an understanding of their own role as economic agents. Students will apply economic models and concepts to assess the roles of the various stakeholders in the Canadian economy and analyse the interactions among them. Students will consider the economic behaviour of the individual as consumer, contributor, and citizen in a mixed economy and will apply economic inquiry, critical-thinking, and communication skills to make and defend informed economic decisions.

Prerequisite: Contemporary Canadian History, Grade 10, Academic or Applied

Making Economic Choices, Grade 11, Workplace Preparation (CIC 3E)

This course encourages students to examine the economic choices they make as consumers and contributors in a mixed economy. Students will become familiar with sources of economic information and indicators of economic performance, such as rates of inflation, interest, and unemployment. Students will gain practical experience of how to apply their knowledge to make informed economic decisions and improve their economic well-being.

Prerequisite: Contemporary Canadian History, Grade 10, Academic or Applied

Analysing Current Economic Issues, Grade 12, University Preparation (CIA 4U)

This course investigates the nature of the competitive global economy and explores how individuals and societies can gain the information they need to make appropriate

economic decisions. Students will learn about the principles of microeconomics and macroeconomics, apply economic models and concepts to interpret economic information, assess the validity of statistics, and investigate marketplace dynamics. Students will use economic inquiry and communication skills to analyse current economic issues, make informed judgements, and present their findings.

Prerequisite: Any University or University/College Preparation Course in Canadian & World Studies, English or Social Sciences & Humanities

Geography

Geography of Canada, Grade 9, Academic (CGC 1D)

This course explores Canada's distinct and changing character and the geographic systems and relationships that shape it. Students will investigate the interactions of natural and human systems within Canada, as well as Canada's economic, cultural, and environmental connections to other countries. Students will use a variety of geotechnologies and inquiry and communication methods to analyse and evaluate geographic issues and present their findings.

Prerequisite: None

Geography of Canada, Grade 9, Applied (CGC 1P)

This course focuses on geographic issues that affect Canadians today. Students will draw on personal and everyday experiences as they learn about Canada's distinct and changing character and the natural and human systems and global influences that shape the country. Students will use a variety of geotechnologies and inquiry and communication methods to examine practical geographic questions and communicate their findings.

Prerequisite: None

The Americas: Geographic Patterns and Issues, Grade 11, University/College Preparation (CGD 3M)

This course investigates the geographic systems and patterns of the Americas, focusing on questions arising from the growing interdependence of the countries in the region. Students will examine diverse environmental, economic, and cultural factors influencing the different countries and their peoples, and the interactions among them. Students will use a variety of geotechnologies and inquiry and communication methods to investigate trends and issues and communicate their findings.

Prerequisite: Geography of Canada, Grade 9, Academic or Applied

Physical Geography: Patterns, Processes and Interactions, Grade 11, University/College Preparation (CGF 3M)

This course examines the major patterns of physical geography and the powerful forces that affect them. Students will investigate the dynamic nature of the earth, the evolving relationship between the planet and its people, and the factors that limit our ability to predict the changes that will occur. Students will use a wide range of geotechnologies and inquiry methods to investigate the distribution and interaction of the elements of their physical environment and to communicate their findings.

Prerequisite: Geography of Canada, Grade 9, Academic or Applied

Geographics: The Geographer's Toolkit, Grade 11, Workplace Preparation (CGT 3E)

This course focuses on giving students practical experiences with geotechnologies and related skills. Students will engage in image interpretation, desktop mapping, analysis using geographic information systems (GIS), use of the global positioning system (GPS), and data collection and management. Students will conduct field work and explore applications and career opportunities in environmental, economic, and political contexts. Students will use a variety of communication tools and methods to present the results of their investigations.

Prerequisite: Geography of Canada, Grade 9, Academic or Applied

Travel and Tourism: A Regional Geographic Perspective, Grade 11, Open (CGG 3O)

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 the 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: Geography of Canada, Grade 9, Academic or Applied

Canadian and World Issues: A Geographic Analysis, Grade 12, University Preparation (CGW 4U)

This course examines the global challenges of creating a sustainable and equitable future, focusing on current issues that illustrate these challenges. Students will investigate a range of topics, including cultural, economic, and geopolitical relationships, regional disparities in the ability to meet basic human needs, and protection of the natural environment. Students will use geotechnologies and skills of geographic inquiry and analysis to develop and communicate balanced

opinions about the complex issues facing Canada and a world that is interdependent and constantly changing.

Prerequisite: Any University or University/College Preparation Course in Canadian & World Studies, English or Social Sciences & Humanities

World Geography: Human Patterns and Interactions, Grade 12, University Preparation (CGU 4U)

This course examines how humans interact with their natural environments and with each other. Students will study the influence of spatial, political, economic, and social factors on settlement patterns, human migration, cultural change, globalization, and environmental trends. Students will use geotechnologies and skills of geographic inquiry and analysis to extend their knowledge of human geography and to identify and explain current trends and patterns, and predict future ones.

Prerequisite: Any University or University/College Preparation Course in Canadian & World Studies, English or Social Sciences & Humanities

The Environment and Resource Management, Grade 12, University/College Preparation (CGR 4M)

This course investigates the complexity and fragility of ecosystems and the pressures human activities place on them. Students will examine ecological processes, the principles of sustainability, and strategies for resource management, with a focus on the challenges of environmental degradation and resource depletion. Students will use geotechnologies and skills of geographic inquiry to explain and evaluate various approaches to achieving a more sustainable relationship between people and their environment.

Prerequisite: Any University or University/College Preparation Course in Canadian & World Studies, English or Social Sciences & Humanities

Geomatics: Geotechnologies in Action, Grade 12, University/College Preparation (CGO 4M)

This course gives students experience in using geotechnologies to develop solutions to real-world problems involving physical and human geography. Students will extend their knowledge of geomatics in the areas of cartography, geographic information systems (GIS), the global positioning system (GPS), and remote sensing. Students will develop critical thinking and communication skills as they apply geotechnologies and geographic inquiry methods to devise and present ways of improving conditions for people and the environment.

Prerequisite: Any University or University/College Preparation Course in Canadian & World Studies, English or Social Sciences & Humanities

World Geography: Urban Patterns and Interactions, Grade 12, College Preparation (CGU 4C)

This course examines cities around the world and the social, political, cultural, environmental, and economic factors that shape them. Students will study urban structures and systems, the impact of migrations on cities, and the impact of cities on the environment. Students will use geotechnologies and apply geographic concepts and inquiry methods to analyse issues and problems related to urban development and to formulate potential solutions.

Prerequisite: Any University or University/College Preparation Course in Canadian & World Studies, English or Social Sciences & Humanities

The Environment and Resource Management, Grade 12, Workplace Preparation (CGR 4E)

This course examines the influence of human activities on the natural environment. Students will study ecosystem structures and processes, the ecological impact of human activities, and methods of responsible resource management. Students will apply geotechnologies and geographic inquiry methods to develop and present practical solutions to environmental and resource-management issues. In the process, students' problem-solving and communication skills will be enhanced in preparation for careers and the workplace.

Prerequisite: Geography of Canada, Grade 9, Academic or Applied

History

Contemporary Canadian History, Grade 10, Academic (CHC 2D)

This course explores the local, national, and global forces that have shaped Canada's national identity from World War I to the present. Students will investigate the challenges presented by economic, social, and technological changes and explore the contributions of individuals and groups to Canadian culture and society during this period. Students will use critical-thinking and communication skills to evaluate various interpretations of the issues and events of the period and to present their own points of view.

Prerequisite: None

Contemporary Canadian History, Grade 10, Applied (CHC 2P)

This course explores some of the pivotal events and experiences that have influenced the development of Canada's identity as a nation from World War I to the present. By examining how the country has responded to economic, social, and technological

changes and how individuals and groups have contributed to Canadian culture and society during this period, students will develop their ability to make connections between historical and current events. Students will have opportunities to formulate questions, locate information, develop informed opinions, and present ideas about the central issues and events of the period.

Prerequisite: None

American History, Grade 11, University Preparation (CHA 3U)

This course traces the social, economic, and political development of the United States from colonial times to the present. Students will examine issues of diversity, identity, and culture that have influenced the country's social and political formation and will consider the implications of its expansion into a global superpower. Students will use critical-thinking and communication skills to determine causal relationships, evaluate multiple perspectives, and present their own points of view.

Prerequisite: Contemporary Canadian History, Grade 10, Academic or Applied

World History to the 16th Century, Grade 11, University/College Preparation (CHW 3M)

This course investigates the history of humanity from earliest times to the sixteenth century. Students will analyse diverse societies from around the world, with an emphasis on the political, cultural, and economic structures and historical forces that have shaped the modern world. They will apply historical inquiry, critical-thinking, and communication skills to evaluate the influence of selected individuals, groups, and innovations and to present their own conclusions.

Prerequisite: Contemporary Canadian History, Grade 10, Academic or Applied

Canadian History and Politics Since 1945, Grade 11, College Preparation (CHH 3C)

This course examines the local, national, and global forces that have shaped Canada since 1945 and highlights the political, social, and economic issues facing the country today. Students will expand their political understanding through an investigation of Canada's efforts in areas such as social justice and human rights, multiculturalism, and international relations. Students will develop their skills in historical research, analysis, and communication to deepen their historical and political awareness and present their own points of view.

Prerequisite: Contemporary Canadian History, Grade 10, Academic or Applied

Canadian History and Politics Since 1945, Grade 11, Workplace Preparation (CHH 3E)

This course traces the most significant changes in Canadian society since 1945 and connects them to the issues facing the country today. Students will learn about the social, economic, and political forces that affect their lives, covering topics such as multiculturalism, labour relations, technological change, equity issues, and globalization. Through their investigation of the connections between historical developments and current issues, students will strengthen their critical-thinking and communication skills in preparation for the workplace.

Prerequisite: Contemporary Canadian History, Grade 10, Academic or Applied

History Since 1900: Global and Regional Perspectives, Grade 11, Open (CHT 3O)

This course focuses on the major events and issues in world history from 1900 to the present. Students will investigate the causes and effects of global and regional conflicts and the responses of individuals and governments to social, economic, and political changes. Students will use critical-thinking and communication skills to formulate and test points of view, draw conclusions, and present their findings about the challenges that have faced and continue to face people in various parts of the world.

Prerequisite: Contemporary Canadian History, Grade 10, Academic or Applied

Canadian History: Identity and Culture, Grade 12, University Preparation (CHI 4U)

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 & World Studies, English or Social Sciences & Humanities

World History: The West and the World, Grade 12, University Preparation (CHY 4U)

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 & World Studies, English or Social Sciences & Humanities

World History: The West and the World, Grade 12, College Preparation (CHY 4C)

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 & World Studies, English or Social Sciences & Humanities

Adventures in World History, Grade 12, Workplace Preparation (CHM 4E)

This course explores a variety of human experiences in world history from earliest times to the present. Students will learn about a wide range of societies and cultures, examining such things as systems of government, technological developments, work, art, and religion. Students will apply methods of research and inquiry to examine human societies in many different times and places and to communicate points of view about their findings.

Prerequisite: Contemporary Canadian History, Grade 10, Academic or Applied

Law

Understanding Canadian Law, Grade 11, University/College Preparation (CLU 3M)

This course explores Canadian law with a focus on legal issues that are relevant to people's everyday lives. Students will investigate fundamental legal concepts and processes to gain a practical understanding of Canada's legal system, including the criminal justice system. Students will use critical-thinking, inquiry, and communication skills to develop informed opinions on legal issues and apply this knowledge in a variety of ways and settings, including case analysis, legal research projects, mock trials, and debates.

Prerequisite: Contemporary Canadian History, Grade 10, Academic or Applied

Understanding Canadian Law, Grade 11, Workplace Preparation (CLU 3E)

This course gives students practical information about legal issues that directly affect their lives. Students will examine the need for laws in society, the roots of Canada's legal system, the rights and freedoms that people in Canada enjoy, and the basic elements of criminal law and dispute resolution. Through experiences such as mock trials, debates, and case studies, students will apply inquiry and communication skills to develop and express opinions on legal topics of interest to them.

Prerequisite: Contemporary Canadian History, Grade 10, Academic or Applied

Canadian and International Law, Grade 12, University Preparation (CLN 4U)

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 & World Studies, English or Social Sciences & Humanities

Politics

Canadian Politics and Citizenship, Grade 11, Open (CPC 3O)

This course explores the role of politics in people's lives and the importance of being an active citizen in a democratic society. Students will examine the ways in which individuals and groups participate in the political process, the ways in which they can influence political decision making and public policy, and the effectiveness of political systems and institutions in meeting societal needs. Students will apply inquiry and communication skills to analyse and report on political issues, events, and trends of interest to them.

Prerequisite: Contemporary Canadian History, Grade 10, Academic or Applied

Canadian and World Politics, Grade 12, University Preparation (CPW 4U)

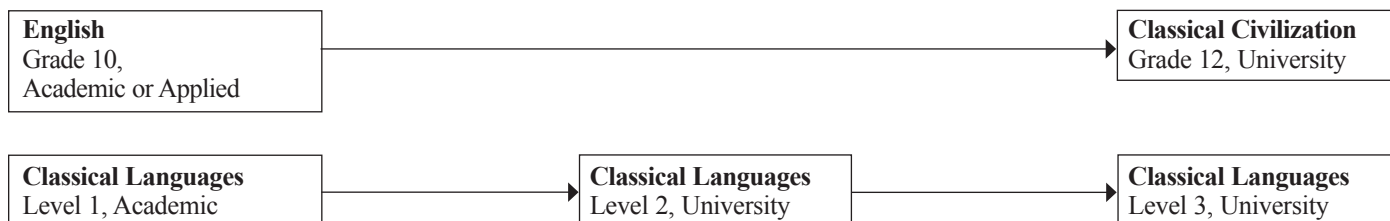
This course examines Canadian and world politics from a variety of perspectives. Students will investigate the ways in which individuals, groups, and states work to influence domestic and world events, the role of political ideologies in national and international politics, and the dynamics of international cooperation and conflict resolution. Students will apply criticalthinking and communication skills to develop and support informed opinions about current political conflicts, events, and issues.

Prerequisite: Any University or University/College Preparation Course in Canadian & World Studies, English or Social Sciences & Humanities

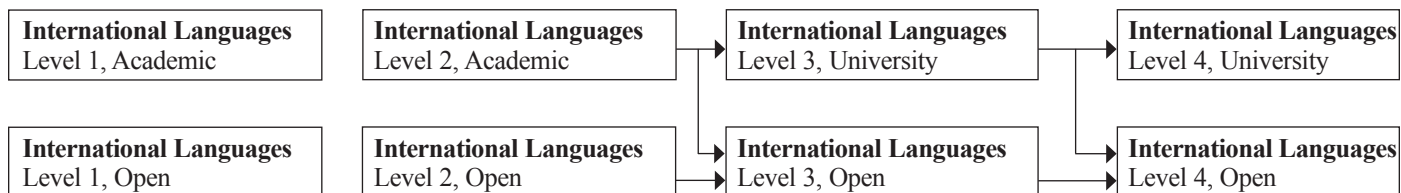
Prerequisite Charts for Classical Studies & International Languages

These charts map out all the courses in the discipline and show the link between courses and the possible prerequisites for them. They do not attempt to depict all possible movements from course to course.

CLASSICAL STUDIES



INTERNATIONAL LANGUAGES



Notes:

Boards and schools may choose to offer their International Languages programs beginning at Level 1 or Level 2.

Codes will be assigned to identify courses for students who have no knowledge of the international language and courses for students who have some knowledge of the language.

Prerequisites for Level 2 International Languages, Academic or Open, will be determined by school boards, depending on the structure of their International Language program.

Classical Studies

Classical Languages, Level 1, Academic (Greek/Latin – LVG AD/LVL AD)

This course introduces students to the achievements of the classical world through the study of Latin or ancient Greek. Students will learn vocabulary and grammar essential for reading and translating classical texts. English is the language of instruction. Through a variety of enrichment activities, such as presentations, debates and dialogues, students will explore such aspects of life in the ancient world as trade, commerce, education, entertainment and social customs while improving their language skills.

Prerequisite: None

Classical Languages, (Greek/Latin – LVG BU/LVL BU) Level 2, University Preparation

This course provides students with opportunities to continue their exploration of the achievements of the ancient world through the study of Latin or ancient Greek. Students will read and translate more complex passages in the classical language and will learn the vocabulary and grammar essential for these activities. English is the language of instruction. Through a variety of methods, such as dramatizations, presentations and hands-on activities, students will investigate aspects of the culture and beliefs of the ancient world, including science, religion and customs.

Prerequisite: Classical Languages, Level 1, Academic

Classical Languages, (Greek/Latin – LVG CU/LVL CU) Level 3, University Preparation

This course provides students with opportunities to further develop their knowledge of the achievements of the ancient world through the study of Latin or ancient Greek. Students will read and translate a broad selection of classical poetry and will learn the vocabulary and grammar essential for these activities. English is the language of instruction. Through a variety of enrichment activities, such as contests, seminars and re-enactments, students will explore elements of the civilization of the ancient world, such as engineering, architecture, politics and literature.

Prerequisite: Classical Languages, Level 2, University Preparation

Classical Civilizations, Grade 12, University Preparation (LVV 4U)

This course allows students to explore the beliefs and achievements of the classical world, which have shaped Western thought and civilization. Students will investigate such aspects of classical culture as its mythology, art, literature and philosophy, as well as elements of ancient Greek and Latin, through a variety of activities such as dramatizations, audio-visual presentations and discussions. By reading classical authors in English and examining archaeological evidence, students will enhance both their communication skills and their ability to think critically and creatively.

Prerequisite: English, Grade 10, Academic or Applied

International Languages

International Languages, Level 1, Academic, (LBA AD – LYX AD)

This course is designed to enable students to begin to communicate with native speakers of the language of study. Students will use simple language and read age- and language-appropriate passages for various purposes. They will explore aspects of the culture of countries where the language under study is spoken, including social customs and the arts, by participating in cultural events and activities involving both print and technological resources.

Prerequisite: None

International Languages, Level 1, Open (LBA AO – LYX AO)

This course introduces students to language elements they will need to begin to communicate with native speakers. Students will participate in practical activities in which they can apply their knowledge and skills, and will begin to explore careers that require knowledge of the language of study. They will explore aspects of the culture of countries where the language under study is spoken, including social customs, music and food, by participating in cultural events and activities involving both print and technological resources.

Prerequisite: None

Classical Studies & International Languages

International Languages, Level 2, Academic

(LBA BD – LYX BD)

This course provides students with the language learning experiences that will enable them to communicate in the language of study. Students will continue to develop and apply their speaking skills in a variety of contexts, and will participate in activities that will improve their reading comprehension and writing skills. They will also continue to explore aspects of the culture of countries where the language under study is spoken by taking part in community-sponsored events and activities involving both print and technological resources. Although students will continue to expand their vocabulary and repertoire of language structures, the language they will use at this level will still be simple.

Prerequisite: Prerequisites will be determined by school boards, depending on the structure of their International Language program

International Languages, Level 2, Open

(LBA BO – LYX BO)

This course provides students with opportunities to further develop their oral communication skills in the language of study, increase their confidence in using the language in practical situations and continue to investigate related career opportunities. Students will be involved in activities that promote the use of the language in real-life situations. They will also continue their exploration of the culture of countries where the language under study is spoken. Although students will continue to expand their vocabulary and repertoire of language structures, the language they will use at this level will still be simple.

Prerequisite: Prerequisites will be determined by school boards, depending on the structure of their International Language program

International Languages, Level 3, University Preparation

(LBA CU – LYX CU)

This course offers students opportunities to further develop their knowledge of the international language and to enhance their communication skills. Students will use increasingly sophisticated language in a variety of activities that will enable them to speak and write with clarity and accuracy. Students will also enhance their thinking skills through the critical study of literature, and continue to explore aspects of the culture of countries where the language is spoken through a variety of print and technological resources.

Prerequisite: International Languages, Level 2, Academic

International Languages, Level 3, Open

(LBA CO – LYX CO)

This course provides students with opportunities to further develop their communication skills in the international language and increase their confidence in applying it in a variety of practical situations, including contexts related to future employment. Students will engage in a variety of activities and use resources that will allow them to use the language in various real-life situations. They will also continue to explore aspects of the culture of countries where the language is spoken and investigate careers that require facility in the language.

Prerequisite: International Languages, Level 2, Academic or Open

International Languages, Level 4, University Preparation

(LBA DU – LYX DU)

This course prepares students for university studies in the international language. Students will enhance their ability to use the language with clarity and precision, and will develop the language skills needed to engage in sustained conversations and discussions, understand and evaluate information, read diverse materials for both study and pleasure, and write clearly and effectively. Students will also have opportunities to add to their knowledge of the culture of countries where the language is spoken through the use of community resources and computer technology.

Prerequisite: International Languages, Level 3, University Preparation

International Languages, Level 4, Open

(LBA DO – LYX DO)

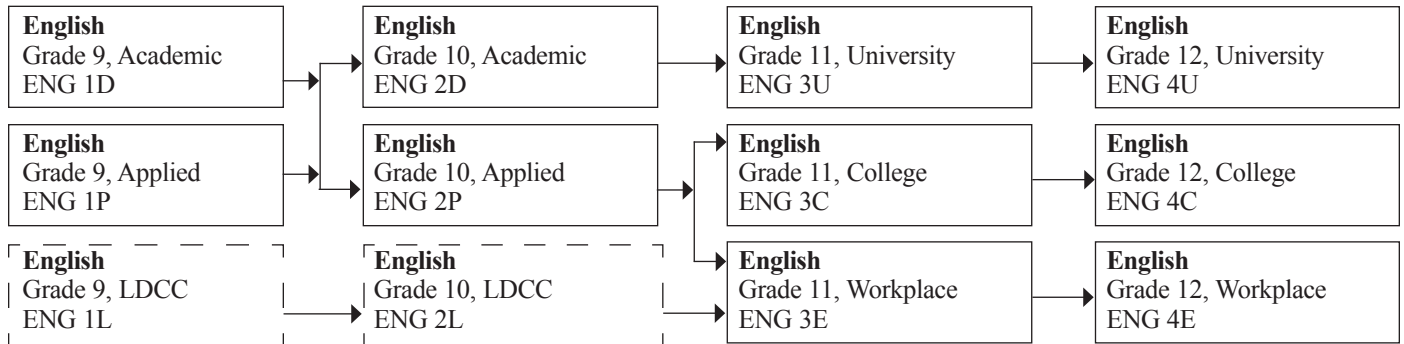
This course provides students with opportunities to consolidate the language skills required for effective communication in business and personal contexts. Students will use a variety of print and technological resources that will promote their ability to apply the language in practical situations, and will engage in activities such as writing memos, reading articles and applying conversational skills in business contexts. They will also add to their knowledge of the culture of countries where the language is spoken by using resources from the local and international community.

Prerequisite: International Languages, Level 3, Preparation or Open

Prerequisite Charts for English

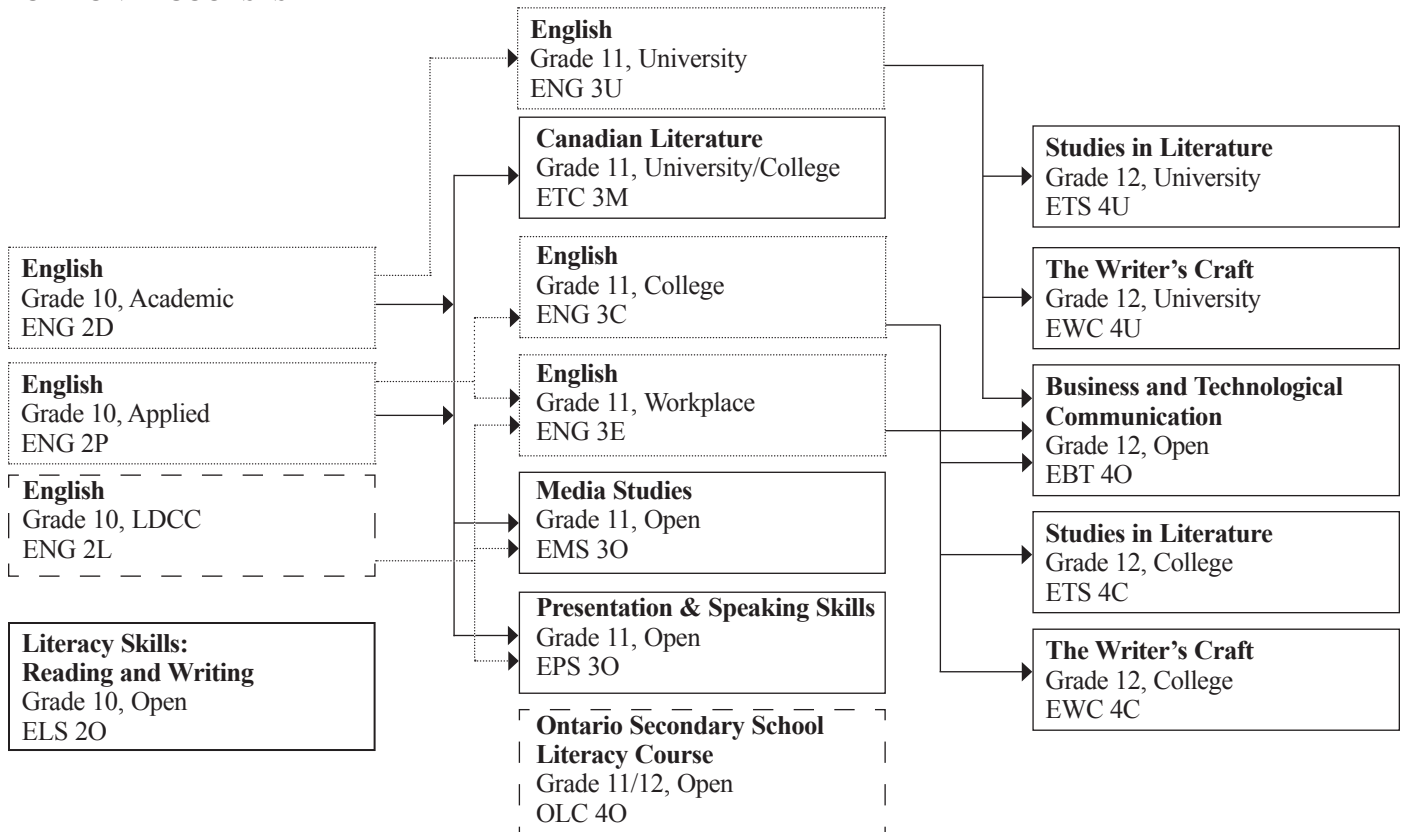
These charts map out all the courses in the discipline and show the links between courses and the possible prerequisites for them. They do not attempt to depict all possible movements from course to course.

COMPULSORY COURSES



Note: Students who take the Grade 11 course English: Contemporary Aboriginal Voices (university, college or workplace preparation) may use the credit earned for this course to meet the Grade 11 English compulsory credit requirement.

OPTIONAL COURSES



Note: Dotted lines indicate prerequisites defined for compulsory courses in the upper chart.

Compulsory Courses

English, Grade 9, Academic (ENG 1D)

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: None

English, Grade 9, Applied (ENG 1P)

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. The course is intended to prepare students for the Grade 10 applied English course, which leads to college or workplace preparation courses in Grades 11 and 12.

Prerequisite: None

English, Grade 9, Locally Developed Compulsory (ENG 1L)

This course provides foundational literacy and communication skills to prepare students for success in their daily lives, in the workplace, and in the Grade 10 LDCC Course.

The course is organized into strands that develop listening and talking skills, reading and viewing skills, and writing skills. In all strands, the focus is on developing foundational literacy skills and on using language clearly and accurately in a variety of authentic contexts.

Students develop strategies and put into practice the processes involved in talking, listening, reading, viewing, writing, and thinking, and reflect regularly upon their growth in these areas.

Prerequisite: None

English, Grade 10, Academic (ENG 2D)

This course is designed to extend the range of 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 and evaluate informational and graphic texts, and create oral, written, and media texts in a variety of forms. An important focus will be on the selective use of strategies that contribute to effective communication. This course is intended to prepare students for the compulsory Grade 11 university or college preparation course.

Prerequisite: English, Grade 9, Academic or Applied

English, Grade 10, Applied (ENG 2P)

This course is designed to extend the range of oral communication, reading, writing, and media literacy skills that students need for success in secondary school and daily life. 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. This course is intended to prepare students for the compulsory Grade 11 college or workplace preparation course.

Prerequisite: English, Grade 9, Academic or Applied

English, Grade 10, Locally Developed Compulsory (ENG 2L)

In this course, students focus on extending their literacy and communication skills to prepare for success in their daily lives, in the workplace, and in the English Grade 11 Workplace Preparation course.

The course is organized into strands that extend listening and talking skills, reading and viewing skills, and writing skills. In all strands, the focus is on refining foundational literacy skills and on using language clearly and accurately in a variety of authentic contexts.

Students build on their strategies and engage in the processes involved in talking, listening, reading, viewing, writing, and thinking, and reflect regularly upon their growth in these areas.

Prerequisite: A Grade 9 English credit

English, Grade 11, University Preparation (ENG 3U)

This course emphasizes the development of literacy, communication, and 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

English, Grade 11, College Preparation (ENG 3C)

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

English, Grade 11, Workplace Preparation (ENG 3E)

This course emphasizes the development of literacy, communication, and critical and creative thinking skills necessary for success in the workplace and in daily life. Students will study the content, form, and style of a variety of contemporary informational, graphic, and literary texts; and create oral, written, and media texts in a variety of forms for practical purposes. An important focus will be on using language clearly and accurately in a variety of formal and informal contexts. The course is intended to prepare students for the compulsory Grade 12 workplace preparation course.

Prerequisite: English, Grade 10, Applied

English, Grade 12, University Preparation (ENG 4U)

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

English, Grade 12, College Preparation (ENG 4C)

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

English, Grade 12, Workplace Preparation (ENG 4E)

This course emphasizes the consolidation of literacy, communication, and critical and creative thinking skills necessary for success in the workplace and in daily life. Students will analyse informational, graphic, and literary texts and create oral, written, and media texts in a variety of forms for workplace-related and practical purposes. An important focus will be on using language accurately and organizing ideas and information coherently. The course is intended to prepare students for the workplace and active citizenship.

Prerequisite: English, Grade 11, Workplace Preparation

Ontario Secondary School Literacy Course, Grade 11/12, Open (OLC 4O)

This course is designed to help students acquire and demonstrate the cross-curricular literacy skills that are evaluated by the Ontario Secondary School Literacy Test (OSSLT). Students who complete the course successfully will meet the provincial literacy requirement for graduation. Students will read a variety of informal, narrative and graphic texts and will produce a variety of forms of writing, including summaries, information paragraphs, opinion pieces and news reports. Students will also maintain and manage a portfolio containing a record of their reading experiences and samples of their writing.

Eligibility requirement: Students who have been eligible to write the OSSLT at least twice and who have been unsuccessful at least once are eligible to take the course. (Students who have already met the literacy requirement for graduation may be eligible to take the course under special circumstances at the discretion of the principal.)

Optional Courses

Literacy Skills, Grade 10, Open (ELS 20)

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. The course will also help students develop core learning strategies.

Prerequisite: None

Canadian Literature, Grade 11, University/College Preparation (ETC 3M)

This course emphasizes the study and analysis of literary texts by Canadian authors for students with a special interest in Canadian literature. Students will study the themes, forms, and stylistic elements of a variety of literary texts representative of various time periods and of the diverse cultures and regions of Canada, and will respond personally, critically, and creatively to them.

Prerequisite: English, Grade 10, Academic or Applied

Media Studies, Grade 11, Open (EMS 30)

This course emphasizes knowledge and skills that will enable students to understand media communication in the twenty-first century and to use media effectively and responsibly. Through analysing the forms and messages of a variety of media works and audience responses to them, and through creating their own media works, students will develop critical thinking skills, aesthetic and ethical judgement, and skills in viewing, representing, listening, speaking, reading, and writing.

Prerequisite: English, Grade 10, Academic or Applied

Presentation and Speaking Skills, Grade 11, Open (EPS 30)

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: English, Grade 10, Academic or Applied

Studies in Literature, Grade 12, University Preparation (ETS 4U)

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 analyse a range of forms and stylistic elements of literary texts and respond personally, critically, and creatively to them. They will also assess critical interpretations, write analytical essays, and complete an independent study project.

Prerequisite: English, Grade 11, University Preparation

The Writer's Craft, Grade 12, University Preparation (EWC 4U)

This course emphasizes knowledge and skills related to the craft of writing. Students will analyse models of effective writing; use a workshop approach to produce a range of works; identify and use techniques required for specialized forms of writing; and identify effective ways to improve the quality of their writing. They will also complete a major paper as part of a creative or analytical independent study project and investigate opportunities for publication and for writing careers.

Prerequisite: English, Grade 11, University Preparation

Studies in Literature, Grade 12, College Preparation (ETS 4C)

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

The Writer's Craft, Grade 12, College Preparation (EWC 4C)

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 Preparation

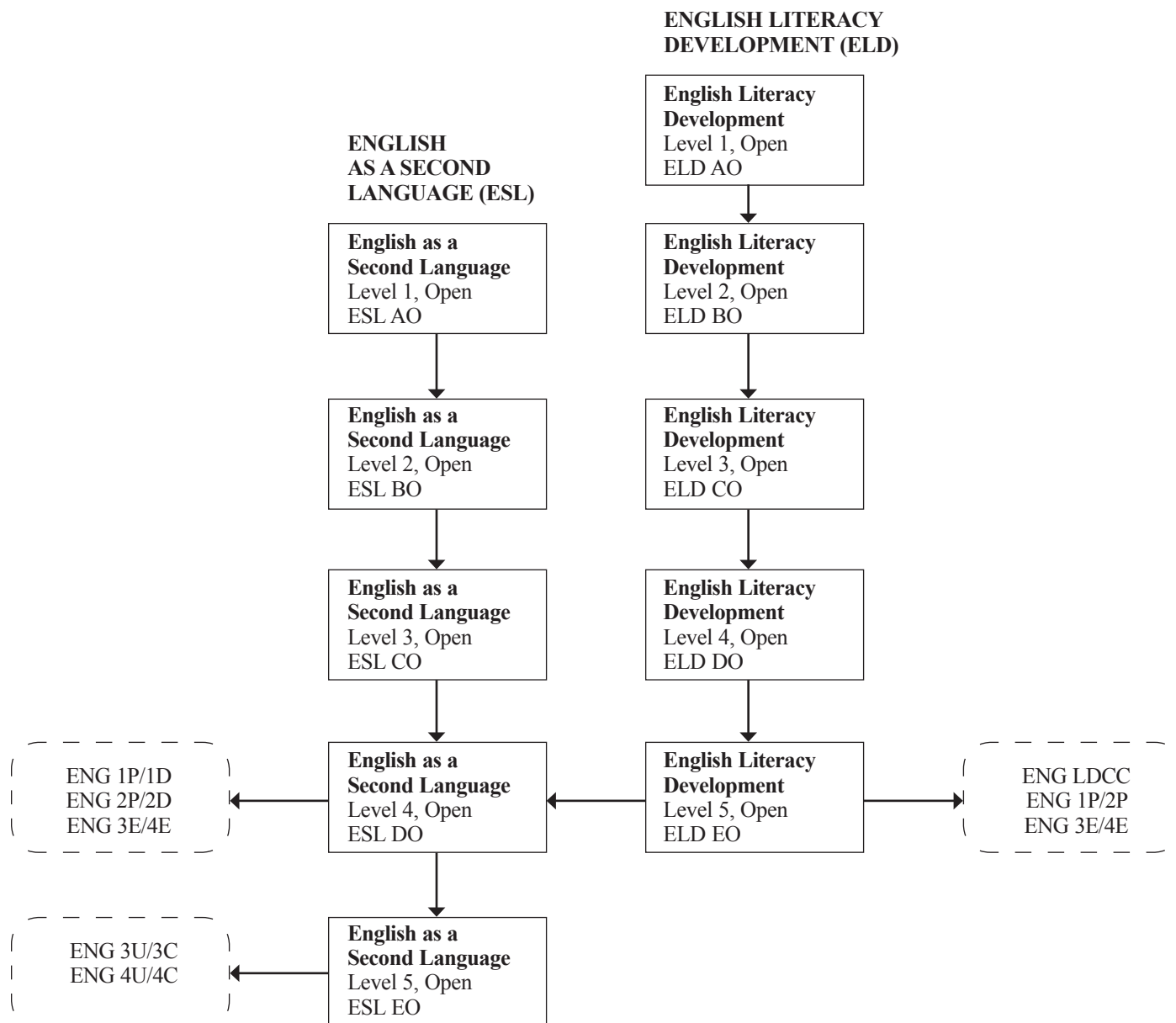
Business and Technological Communication, Grade 12, Open (EBT 40)

This course emphasizes practical writing and communication skills that are needed in the world of business and technology. Students will analyse the characteristics of effective models of business and technical communications; gather information to write reports, business letters, memos, manuals, instructions, and brochures; and integrate graphics and text, using technology appropriately for formatting and special effects. They will also make a number of oral and visual presentations.

Prerequisite: English, Grade 11, University Preparation, College Preparation, or Workplace Preparation

Prerequisite Charts for English as a Second Language & English Literacy Development

The chart below shows how most students may progress through their ESL and/or ELD courses and into mainstream English courses. Not all students will follow this sequence exactly, and individual students may vary in the rate at which they progress through the levels.



English as a Second Language

English as a Second Language, Level 1, Open (ESL AO)

This course builds on students' previous education and language knowledge to introduce the English language and help students adjust to their new cultural environment. Students will use beginning English language skills in listening, speaking, reading, and writing for everyday and essential academic purposes; use basic English language structures and simple sentence patterns in short conversations; read short adapted texts; and write phrases and short sentences. The course also provides students with the knowledge and skills they need to begin to adapt to their new lives in Canada.

Prerequisite: None

English as a Second Language, Level 2, Open (ESL BO)

This 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 equivalent

English as a Second Language, Level 3, Open (ESL CO)

This course extends students' skills in listening, speaking, reading, and writing 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 forms of text. Students will also expand their academic vocabulary and their study skills to facilitate the 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 or equivalent**

English as a Second Language, Level 4, Open (ESL DO)

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 school subjects. They will study and interpret a variety of grade-level texts; extend listening and speaking skills through participation in discussions and seminars; write narratives, articles, and summaries in English; and respond critically to various print and media texts.

*Prerequisite: English as a Second Language, Level 3 or equivalent**

English as a Second Language, Level 5, Open (ESL EO)

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 further develop their ability to respond critically to print and media texts.

*Prerequisite: English as a Second Language, Level 4 or equivalent**

* "Equivalent" may be an equivalent course of study completed in another province in Canada or in another country, or a proficiency level determined through initial assessment.

English Literacy Development

English Literacy Development, Level 1, Open (ELD AO)

This course is intended for English language learners who have had limited access to schooling and thus have significant gaps in their first-language literacy skills. Students will use basic listening and speaking skills to communicate in English for everyday purposes; develop readiness skills for reading and writing; begin to read highly structured texts for everyday and school-related purposes; and use basic English language structures and sentence patterns in speaking and writing. The course will also help students become familiar with school routines and begin to adapt to their new lives in Canada.

Prerequisite: None

English Literacy Development, Level 2, Open (ELD BO)

This course is intended for English language learners who have had limited access to schooling and thus have gaps in their first-language literacy skills. Students will use their developing listening and speaking skills to communicate in English; develop reading strategies to understand a variety of simple texts; produce simple forms of writing; apply increasing knowledge of English grammatical structures; expand their vocabulary; and develop fundamental study skills. The course will also provide opportunities for students to use school and community resources and build their cultural knowledge of Canada.

*Prerequisite: English Literacy Development, Level 1 or equivalent**

English Literacy Development, Level 3, Open (ELD CO)

This course builds on students' growing literacy and language skills and extends their ability to communicate in English about familiar and school-related topics. Students will improve their literacy skills through a variety of contextualized and supported reading and writing tasks; distinguish between fact and opinion in short written and oral texts; complete short guided-research projects; make brief oral presentations; and engage in a variety of cooperative learning activities. The course will also enable students to further develop their study skills and personal-management strategies, and broaden their understanding of Canadian culture and citizenship.

*Prerequisite: English Literacy Development, Level 2 or equivalent**

English Literacy Development, Level 4, Open (ELD DO)

This course extends students' literacy skills and ability to apply learning strategies effectively, and teaches them how to use community resources to enhance lifelong learning. Students will engage in a variety of guided reading, writing, and viewing tasks; use media and community resources to complete guided-research projects; and communicate for a variety of academic and everyday purposes with increasing accuracy and fluency. This course further develops the critical thinking skills students will need to participate in Canadian society as informed citizens.

*Prerequisite: English Literacy Development, Level 3 or equivalent**

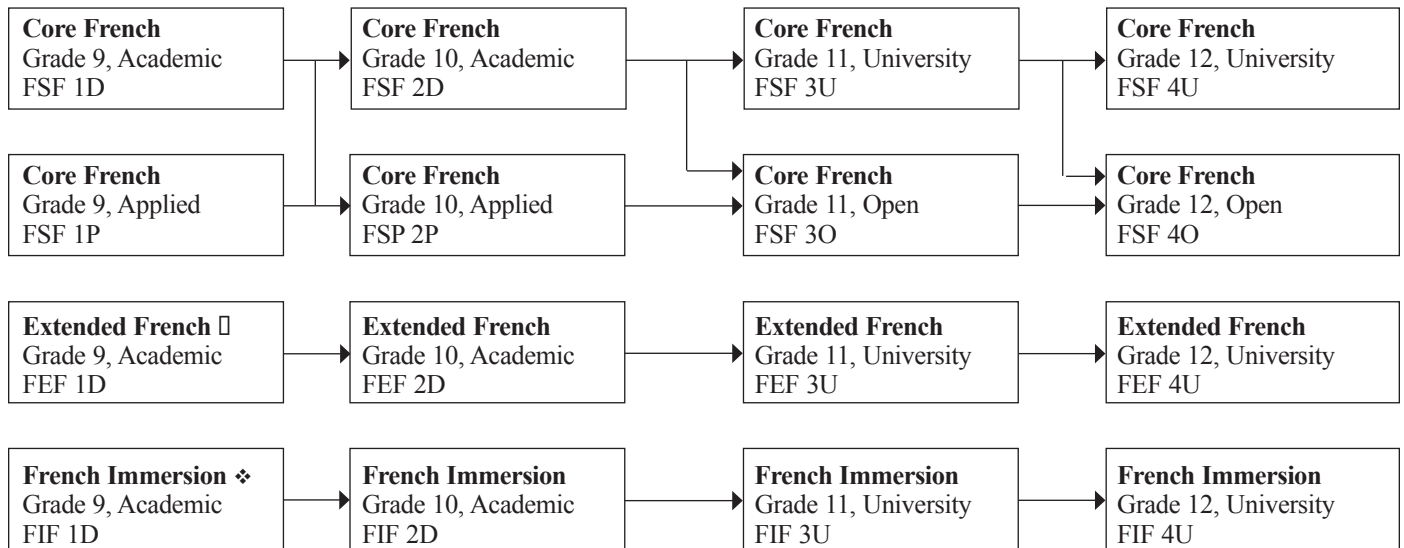
English Literacy Development, Level 5, Open (ELD EO)

This course provides students with skills and strategies that will allow them to continue their education successfully and pursue pathways to employment that may involve apprenticeship and/or cooperative education programs. Students will develop greater independence in reading and writing, as well as in interpreting media texts; use a range of media and community resources; and communicate both orally and in writing on a variety of topics. This course also expands the critical thinking skills students will need in order to contribute to Canadian society as informed citizens.

*Prerequisite: English Literacy Development, Level 4 or equivalent**

* "Equivalent" may be an equivalent course of study completed in another province in Canada or in another country, or a proficiency level determined through initial assessment.

Prerequisite Chart for French as a Second Language



Notes:

□ The prerequisite for Grade 9 Extended French is the elementary Extended French program or the elementary French Immersion program or equivalent.

❖ The prerequisite for Grade 9 French Immersion is the elementary French Immersion program or equivalent.

Students who have successfully completed elementary Extended French or French Immersion programs and do not wish to pursue further studies in these programs should be considered for advanced placement in the Core French program, if they demonstrate the necessary knowledge and skills.

French as a Second Language

Core French

Core French, Grade 9, Academic (FSF 1D)

This course emphasizes the further development of oral communication, reading and writing skills. Students will build on and apply their knowledge of French while exploring a variety of themes, such as relationships, social trends and careers. Thematic readings, which include a selection of short stories, articles and poems, will serve as stepping stones to oral and written activities.

Prerequisite: Minimum of 600 hours of French instruction or equivalent

Core French, Grade 9, Applied (FSF 1P)

This course emphasizes the concurrent development of oral communication, reading and writing skills, using a broad-based theme, such as the media. Students will enhance their ability to understand and speak French through conversations, discussions and presentations. They will also read short stories, articles, poems and songs, and write brief descriptions, letters, dialogues and invitations.

Prerequisite: Minimum of 600 hours of French instruction or equivalent

Core French, Grade 10, Academic (FSF 2D)

This course enables students to increase their knowledge of the French language, further develop their language skills, and deepen their understanding and appreciation of francophone culture around the world. Exploring a variety of themes, students will develop and apply critical thinking skills in discussion, in their analysis and interpretation of texts, and in their own writing.

Prerequisite: Core French, Grade 9, Academic or Applied

Core French, Grade 10, Applied (FSF 2P)

This course emphasizes the further development of oral communication, reading and writing skills using a broad-based theme, such as adolescence. Students will expand their knowledge of French by studying a series of theme-related topics, such as students' rights and responsibilities, relationships with peers and adults, and part-time jobs.

Prerequisite: Core French, Grade 9, Academic or Applied

Core French, Grade 11, University Preparation (FSF 3U)

This course draws on a variety of themes to promote extensive development of reading and writing skills and to reinforce oral communication skills. Students will gain a greater understanding of French-speaking cultures in Canada and around the world through their reading of a variety of materials, including a short novel or play. Students will produce various written assignments, including a formal essay. The correct use of grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: Core French, Grade 10, Academic

Core French, Grade 11, Open (FSF 3O)

This course draws on a broad theme, such as leisure activities, to develop oral communication, reading and writing skills. Students will give presentations, read a selection of short stories and articles and produce a variety of written assignments. The correct use of grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: Core French, Grade 10, Academic or Applied

Core French, Grade 12, University Preparation (FSF 4U)

This course draws on a variety of themes to promote extensive development of French language skills. Students will consolidate their oral skills as they discuss literature, culture and current issues. They will read a variety of texts and will write a formal essay. The correct use of grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: Core French, Grade 11, University Preparation

Core French, Grade 12, Open (FSF 4O)

This course focuses on the development of French language skills that students can use in the business world or the workplace. Students will give presentations, read a selection of materials appropriate to the topics under study and produce a variety of written assignments. The correct use of grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: Core French, Grade 11, Open or University Preparation

Extended French

Extended French, Grade 9, Academic (FEF 1P)

This course emphasizes the expansion of students' oral communication, reading and writing skills through the study of themes that reflect their interests. Students will apply their knowledge of French in discussions, debates, dramatizations and oral presentations. Students will read and write in a variety of genres (e.g., poems, articles, brochures) and study at least one short novel intended for a French-speaking audience.

Prerequisite: Minimum of 1,260 hours of French instruction or equivalent

Extended French, Grade 10, Academic (FEF 2D)

This course emphasizes the continued development and refinement of students' oral communication, reading and writing skills as they explore a variety of themes. Students will expand their knowledge and appreciation of francophone culture through the study and interpretation of novels, poems and plays intended for a French-speaking audience.

Prerequisite: Extended French or French Immersion, Grade 9, Academic

Extended French, Grade 11, University Preparation (FEF 3U)

This course focuses on developing French language skills through the study of Canadian francophone authors. Students will analyse works in a variety of genres and will produce various types of written assignments, including a formal essay. The correct use of grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: Extended French, Grade 10, Academic

Extended French, Grade 12, University Preparation (FEF 4U)

This course emphasizes the development of French language skills through the study of Canadian and international francophone literature. Students will interpret literary works, produce written assignments in a variety of genres and conduct research on a major topic for written and oral presentation. The correct use of grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: Extended French, Grade 11, University Preparation

French Immersion

French Immersion, Grade 9, Academic (FIF 1D)

This course enables students to enhance their knowledge of the French language and to further develop their language skills through the study of 20th century North American francophone literature and culture. Students will participate in oral communication, reading and writing activities as they study an authentic novel and selected authentic poems, legends, songs, films and newspaper articles from French-speaking parts of North America.

Prerequisite: Minimum of 3,800 hours of French instruction or equivalent

French Immersion, Grade 10, Academic (FIF 2D)

This course enables students to increase their knowledge of the French language and to further develop their language skills through the study of 20th century European francophone literature and culture. Students will participate in oral communication, reading and writing activities based on a variety of French literary and media works. They will study at least one novel and a selection of poems, short stories, films, plays, and newspaper and magazine articles.

Prerequisite: French Immersion, Grade 9, Academic

French Immersion, Grade 11, University Preparation (FIF 3U)

This course develops knowledge and language skills through the study of francophone literature and culture from around the world. Students will study novels, plays, poems, short stories, films, and non-fiction works and produce written assignments in a variety of forms, including critiques and précis. They will also write a formal research essay. The correct use of grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: French Immersion, Grade 10, Academic

French Immersion, Grade 12, University Preparation (FIF 4U)

This course provides for extensive study of French literature and culture from the Middle Ages to the present. Students will study novels, plays, poems, films and non-fiction works produced in various historical periods, and will write a formal research paper. The correct use of grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Prerequisite: French Immersion, Grade 11, University Preparation

Prerequisite Chart for Guidance & Career Education and Special Education

Discovering the Workplace
Grade 10, Open
GLD 20

Navigating the Workplace
Grade 12, Open
GLN 40

Designing Your Future
Grade 11, Open
GWL 30

**Learning Strategies 1:
Skills for Success in
Secondary School**
Grade 9, Open
GLS 10 or GLE 10

Career Studies
(compulsory)
(half-credit)
Grade 10, Open
GLC 20

**Leadership
and Peer Support**
Grade 11, Open
GPP 30

**Advanced Learning
Strategies: Skills for
Success After
Secondary School**
Grade 12, Open
GLS 40 or GLE 40

Learning
Strategies 1: Skills
for Success in
Secondary School
Grade 10, Open
GLE 20

Advanced Learning
Strategies: Skills for
Success After
Secondary School
Grade 11, Open
GLE 30

Guidance & Career Education and Special Education

Learning Strategies 1: Skills for Success in Secondary School, Grade 9, Open (GLS 10/GLE 10/GLE 20)

This course explores learning strategies and helps students become better, more independent learners while increasing their personal management skills, both in school and in other contexts. Students will learn how to develop and apply a range of strategies to improve their learning and achievement, particularly their literacy, numeracy, communication and planning skills. This course will increase students' confidence, motivation and ability to learn.

Prerequisite: For GLS 10 – none; For GLE 10 and GLE 20 – recommendation of principal

Career Studies, Grade 10, Open (GLC 20)

This course teaches students how to develop and achieve personal goals in education and work and contribute to their communities. Student learning will include assessing their own knowledge, skills, and characteristics and investigating economic trends, workplace organization, work opportunities and ways to search for work. The course explores post-secondary learning options, prepares students for community-based learning and helps them build the capabilities needed for managing work and life transitions. Students will design action plans for pursuing their goals.

Prerequisite: None

Designing Your Future, Grade 11, Open (GWL 30)

This course prepares students to make successful transitions to post-secondary work and education, or training. Students will explore the realities and opportunities of modern workplaces, while refining their employability skills and learning how to manage their careers. Students will target appropriate post-secondary education or training options and begin to implement an action plan for post-secondary success.

Prerequisite: None

Leadership and Peer Support, Grade 11, Open (GPP 30)

This course prepares and motivates students to provide leadership and assistance to others in their schools and communities. Students will develop skills in communication, interpersonal relations, coaching, leadership, teamwork and conflict management, and apply these skills in roles such

as tutoring, mentoring and student council involvement. Students also learn the value and complexity of social diversity, while acquiring an appreciation of the importance of contributing to their communities and helping others throughout their lives.

Prerequisite: None

Advanced Learning Strategies: Skills for Success After Secondary School, Grade 12, Open (GLS 40/GLE 40/GLE 30)

This course improves students' learning skills, preparing them to make successful transitions to work and post-secondary education and become independent, lifelong learners. Students will learn how to assess their learning abilities and use critical reading, time management and other techniques for promoting effective learning. In addition, they will investigate learning requirements for employment and post-secondary education or training and develop plans for learning after secondary school.

Prerequisite: For GLS 40 – None; For GLE 40 and GLE 30 – recommendation of principal

Discovering the Workplace, Grade 10, Open (GLD 20)

This course provides students with opportunities to discover and develop the workplace essential skills and work habits required to be successfully employed. Students will develop an understanding of work through practical, hands-on experiences in the school and in the community, using real workplace materials. They investigate occupations of interest through experiential opportunities (e.g., worksite visits, hearing guest speakers, job shadowing, work experience, simulations, entrepreneurial projects). This course helps students make plans for continued learning and work.

Prerequisite: None

Navigating the Workplace, Grade 12, Open (GLN 40)

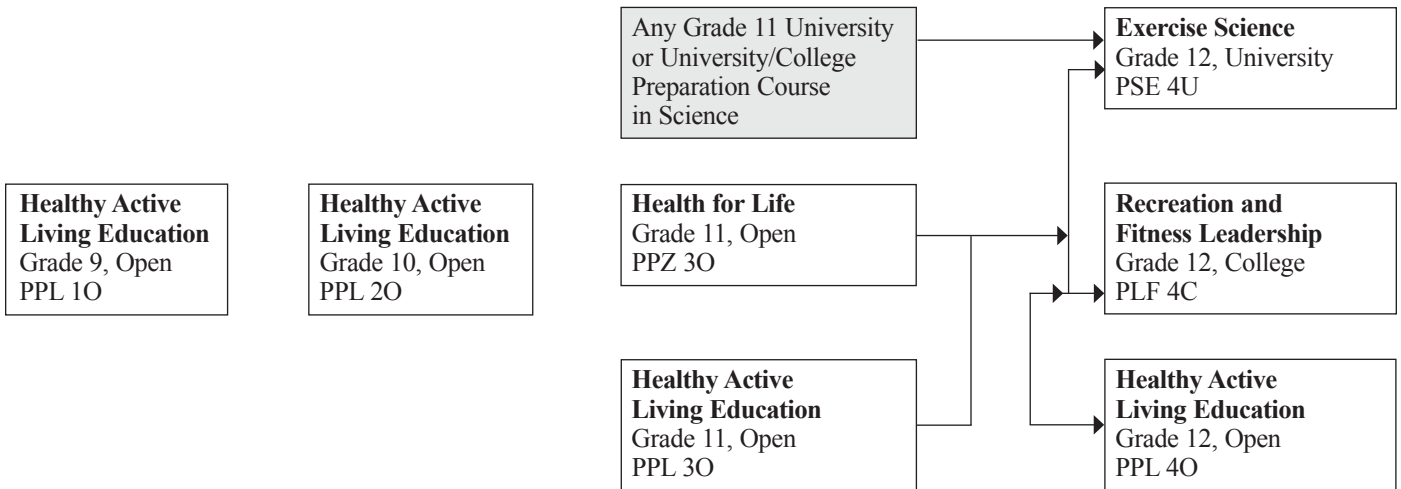
This course provides students with opportunities to develop the workplace essential skills and work habits required for success in all types of workplaces. Students will explore occupations and careers of interest through participation in real workplace experiences (e.g., information interviews, work 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

Note: See Co-operative Education section on page 6

Prerequisite Chart for Health & Physical Education

This chart maps out all the courses in the discipline and shows the link between courses and the possible prerequisites for them. It does not attempt to depict all possible movements from course to course.



Health & Physical Education

Healthy Active Living Education, Grade 9, Open (PPL 10)

This course emphasizes regular participation in a variety of enjoyable physical activities that promote lifelong healthy active living. Students will learn movement skills and principles, ways to improve personal fitness and physical competence, and safety and injury prevention. They will investigate issues related to healthy sexuality and the use and abuse of alcohol, tobacco, and other drugs and will participate in activities designed to develop goal-setting, communication and social skills.

Prerequisite: None

Healthy Active Living Education, Grade 10, Open (PPL 20)

This course emphasizes regular participation in a variety of enjoyable physical activities that promote lifelong healthy active living. Student learning will include the application of movement principles to refine skills, participation in a variety of activities that enhance personal competence, fitness, and health, examination of issues related to healthy sexuality, healthy eating, substance use and abuse, and the use of informed decision-making, conflict resolution and social skills in making personal choices.

Prerequisite: None

Healthy Active Living Education, Grade 11, Open (PPL 30)

This course focuses on the development of a healthy lifestyle and participation in a variety of enjoyable physical activities that have the potential to engage students' interest throughout their lives. Students will be encouraged to develop personal competence in a variety of movement skills, and will be given opportunities to practice goal-setting, decision-making, coping, social and interpersonal skills. Students will also study the components of healthy relationships, reproductive health, mental health and personal safety.

Prerequisite: None

Health for Life, Grade 11, Open (PPZ 30)

This course helps students develop a personalized approach to healthy living. Students will examine the factors that affect their own health and the health of individuals as members of the community. They will learn about the components of the vitality approach to healthy living – an initiative that promotes healthy eating, an active lifestyle and a positive self-image. Throughout this course, students will develop

the skills necessary to take charge of and improve their own health, as well as to encourage others to lead healthy lives.

Prerequisite: None

Healthy Active Living, Grade 12, Open (PPL 40)

This course focuses on the development of a personalized approach to healthy active living through participation in a variety of sports and recreational activities that have the potential to engage students' interest throughout their lives. Students will develop and implement personal physical fitness plans. In addition, they will be given opportunities to refine their decision-making, conflict resolution and interpersonal skills, with a view to enhance their mental health and their relationships with others.

Prerequisite: None

Exercise Science, Grade 12, University Preparation (PSE 4U)

This course focuses on the study of human movement and of systems, factors and principles involved in human development. Students will learn about the effects of physical activity on health and performance, the evolution of physical activity and sports and the factors that influence an individual's participation in physical activity. The course prepares students for university programs in physical education, kinesiology, recreation and sports administration.

Prerequisite: Any Grade 11 University or University/College Preparation Course in Science or any Grade 11 or 12 Open Course in Health & Physical Education

Recreation and Fitness Leadership, Grade 12, College Preparation (PLF 4C)

This course focuses on the development of leadership and co-ordination skills related to recreational activities. Students will acquire the knowledge and skills required to plan, organize and implement recreational events. They will also learn how to promote the value of physical fitness, personal well-being and personal safety to others through mentoring. The course will prepare students for college programs in recreational, leisure and fitness leadership.

Prerequisite: Any Grade 11 or 12 Open Course in Health & Physical Education

Options for grades 9-12:

PAD	Outdoor Activities
PAF	Personal and Fitness Activities
PAI	Individual and Small Group Activities
PAL	Large Group Activities
PAQ	Aquatics
PAR	Rhythm and Movement

Interdisciplinary Studies

Interdisciplinary Studies, Grade 11, Open (IDC 30/IDP 30)

This course will help students combine the skills required for the knowledge of different subjects and disciplines to solve problems, make decisions, create personal meaning and present findings beyond the scope of a single subject or discipline. Through individual and collaborative inquiry and research, students will analyse the connections among diverse subjects and disciplines, develop information literacy skills in analysing, selecting, evaluating and communicating information and become aware of a variety of resources and viewpoints on contemporary issues. They will also examine their own learning styles, relate their inquiries and research to real-life situations and investigate career opportunities in new disciplines.

Prerequisite: For IDC 30 – none; For IDP 30 – the prerequisite for each of the courses in the package

Interdisciplinary Studies, Grade 12, University Preparation (IDC 4U/IDP 4U)

This course will help students develop and consolidate the skills required for and knowledge of different subjects and disciplines to solve problems, make decisions, create personal meaning and present findings beyond the scope of a single subject or discipline. Students will apply the principles and processes of inquiry and research to effectively use a range of print, electronic and mass media resources, to analyse historical innovations and exemplary research, and to investigate real-life situations and career opportunities in interdisciplinary endeavours. They will also assess their own cognitive and affective strategies, apply general skills in both familiar and new contexts, create innovative products and communicate new knowledge.

Prerequisite: For IDC 4U, any University or University/College Preparation Course; For IDP 4U, the prerequisite for each of the courses in the package

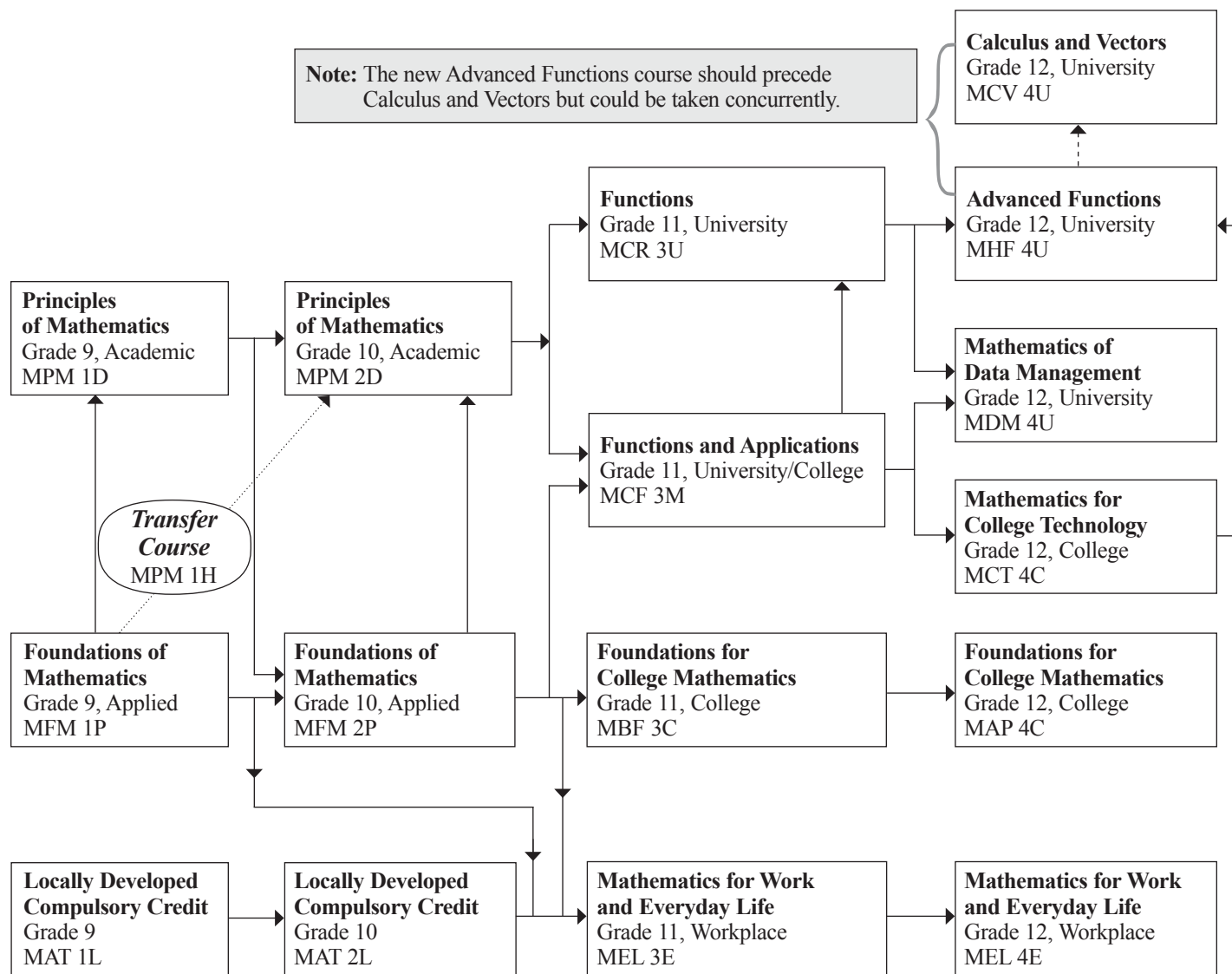
Interdisciplinary Studies, Grade 12, Open (IDC 4O/IDP 4O)

This course emphasizes the development of practical skills and knowledge to solve problems, make decisions, create personal meaning and present findings beyond the scope of a single subject or discipline. Through individual and collaborative inquiry and research into contemporary issues, real-life situations and careers, students will apply the principles and skills derived from the complementary subjects and disciplines studied, evaluate the reliability of information, and examine how information technology can be used safely, effectively and legally. They will also learn how to select strategies to define problems, research alternative solutions, assess their thinking in reaching decisions and adapt to change as they acquire new knowledge.

Prerequisite: For IDC 4O – none; For IDP 4O – the prerequisite for each of the courses in the package

Prerequisite Chart for Mathematics

This chart maps out all the courses in the discipline and shows the link between courses and the possible prerequisites for them. It does not attempt to depict all possible movements from course to course.



Mathematics

Principles of Mathematics, Grade 9, Academic (MPM 1D)

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.

Successful completion of this course prepares students for Principles of Mathematics, Grade 10, Academic (MPM 2D) or Foundations of Mathematics, Grade 10, Applied (MFM 2P).

Learning through abstract reasoning is an important aspect of this course.

Prerequisite: None

Foundations of Mathematics, Grade 9, Applied (MFM 1P)

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 objects and two-dimensional shapes. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Successful completion of this course prepares students for Foundations of Mathematics, Grade 10, Applied (MFM 2P). (Note: Students who wish to take Principles of Mathematics, Grade 10, Academic (MPM 2D) after completing this course will need to take a transfer course.)

Learning through hands-on activities and the use of concrete examples is an important aspect of this course.

Prerequisite: None

Mathematics Transfer Course, Grade 9, Applied to Academic (MPM 1H)

This transfer course will provide students who have successfully completed Foundations of Mathematics, Grade 9, Applied with an opportunity to achieve the expectations not covered in that course but included in Principles of Mathematics, Grade 9, Academic. On successful completion of this transfer course, students may proceed to Principles of Mathematics, Grade 10, Academic (MPM 2D).

This transfer course focuses on developing number sense and algebra, linear relations, analytic geometry, and measurement and geometry through investigation, the effective use of technology, and abstract reasoning. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Prerequisite: Foundations of Mathematics, Grade 9, Applied (MFM 1P). Credit value: 0.5

Locally Developed Compulsory Credit Grade 9 (MAT 1L)

This course emphasizes further development of mathematical knowledge and skills to prepare students for success in their everyday lives, in the workplace, and in the Grade 10 LDCC course.

The course is organized in three strands related to money sense, measurement, and proportional reasoning. In all strands, the focus is on developing and consolidating key foundational mathematical concepts and skills by solving authentic, everyday problems.

Students have opportunities to further develop their mathematical literacy and problem-solving skills and to continue developing their skills in reading, writing, and oral language through relevant and practical math activities.

Prerequisite: None

Principles of Mathematics, Grade 10, Academic (MPM 2D)

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: Mathematics, Grade 9, Academic or Applied + Transfer

Foundations of Mathematics, Grade 10, Applied (MFM 2P)

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: Mathematics, Grade 9, Academic or Applied

Locally Developed Compulsory Credit Grade 10 (MAT 2L)

This course emphasizes the extension of mathematical knowledge and skills to prepare students for success in their everyday lives, in the workplace, and in the Grade 11 Mathematics Workplace Preparation course.

The course is organized in three strands related to money sense, measurement, and proportional reasoning. In all strands, the focus is on strengthening and extending key foundational mathematical concepts and skills by solving authentic, everyday problems.

Students have opportunities to extend their mathematical literacy and problem-solving skills and to continue developing their skills in reading, writing and oral language through relevant and practical math activities.

Prerequisite: A Grade 9 Mathematics credit

Functions, Grade 11, University Preparation (MCR 3U)

This 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; and develop facility in simplifying polynomial and rational expressions. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Prerequisite: Principles of Mathematics, Grade 10, Academic

Functions and Applications, Grade 11, University/College Preparation (MCF 3M)

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 financial and trigonometric applications. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Prerequisite: Principles of Mathematics, Grade 10, Academic, or Foundations of Mathematics, Grade 10, Applied

Foundations for College Mathematics, Grade 11, College Preparation (MBF 3C)

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; as well as of measurement and geometry; investigate situations involving exponential growth; solve problems involving compound interest; solve financial problems connected with vehicle ownership; and develop their ability to reason by collecting, analysing, and evaluating data involving one and two variables. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Prerequisite: Foundations of Mathematics, Grade 10, Applied

Mathematics for Work and Everyday Life, Grade 11, Workplace Preparation (MEL 3E)

This course enables students to broaden their understanding of mathematics as it is applied in the workplace and daily life. 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. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Prerequisite: Principles of Mathematics, Grade 9, Academic, or Foundations of Mathematics, Grade 9, Applied, or a ministry-approved locally developed Grade 10 mathematics course

Calculus and Vectors Grade 12, University Preparation (MCV 4U)

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, rational, exponential, and sinusoidal 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 plan to study mathematics in university and who may choose to pursue careers in fields such as physics and engineering.

Note: The new Advanced Functions course should precede Calculus and Vectors but could be taken concurrently.

Prerequisite: Functions, Grade 11, University Preparation

Advanced Functions, Grade 12, University Preparation (MHF 4U)

This course extends students' experience with functions. Students will investigate the properties of polynomial, rational, logarithmic, and trigonometric 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 who plan to study mathematics in university and for those wishing to consolidate their understanding of mathematics before proceeding to any one of a variety of university programs.

Prerequisite: Functions, Grade 11, University Preparation, or Mathematics for College Technology, Grade 12, College Preparation

Mathematics of Data Management, Grade 12, University Preparation (MDM 4U)

This course broadens students' understanding of mathematics as it relates to managing data. Students will apply methods for organizing large amounts of information; solve problems involving probability and statistics; and carry out a culminating project 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 & humanities will find this course of particular interest.

Prerequisite: Functions and Applications, Grade 11, University/College Preparation, or Functions, Grade 11, University Preparation

Mathematics for College Technology, Grade 12, College Preparation (MCT 4C)

This course enables students to extend their knowledge of functions. Students will investigate and apply properties of polynomial, exponential, and trigonometric functions; continue to represent functions numerically, graphically, and algebraically; develop facility in simplifying expressions and solving equations; and solve problems that address applications of algebra, trigonometry, vectors, and geometry. Students will reason mathematically and communicate their thinking as they solve multi-step problems. This course prepares students for a variety of college technology programs.

Prerequisite: Functions and Applications, Grade 11, University/College Preparation

Foundations for College Mathematics, Grade 12, College Preparation (MAP 4C)

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; 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 Preparation

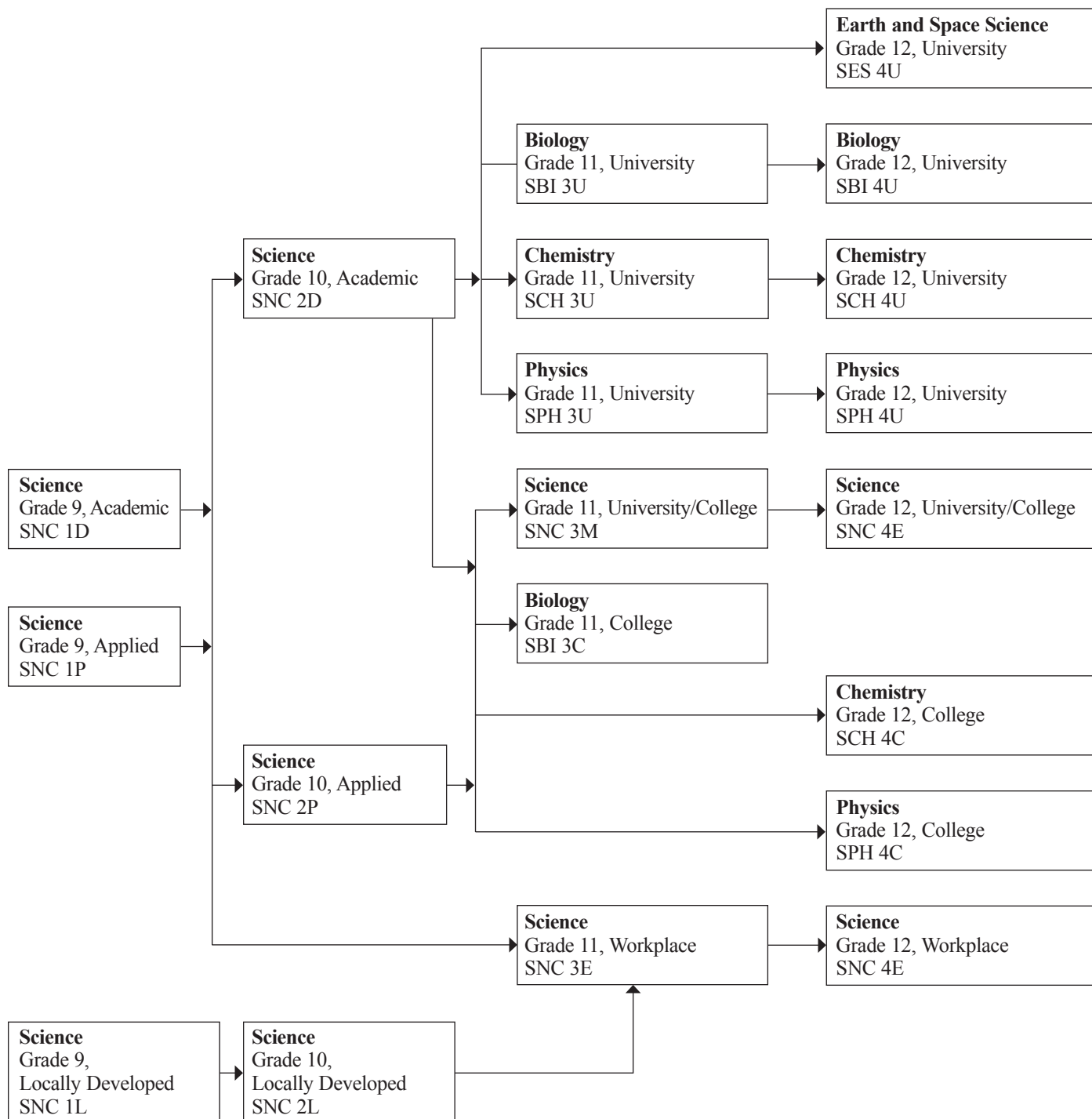
Mathematics for Work and Everyday Life, Grade 12, Workplace Preparation (MEL 4E)

This course enables students to broaden their understanding of mathematics as it is applied in the workplace and daily life. Students will investigate questions involving the use of statistics; apply the concept of probability to solve problems involving familiar situations; investigate accommodation costs and create household budgets; use proportional reasoning; estimate and measure; and apply geometric concepts to create designs. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Prerequisite: Mathematics for Work and Everyday Life, Grade 11, Workplace Preparation

Prerequisite Chart for Science

This chart maps out all the courses in the discipline and shows the link between courses and the possible prerequisites for them. It does not attempt to depict all possible movements from course to course.



Science

Courses for Grades 9 and 10

Science, Grade 9, Academic (SNC 1D)

This course enables students to understand basic concepts in biology, chemistry, earth and space science and physics, to develop skills in the processes of scientific inquiry, and to relate science to technology, society and the environment. Students will learn scientific theories and conduct investigations related to cell division and reproduction, atomic and molecular structures and the properties of elements and compounds, the universe and space exploration and the principles of electricity.

Prerequisite: None

Science, Grade 9, Applied (SNC 1P)

This course enables students to understand basic concepts in biology, chemistry, earth and space science and physics, to develop practical skills in scientific investigation and to apply their knowledge of science to everyday situations. Students will design and conduct investigations into practical problems and issues related to cell division and reproduction, the structure and properties of elements and compounds, astronomy and space exploration, and static and current electricity.

Prerequisite: None

Science, Grade 9, Locally Developed Compulsory (SNC 1L)

This course emphasizes reinforcing and strengthening science-related knowledge and skills, including scientific inquiry, critical thinking, and the relationship between science, society, and the environment, to prepare students for success in everyday life, in the workplace, and in the Grade 10 LDCC course.

Students explore a range of topics, including science in daily life, properties of common materials, life-sustaining processes in simple and complex organisms, and electrical circuits.

Students have the opportunity to extend mathematical and scientific process skills and to continue developing their skills in reading, writing, and oral language through relevant and practical science activities.

Prerequisite: None

Science, Grade 10, Academic (SNC 2D)

This course enables students to develop a deeper understanding of concepts in biology, chemistry, earth and space science and physics, to develop further their skills in scientific inquiry, and to understand the interrelationships among science, technology, and the environment. Students will conduct investigations and understand scientific theories related to ecology and the maintenance of ecosystems, chemical reactions, with particular attention to acid-base reactions, factors that influence weather systems and motion.

Prerequisite: Science, Grade 9, Academic or Applied

Science, Grade 10, Applied (SNC 2P)

This course enables students to develop a deeper understanding of concepts in biology, chemistry, earth and space science and physics, to develop further their practical skills in scientific investigation, and to apply their knowledge of science to real-world situations. Students will design and conduct investigations into everyday problems and issues related to ecological sustainability, chemical reactions, weather systems and motion.

Prerequisite: Science, Grade 9, Academic or Applied

Science, Grade 10, Locally Developed Compulsory (SNC 2L)

This course emphasizes reinforcing and strengthening science-related knowledge and skills, including scientific inquiry, critical thinking, and the environmental impact of science and technology, to prepare students for success in everyday life, in the workplace, and in the Science Grade 11 Workplace Preparation course.

Students explore a range of topics, including science in the media, interactions of common materials, interdependence of organisms in communities, and using electrical energy.

Students have the opportunity to extend mathematical and scientific process skills and to continue developing their skills in reading, writing, and oral language through relevant and practical science activities.

Prerequisite: None

Biology

Courses for Grades 11 and 12

**Biology,
Grade 11, University Preparation (SBI 3U)**

This course furthers students' understanding of the processes involved in biological systems. Students will study cellular functions, genetic continuity, internal systems and regulation, the diversity of living things, and the anatomy, growth and functions 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

**Biology,
Grade 11, College Preparation (SBI 3C)**

This course focuses on the processes involved in biological systems. Students will learn concepts and theories as they conduct investigations in the areas of cellular biology, microbiology, animal anatomy and physiology, plant structure and physiology, and environmental science. Emphasis will be placed on the practical application of concepts and skills needed for further study in the various branches of life sciences and related fields.

Prerequisite: Science, Grade 10, Academic or Applied

**Biology,
Grade 12, University Preparation (SBI 4U)**

This course provides students with the opportunity for in-depth study of the concepts and processes associated with biological systems. Students will study theory and conduct investigations in the areas of metabolic processes, molecular genetics, homeostasis, evolution and population dynamics. Emphasis will be placed on achievement of the detailed knowledge and refined skills needed for further study in various branches of the life sciences and related fields.

Prerequisite: Biology, Grade 11, University Preparation

Chemistry

**Chemistry,
Grade 11, University Preparation (SCH 3U)**

This course focuses on the concepts and theories that form the basis of modern chemistry. Students will study the behaviours of solids, liquids, gases and solutions, investigate changes and relationships in chemical systems, and explore how chemistry is used in developing new products and

processes that affect our lives and our environment. Emphasis will also be placed on the importance of chemistry in other branches of science.

Prerequisite: Science, Grade 10, Academic

**Chemistry,
Grade 12, University Preparation (SCH 4U)**

This course enables students to deepen their understanding of chemistry through the study of organic chemistry, energy changes and rates of reaction, chemical systems and equilibrium, electrochemistry, and atomic and molecular structure. Students will further develop problem-solving and laboratory skills as they investigate chemical processes, at the same time refining their ability to communicate scientific information. Emphasis will be placed on the importance of chemistry in daily life, and on evaluating the impact of chemical technology on the environment.

Prerequisite: Chemistry, Grade 11, University preparation

**Chemistry,
Grade 12, College Preparation (SCH 4C)**

This course introduces students to the concepts that form the basis of modern chemistry. Students will study qualitative analysis, quantitative relationship in chemical reactions, organic chemistry and electrochemistry, and chemistry as it relates to the quality of the environment. Students will employ 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 the chemistry in daily life and in the development of new technologies and products.

Prerequisite: Science, Grade 10, Academic or Applied

Earth and Space Science

**Earth and Space Science,
Grade 12, University Preparation (SES 4U)**

This course focuses on the Earth as a planet, and on the basic concept and theories of earth science and their relevance to everyday life. Students will examine the earth's place in the solar system and, after a general introduction to Earth science, will explore in more detail the materials of the Earth, its internal and surficial processes and its history. The course draws on astronomy, biology, chemistry, mathematics and physics in its consideration of geological processes that can be observed directly or inferred from other evidence.

Prerequisite: Science, Grade 10, Academic

Physics

Physics, Grade 11, University Preparation (SPH 3U)

This course develops students' understanding of the basic concepts of physics. Students will study the laws of dynamics and explore different kinds of forces, the quantification and forms of energy (mechanical, sound, light, thermal and electrical), and the way energy is transformed and transmitted. They will develop scientific-inquiry skills as they verify accepted laws and solve both assigned problems and those emerging from their investigations. Students will also 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

Physics, Grade 12, University Preparation (SPH 4U)

This course enables students to deepen their understanding of the concepts and theories of physics. Students will explore further the laws of dynamics and energy transformations, and will investigate electrical, gravitational and magnetic fields, electromagnetic radiation and the interface between energy and matter. They will further develop inquiry skills, learning, for example, how the interpretation of experimental data can provide indirect evidence to support the development of a scientific model. Students will also consider the impact on society and the environment of technological applications of physics.

Prerequisite: Physics, Grade 11, University Preparation

Physics, Grade 12, College Preparation (SPH 4C)

This course develops students' understanding of the basic concepts of physics. Students will explore these concepts as they relate to mechanical, electrical, fluid (hydraulic and pneumatic), and communications systems, as well as to the operation of commonly used tools and equipment. They will develop scientific-inquiry skills as they verify accepted laws of physics and solve both assigned problems and those emerging from their investigations. Students will also consider the impact of technological applications of physics on society and the environment.

Prerequisite: Science, Grade 10, Academic or Applied

Science

Science, Grade 11, University/College Preparation (SNC 3M)

This course enables students, including those who do not intend to pursue science-related programs at the post-

secondary level, to increase their understanding of science and its technological applications. Students will explore a range of topics, including the safe use of everyday chemicals, the science of nutrition and body function, waste management, the application of scientific principles in space and technologies in everyday life. Emphasis will be placed on the role of science and technology in daily life and in relation to social and environmental issues.

Prerequisite: Science, Grade 10, Academic or Applied

Science, Grade 11, Workplace Preparation (SNC 3E)

This course provides students with the science-related knowledge and skills they need to help them make informed decisions in the workplace and in their personal lives. Students will explore a range of topics, including materials and safety, electrical circuits, micro-organisms, the human immune system and defences against disease, and the impact of technology on the environment. Emphasis is placed on relating these topics directly to students' experiences both in the world of work and in daily life.

Prerequisite: Science, Grade 9, Academic or Applied

Science, Grade 12, University/College Preparation (SNC 4M)

This course enables students, including those who do not intend to pursue science-related programs at the post-secondary level, to further develop their understanding of science and its technological applications. Students will explore a range of topics, including organic products in everyday life, pathogens and disease, energy alternatives and their impact globally, communications systems, and science and contemporary societal issues. Emphasis will be placed on relating these topics to global issues as well as to daily life, and on developing skills in the areas of experimentation, research, critical thinking and analysis.

Prerequisite: Science, Grade 11, University/College Preparation

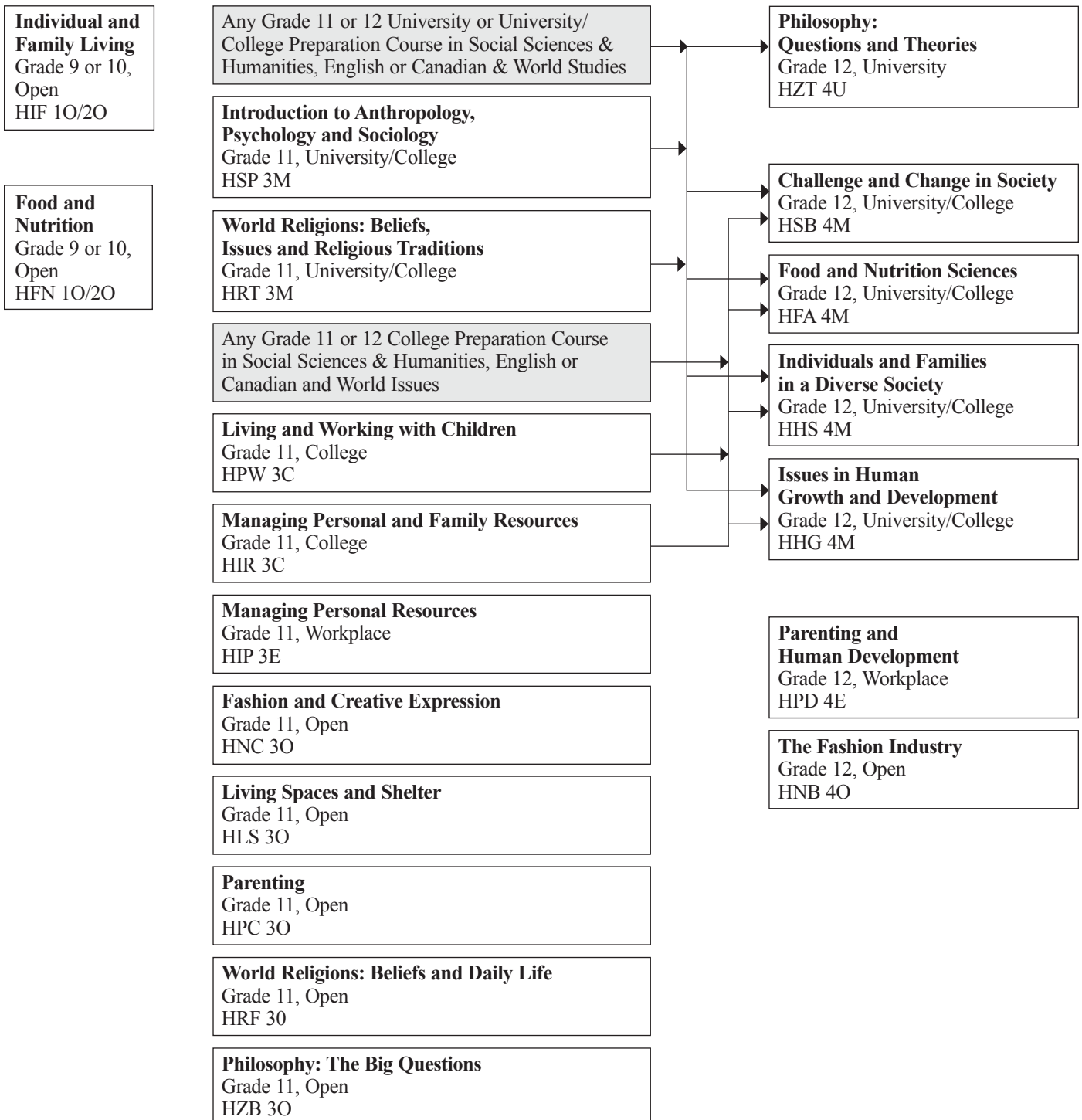
Science, Grade 12, Workplace Preparation (SNC 4E)

This course provides students with the science-related knowledge and skills they need to help them make informed decisions in the workplace and in their personal lives. Students will explore a range of topics, including chemistry at home and at work, communications technology, medical technology/gardening, horticulture, landscaping, and forestry, and alternative life-sustaining environments. Emphasis is placed on relating these topics directly to students' experiences both in the world of work and in daily life.

Prerequisite: Science, Grade 11, Workplace Preparation

Prerequisite Chart for Social Sciences & Humanities

This chart maps out all the courses in the discipline and shows the link between courses and the possible prerequisites for them. It does not attempt to depict all possible movements from course to course.



Family Studies

Food and Nutrition, Grade 9 or 10, Open (HFN 10/HFN 20)

This course explores the factors that affect attitudes and decisions about food, examines current issues of body image and food marketing and is grounded in the scientific study of nutrition. Students will learn how to make informed food choices, how to prepare foods and will investigate our Canadian food heritage and food industries, as well as global food issues. The course also introduces students to research skills related to food and nutrition.

Prerequisite: None

Individual and Family Living, Grade 9 or 10, Open (HIF 10/HIF 20)

This course explores the challenges faced by all people: how to meet basic needs, how to relate to others, how to manage resources and how to become responsible members of society. Students will acquire knowledge and skills that are needed to make the transition to adulthood. Teachers will instruct students in developing interpersonal, decision-making and practical skills related to daily life. Students will explore the functioning of families and the diversities found among families and within society.

Prerequisite: None

Living and Working with Children, Grade 11, College Preparation (HPW 3C)

This course focuses on the well-being of children in families and community settings. Students will study child behaviour and child development in the context of relationships with parents and others in the community, and will learn through research and by observing and interacting with children. This course prepares students for further study of children, familiarizes them with occupational opportunities related to working with children and introduces them to skills used in researching and investigating children's behaviour in response to others.

Prerequisite: None

Managing Personal and Family Resources, Grade 11, College Preparation (HIR 3C)

This course explores how to use human, material and community resources effectively, and how to make informed choices with respect to clothing purchases, finance, food and nutrition, housing and transportation. Students will learn about the dynamics of human interaction, how to make responsible choices in their transition to post-secondary education and careers, and strategies to enable them to manage time, talent and money effectively. This course also introduces students to skills used in researching and investigating resource management.

Prerequisite: None

Managing Personal Resources, Grade 11, Workplace Preparation (HIP 3E)

This course prepares students for living independently and working successfully with others. Students will learn to manage their personal resources (including talent, money and time), to develop interpersonal skills and to understand economic influences on workplace issues, in order to make wise and responsible personal and occupational choices. The course emphasizes the achievement of expectations through practical experiences and introduces students to skills used in researching and investigating resource management.

Prerequisite: None

Fashion and Creative Expression, Grade 11, Open (HNC 3O)

This course explores what clothing communicates about the wearer and how it becomes a creative and entrepreneurial outlet through the design and production process. Students will learn, through practical experiences, about the nature of fashion design, the characteristics of fibres and fabrics, the construction, production, and marketing of clothing, and how to plan for a wardrobe that is appropriate for an individual's appearance, activities, employment and lifestyle. Students will develop research skills as they explore the evolution of fashion and its relationship to society, culture and individual psychology.

Prerequisite: None

Social Sciences & Humanities

Living Spaces and Shelter, Grade 11, Open (HLS 30)

This course analyses how different types of living spaces and forms of shelter meet people's physical, social, emotional and cultural needs and reflect society's values, established patterns of living, and economic and technological developments. Students will learn how to make practical decisions about where to live and how to create functional and pleasing environments, and will explore occupational opportunities related to housing and design. They will also learn skills used in researching and investigating living accommodations and housing.

Prerequisite: None

Parenting, Grade 11, Open (HPC 30)

This course focuses on the skills and knowledge needed to promote the positive and healthy nurturing of children, with particular emphasis on the critical importance of the early years to human development. Students will learn how to meet the developmental needs of young children, communicate and discipline effectively, and guide early behaviour. They will have practical experiences with infants, toddlers and preschoolers, and will learn skills in researching and investigating questions relating to parenting.

Prerequisite: None

Food and Nutrition Sciences, Grade 12, University/College Preparation (HFA 4M)

This course examines various nutritional, psychological, social, cultural and global factors that influence people's food choices and customs. Students will learn about current Canadian and worldwide issues related to food, frameworks for making appropriate dietary choices and food preparation techniques. This course also refines students' skills used in researching and investigating issues related to food and nutrition.

Prerequisite: Any University, University/College or College Preparation Course in Social Sciences & Humanities, English or Canadian & World Studies

Individuals and Families in a Diverse Society, Grade 12, University/College Preparation (HHS 4M)

This course applies current theories and research from the disciplines of anthropology, psychology and sociology to the study of individual development, family behaviour, intimate and parent-child relationships, and the ways in which families interact within the diverse Canadian society. Students will learn the interpersonal skills required to

contribute to the well-being of families, and the investigative skills required to conduct and evaluate research about individuals and families.

Prerequisite: Any University, University/College or College Preparation Course in Social Sciences & Humanities, English or Canadian & World Studies

Issues in Human Growth and Development, Grade 12, University/College Preparation (HHG 4M)

This course offers a multidisciplinary approach to the study of human development throughout the life cycle, with particular emphasis on enhancing growth and development. Students will examine how early brain and child development are linked to lifelong learning, health, and well-being, and will develop child-care and human-relationship skills through practical experience in a community setting. This course also refines students' skills used in researching and investigating issues related to human growth and development.

Prerequisite: Any University, University/College or College Preparation Course in Social Sciences & Humanities, English or Canadian & World Studies

Parenting and Human Development, Grade 12, Workplace Preparation (HPD 4E)

This course prepares students for occupations involving older children, and for the responsibility of parenting, with emphasis on school-age and adolescent children. Students will learn, through practical experience in the community, how early child development affects later development, success in school, and personal and social well-being throughout life, and how children and parents change over time. This course also develops students' skills in researching and investigating various aspects of parenting and human development.

Prerequisite: None

The Fashion Industry, Grade 12, Open (HNB 4O)

This course provides a historical perspective on fashion and design, exploring the origins, influence, and importance of fashion as an expression of national, cultural, religious and personal identity. Students will learn about the many facets of the Canadian fashion industry, including both large-scale and small entrepreneurial enterprises, and its worldwide links, as well as gaining practical experience in garment design, production and care. This course also refines students' skills used in researching and investigating various aspects of the fashion industry.

Prerequisite: None

General Social Science

Introduction to Anthropology, Psychology, and Sociology, Grade 11, University/College Preparation (HSP 3M)

This course introduces the theories, questions, and issues that are the major concerns of anthropology, psychology and sociology. Students will develop an understanding of the way social scientists approach the topics they study and the research methods they employ. Students will be given opportunities to explore theories from a variety of perspectives and to become familiar with current thinking on a range of issues that have captured the interest of classical and contemporary social scientists in the three disciplines.

Prerequisite: None

Challenge and Change in Society, Grade 12, University/College Preparation (HSB 4M)

This course examines the theories and methodologies used in anthropology, psychology and sociology to investigate and explain shifts in knowledge, attitudes, beliefs, and behaviour and their impact on society. Students will analyse cultural, social and biological patterns in human societies, looking at ways in which those patterns change over time. Students will also explore the ideas of classical and contemporary social theorists, and will apply those ideas to the analysis of contemporary trends.

Prerequisite: Any University, University/College or College Preparation Course in Social Sciences & Humanities, English or Canadian & World Studies

Philosophy

Philosophy: The Big Questions, Grade 11, Open (HZB 3O)

This course addresses three (or more) of the following questions: What is a person? What is a meaningful life? What are good and evil? What is a just society? What is human knowledge? How do we know what is beautiful in art, music and literature? Students will learn critical thinking skills in evaluating philosophical arguments related to these questions, as well as skills used in researching and investigating various topics in philosophy.

Prerequisite: None

Philosophy: Questions and Theories, Grade 12, University Preparation (HZT 4U)

This course addresses three (or more) of the main areas of philosophy: metaphysics, logic, epistemology, ethics, social and political philosophy, and aesthetics. Students will learn critical thinking skills, the main ideas expressed by philosophers from a variety of the world's traditions, how to develop and explain their own philosophical ideas, and how to apply those ideas to contemporary social issues and personal experiences. The course will also help students refine skills used in researching and investigating topics in philosophy.

Prerequisite: Any University or University/College Preparation Course in Social Sciences & Humanities, English or Canadian & World Studies

World Religions

World Religions: Beliefs, Issues and Religious Traditions, Grade 11, University/College Preparation (HRT 3M)

This course enables students to discover what others believe and how they live, and to appreciate their own unique heritage. Students will learn about the teachings and traditions of a variety of religions, the connections between religion and the development of civilizations, the place and function of religion in human experience and the influence of a broad range of religions on contemporary society. This course also introduces students to skills used in researching and investigating world religions.

Prerequisite: None

World Religions: Beliefs and Daily Life, Grade 11, Open (HRF 3O)

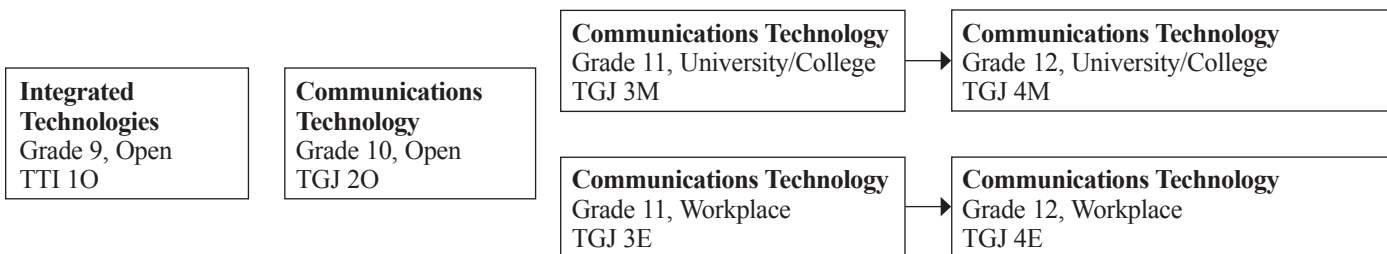
This course introduces students to the range and diversity of world religions and examines how systems of belief affect individual lives and social relationships. Students will learn about a variety of religious beliefs, teachings, traditions and practices. The course also helps students to develop skills used in researching and investigating topics related to world religions.

Prerequisite: None

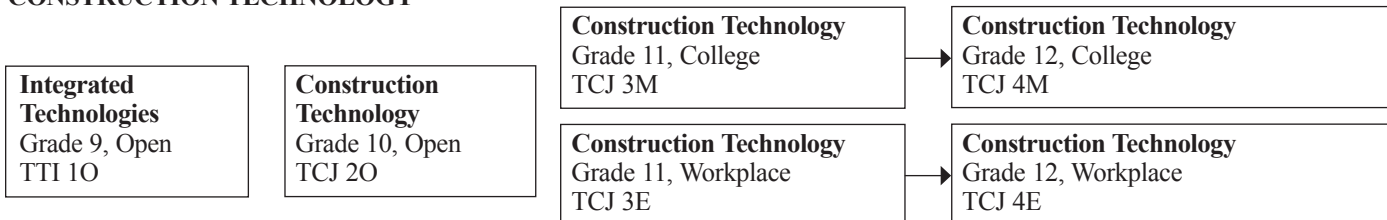
Prerequisite Charts for Technological Education, Part A: Broad-based Technology

These charts map out all the courses in the discipline and show the link between courses and the possible prerequisites for them. They do not attempt to depict all possible movements from course to course.

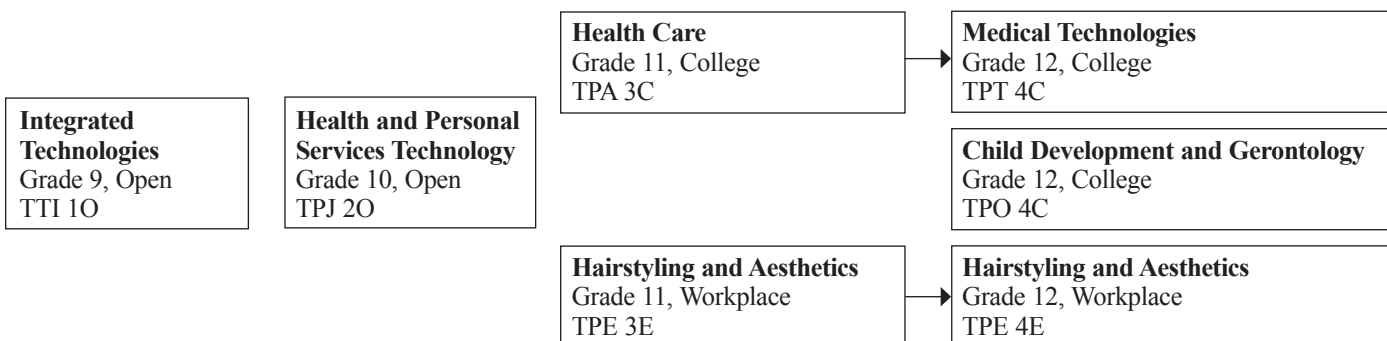
COMMUNICATIONS TECHNOLOGY



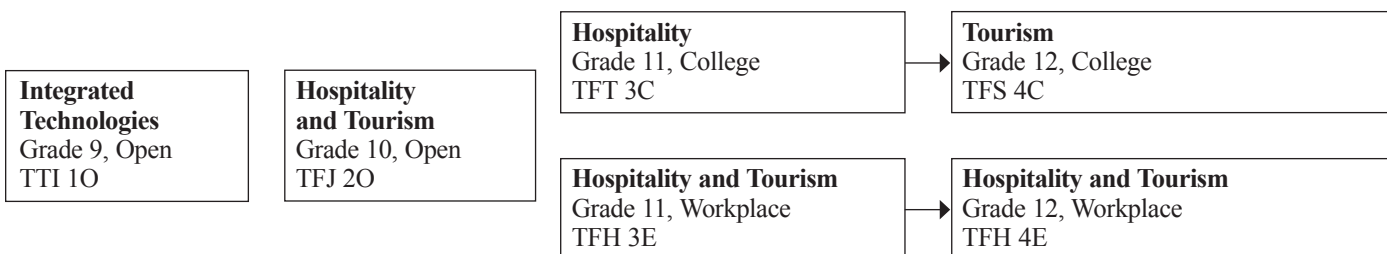
CONSTRUCTION TECHNOLOGY



HEALTH AND PERSONAL SERVICES



HOSPITALITY AND TOURISM



Prerequisite Charts for Technological Education, Part A: Broad-based Technology (cont.)

MANUFACTURING TECHNOLOGY

Integrated Technologies
Grade 9, Open
TTI 10

Manufacturing Technology
Grade 10, Open
TMJ 20

Manufacturing Engineering Technology
Grade 11, College
TMJ 3C

Manufacturing Engineering Technology
Grade 12, College
TMJ 4C

Manufacturing Technology
Grade 11, Workplace
TMJ 3E

Manufacturing Technology
Grade 12, Workplace
TMJ 4E

TECHNOLOGICAL DESIGN

Integrated Technologies
Grade 9, Open
TTI 10

Technological Design
Grade 10, Open
TDJ 20

Technological Design
Grade 11, University/College
TDJ 3M

Technological Design
Grade 12, University/College
TDJ 4M

Technological Design
Grade 11, Workplace
TDJ 3E

Technological Design
Grade 12, Workplace
TDJ 4E

TRANSPORTATION TECHNOLOGY

Integrated Technologies
Grade 9, Open
TTI 10

Transportation Technology
Grade 10, Open
TTJ 20

Transportation Technology
Grade 11, College
TTJ 3C

Transportation Technology
Grade 12, College
TTJ 4C

Transportation Technology
Grade 11, Workplace
TTJ 3E

Transportation Technology
Grade 12, Workplace
TTJ 4E

Prerequisite Charts for Technological Education, Part B: Computer Studies

These charts map out all the courses in the discipline and show the link between courses and the possible prerequisites for them. They do not attempt to depict all possible movements from course to course.

COMPUTER AND INFORMATION SCIENCE

Integrated Technologies
Grade 9, Open
TTI 10

Computer and Information Science
Grade 10, Open
TIK 20

Computer and Information Science
Grade 11, University/College
ICS 3M

Computer and Information Science
Grade 12, University/College
ICS 4M

COMPUTER ENGINEERING

Integrated Technologies
Grade 9, Open
TTI 10

Computer Engineering
Grade 10, Open
TEE 20

Computer Engineering
Grade 11, University/College
ICE 3M

Computer Engineering
Grade 12, University/College
ICE 4M

Computer Engineering
Grade 11, Workplace
ICE 3E

Computer Engineering
Grade 12, Workplace
ICE 4E

Technological Education

Integrated Technologies, Grade 9, Open (TTI 10)

This course enables students to understand the technological and computer concepts they will need in order to design, develop, and build usable products or to deliver services, as well as to pursue further technological studies. Students will use the technological design process and a variety of tools and software to solve problems, complete projects and strengthen their communication skills.

Prerequisite: None

Part A: Broad-based Technology

Communications Technology

Communications Technology, Grade 10, Open (TGJ 20)

This course requires students to complete a range of communications technology projects. These may include creating printed stationery, short videos, computer-generated animations and graphical information displays. Students will learn to transfer information using electronic, live and graphic communications methods. The knowledge and skills they will develop will provide a basis for careers in areas such as publishing, advertising, print production, animation, photography and journalism.

Prerequisite: None

Communications Technology, Grade 11, University/College Preparation (TGJ 3M)

This course examines communications systems and design and production processes in the areas of electronic, live and graphic communications. Students will develop knowledge and skills relating to the assembly, maintenance and repair of the basic and more complex components of a range of communications systems. Students will also study industry standards and regulations and health and safety issues, and will explore careers, the importance of lifelong learning and the impact of communications technology on society and the environment.

Prerequisite: None

Communications Technology, Grade 11, Workplace Preparation (TGJ 3E)

This course examines communications systems and design and production processes in the areas of electronic, live and graphic communications. Students will learn how basic communication systems function and will develop the knowledge and skills needed to assemble, repair, maintain and test various systems. Students will also study industry standards and regulations and health and safety issues, and will explore careers, the importance of lifelong learning and the impact of communications technology on society and the environment.

Prerequisite: None

Communications Technology, Grade 12, University/College Preparation (TGJ 4M)

This course examines communications systems and design and production processes in the areas of electronic, live, recorded and graphic communications. Students will create, manage, and distribute complex electronic, graphic, recorded or audio-visual projects independently and in project teams. Students will also study industry standards and regulations and health and safety issues, and will explore careers, the importance of lifelong learning and the impact of communications technology on society and the environment.

Prerequisite: Communications Technology, Grade 11, University/College Preparation

Communications Technology, Grade 12, Workplace Preparation (TGJ 4E)

This course examines the key elements in the areas of electronic, live recorded or graphic communications systems. Students will develop safe workplace habits and business management skills and use a variety of materials, tools, and equipment to assemble, maintain, operate and repair communications systems. They will also research the entry requirements for training programs available upon graduation, such as apprenticeships and will develop employability and technical skills required for entry into the workplace.

Prerequisite: Communications Technology, Grade 11, Workplace Preparation

Construction Technology

Construction Technology, Grade 10, Open (TCJ 2O)

This course requires students to design, build, and evaluate projects using design instruments and machine and hand tools. Students will solve technological problems through a variety of media, identify and describe building materials and other resources needed to construct, maintain and service buildings, identify support systems and components, apply safety rules related to materials, processes, and equipment, identify common architectural styles and identify careers related to construction technology.

Prerequisite: None

Construction Technology, Grade 11, College Preparation (TCJ 3C)

This course focuses on residential, commercial, industrial and/or recreational construction. Students will learn about the tools, materials, equipment and methods used in the light construction industry, structural analysis and design, presentation and working drawings and mechanical systems. They will also estimate materials and labour costs, and study industry standards and building codes, health and safety issues, energy conservation, careers and the impact of construction technology on society and the environment.

Prerequisite: None

Construction Technology, Grade 11, Workplace Preparation (TCJ 3E)

This course focuses on residential, commercial, industrial and/or recreational construction, emphasizing practical workplace applications, the development of generic employment skills and preparation for apprenticeship and training programs. Students will learn about and gain practical experience with various types of materials, processes, labour, tools and equipment used in the construction industry, technical drawings and mechanical systems. They will also study industry standards and building codes, consider health and safety issues, and explore careers, the importance of lifelong learning and the impact of construction technology on society and the environment.

Prerequisite: None

Construction Technology, Grade 12, College Preparation (TCJ 4C)

This course focuses on advanced residential construction, more complex construction systems, and the introduction of heavy construction related to commercial, industrial and/or recreational construction. Students will learn about the tools, materials, equipment and methods used in the light construction industry, structural analysis and design, presentation and working drawings, and auxiliary systems. They will also estimate materials and labour costs, and study industry standards and building code, consider health and safety issues, explore energy conservation, careers and the impact of construction technology on society and the environment.

Prerequisite: Construction Technology, Grade 11, College Preparation

Construction Technology, Grade 12, Workplace Preparation (TCJ 4E)

This course focuses on advanced residential, and more complex construction systems, as well as the introduction of heavy construction, related to commercial, industrial and/or recreational construction, advanced practical workplace applications and the development of generic employment skills and independent learning skills. Students will examine the materials, processes, labour, tools and equipment used in the construction industry, technical drawings, auxiliary systems and landscaping. They will also study industry standards and building codes, consider health and safety issues, and explore careers, the importance of lifelong learning and the impact of construction technology on society and the environment.

Prerequisite: Construction Technology, Grade 11, Workplace Preparation

Health and Personal Services

Health and Personal Services Technology, Grade 10, Open (TPJ 2O)

This course emphasizes technological applications in the areas of health care and personal services. Students will learn to describe and evaluate professional practices and principles, to select and use technical resources to solve problems and to use materials, tools and equipment safely. They will also acquire transferable skills for changing work environments, personal management skills, and knowledge of entry requirements for careers in this area.

Prerequisite: None

Technological Education

Health Care, Grade 11, College Preparation (TPA 3C)

This course focuses on human anatomy, body systems and basic medical terminology. Students will learn about the relationship between lifestyle and personal health, and traditional and alternative methods of disease prevention and treatment. They will also investigate health care procedures and equipment in nursing, medicine, and dentistry, examine health and safety issues in health care and the environmental and societal impacts of bio-technology, and explore various career opportunities in the health care field.

Prerequisite: None

Hairstyling and Aesthetics, Grade 11, Workplace Preparation (TPE 3E)

This course provides students with opportunities to learn techniques in hairstyling and aesthetics that meet industry standards, using appropriate materials and equipment. Students will identify trends in the hairstyling and aesthetics industry, describe scientific and physical processes used in beauty services, learn to respect environmental, health and safety laws, and explore career opportunities. The course may focus on either hairstyling or aesthetics, or may include a combination of both areas.

Prerequisite: None

Child Development and Gerontology, Grade 12, College Preparation (TPO 4O)

This course helps students understand the stages of development and needs of children and the elderly. Students will master the fundamental skills required to meet these needs, acquire an awareness of legislation governing the care of children and of elderly people who require support or supervision, evaluate society and recreational activities for children and the elderly and assess available facilities. Students will also examine career paths in child and geriatric care, the impact of technological developments on products and services and health and safety laws.

Prerequisite: None

Medical Technologies, Grade 12, College Preparation (TPT 4C)

This course focuses on human physiology, pathology and immunology. Students will learn about accepted medical care practices, current technological advances in health care and how to perform various procedures and use tools and equipment in the field of health care. Students will also design solutions to common medical and health care problems, investigate career opportunities and examine laws and safety standards in the health care industry and the impact of this industry on the environment.

Prerequisite: Health Care, Grade 11, College Preparation

Hairstyling and Aesthetics, Grade 12, Workplace Preparation (TPE 4E)

This course builds on the grade 11 course to provide a solid foundation for students wishing to pursue a career in cosmetology. Students will continue to develop practical skills and knowledge pertaining to the beauty industry. They will also gain an awareness of the entrepreneurial skills required to own and operate a salon. This course may focus on either hairstyling or aesthetics, or may include a combination of both areas.

Prerequisite: Hairstyling and Aesthetics, Grade 11, Workplace Preparation

Hospitality and Tourism

Hospitality and Tourism Technology, Grade 10, Open (TFJ 2O)

This course emphasizes the scope of the hospitality and tourism industry. Students will study food origins, food-handling techniques and food preparation, health and safety standards and the use of specialized tools and equipment. They will also investigate travel and tourism activities in Ontario, develop effective communication and management skills and identify career opportunities in the hospitality and tourism industry.

Prerequisite: None

Hospitality, Grade 11, College Preparation (TFT 3C)

This course helps students understand the features, trends and guidelines of the hospitality industry, as well as learn the basic requirements of serving customers. Students will acquire skills related to advanced methods of preparing and presenting food, evaluating facilities, controlling inventory and marketing special events. They will also learn about economic and environmental impacts, health and safety standards and career opportunities related to the hospitality industry.

Prerequisite: None

Hospitality and Tourism, Grade 11, Workplace Preparation (TFH 3E)

This course focuses on food preparation and management, and hospitality and tourism activities, equipment and facilities. Students will learn how to prepare, present, and serve food, plan, manage, and promote activities and use the necessary equipment. Throughout the course, they will learn the fundamentals of providing high-quality service and customer satisfaction. Students will also study the occupational health and safety standards and laws regulating the hospitality and tourism industry, explore the

Technological Education

industry's social and environmental impacts and identify possible career paths.

Prerequisite: None

Tourism, Grade 12, College Preparation (TFS 4C)

This course provides students with opportunities to analyse the characteristics and standards of the tourism industry, determine the factors that promote its success and investigate principles and procedures that contribute to high-quality customer service. Students will also assess facilities and activities that attract tourists and study communication and customer service techniques. In addition to exploring career opportunities, students will analyse the relationship between tourism and the economy and propose ways to enhance the performance of the industry.

Prerequisite: None

Hospitality and Tourism, Grade 12, Workplace Preparation (TFH 4E)

This course focuses on advanced food preparation and presentation skills, event and activity planning, the equipment and facilities used in the hospitality and tourism industry and tourist attractions. Students will study the nutritional value of foods, plan menus and recipes, develop management techniques, design and implement an event and learn effective communication skills. They will also explore careers, the impact of the hospitality and tourism industry on society and the environment and health and safety standards in the workplace.

Prerequisite: Hospitality and Tourism, Grade 11, Workplace Preparation

Manufacturing Technology

Manufacturing Technology, Grade 10, Open (TMJ 2O)

This course introduces students to the scope of the manufacturing industry, the various components used in the design of products, the industrial tools and equipment used and methods of manufacturing, including assembly-line production. Students will learn about technical drawing, preparation processes, manufacturing techniques, power, electronic and quality control systems, careers in the manufacturing field and the role of entrepreneurs in Canadian society.

Prerequisite: None

Manufacturing Engineering Technology, Grade 11, College Preparation (TMJ 3C)

This course focuses on design principles, electronic, pneumatic, and hydraulic control systems, and traditional and advanced manufacturing processes. Students will solve problems and make the critical decisions necessary to develop efficient production systems. They will also study the broad range of career opportunities available in the manufacturing sector and their educational requirements, and will research the scope of the manufacturing industry and the impact of its products on individuals, society and the environment.

Prerequisite: None

Manufacturing Technology, Grade 11, Workplace Preparation (TMJ 3E)

This course helps clarify for young people the broad range of career opportunities available within the manufacturing sector. Students will acquire design and fabrication skills using a variety of materials, tools, equipment and processes, and will construct products that adhere to design specifications and meet quality control standards. In addition to developing employability and technical skills, students will develop an understanding of the impact of the manufacturing sector on consumers, society and the environment.

Prerequisite: None

Manufacturing Engineering Technology, Grade 12, College Preparation (TMJ 4C)

This course focuses on advanced manufacturing and engineering and provides students with an opportunity to develop specialized knowledge and skills used in sophisticated production processes. Students will solve problems, make the decisions necessary to develop a product for manufacture, and examine production methods, quality control systems, and environmental and societal impacts.

Prerequisite: Manufacturing Engineering Technology, Grade 11, College Preparation

Manufacturing Technology, Grade 12, Workplace Preparation (TMJ 4E)

This course focuses on drafting and design, machining, welding, computer numerical control (CNC), computer-assisted machining (CAM), motor control, hydraulic control, pneumatic control and computer control. Students will use sophisticated design and manufacturing systems to design and fabricate tooling, to program CNC equipment and to design and build solutions to technological challenges in manufacturing.

Prerequisite: Manufacturing Technology, Grade 11, Workplace Preparation

Technological Design

Technological Design, Grade 10, Open (TDJ 20)

This course requires students to design and develop innovative products and services. Students will learn how to identify user needs related to specified design problems, the physical properties of selected materials and their application in product design, techniques to create physical products and services, various presentation techniques, how to test and evaluate design solutions and the implications of technology on the development of products or services. They will also become aware of design-related careers.

Prerequisite: None

Technological Design, Grade 11, University/College Preparation (TDJ 3M)

This course provides students with opportunities to apply the principles of technological design to challenges in communications, manufacturing, electronics, transportation, architecture, industrial and consumer products, health and safety equipment and environmental services. Students will identify user needs, estimate labour and material costs, analyse material characteristics and illustrate design solutions, using traditional and computer-based methods. They will also acquire the basic design skills required for post-secondary studies in engineering, manufacturing, architecture and construction.

Prerequisite: None

Technological Design, Grade 11, Workplace Preparation (TDJ 3E)

This course provides students with opportunities to apply the principles of basic design to technological challenges in industry, engineering, architecture, manufacturing and graphics. Students will develop problem-solving and design skills through the use of technical drawings and illustrations, model building, testing and marketing. They will also become aware of consumer, business and environmental issues in the creation and marketing of products or services and the educational requirements of design-related careers.

Prerequisite: None

Technological Design, Grade 12, University/College Preparation (TDJ 4M)

This course provides students with opportunities to solve problems in design through the use of technical drawings, model building, testing and marketing. Students will research, design, and test solutions for residential or commercial architecture, industrial engineering and manufacturing.

They will also examine the educational requirements of a technical-design-related career in engineering, architecture or industrial design.

Prerequisite: Technological Design, Grade 11, University/College Preparation

Technological Design, Grade 12, Workplace Preparation (TDJ 4E)

This course helps students develop a systematic process to design products or services based on an understanding and analysis of consumer needs, material characteristics, fabrication methods and design principles. Students will develop design briefs, conduct marketing surveys, create freehand and computer-generated illustrations, make models, generate technical reports, design packaging and become aware of design trends. They will also examine careers and small business opportunities in design, architecture, manufacturing or marketing.

Prerequisite: Technological Design, Grade 11, Workplace Preparation

Transportation Technology

Transportation Technology, Grade 10, Open (TTJ 20)

This course requires students to build projects and to learn service procedures related to different modes of transportation. Students will learn about support systems for transporting people and products, measurement systems and methods, the analysis, design, and construction of a system to convert and make practical use of energy, the function of major vehicle system components, the impact of transportation systems on the environment, communication skills and transportation-related careers.

Prerequisite: None

Transportation Technology, Grade 11, College Preparation (TTJ 3C)

This course examines the infrastructure required for the operation of land, air and/or marine vehicles. Students will design, construct, and modify vehicles and apply safe work practices and procedures using current technology. They will also develop effective communication and teamwork skills when developing solutions to managing vehicle support systems, investigate the educational requirements for career opportunities in the transportation sector and analyse the impact of transportation technology on society and the environment.

Prerequisite: None

Transportation Technology, Grade 11, Workplace Preparation (TTJ 3E)

This course examines the various types of land, air and/or marine vehicles and vehicle systems found within the transportation sector. Students will acquire identification, troubleshooting, repairing and testing skills that meet industry standards and government regulations. In addition to developing employability and technical skills, they will explore the broad range of career opportunities within this sector, and will examine the impact of the transportation sector on people, society and the environment.

Prerequisite: None

Transportation Technology, Grade 12, College Preparation (TTJ 4C)

This course examines alternative modes of mass transit to enable students to develop the specialized knowledge and skills required to work with sophisticated land, air and/or marine vehicles and transportation systems. Students will solve problems related to vehicles and transportation systems, examine transportation-related issues such as energy conversion, power transfer, control systems, and environmental and societal impact and investigate the educational requirements of career opportunities in the transportation sector.

Prerequisite: Transportation Technology, Grade 11, College Preparation

Transportation Technology, Grade 12, Workplace Preparation (TTJ 4E)

This course examines the commonalities of land, air and marine vehicles and transportation systems. Students will develop safe workplace habits and business management skills and will use diagnostic, hand, power tools effectively to service and repair vehicles to meet industry standards and safety inspections. They will also research the entry requirements for apprenticeship training programs and develop the employability and technical skills required for entry into the workplace.

Prerequisite: Transportation Technology, Grade 11, Workplace Preparation

Part B: Computer Studies

Computer and Information Science

Computer and Information Science, Grade 10, Open (TIK 20)

This course introduces students to computer science concepts. Students will learn about the stages in software design, the fundamental programming constructs of sequence, selection, and repetition, the functions of internal and external computer components, the relationship among networks, operating systems, and application software and their uses and how programming languages evolve. Students will also develop an awareness of computer-related careers.

Prerequisite: None

Computer and Information Science, Grade 11, University/College Preparation (ICS 3M)

This course helps students examine computer science concepts. Students will outline stages in software development, define standard control and data structures, identify on- and off-line resources, explain the functions of basic computer components and develop programming and problem-solving skills by using operating systems and implementing defined practices. As well as identifying careers in computer science, students will develop an understanding of the ethical use of computers and the impact of emergent technologies on society.

Prerequisite: None

Computer and Information Science, Grade 12, University/College Preparation (ICS 4M)

This course helps students use programming and software engineering principles to design and develop algorithms and programs. Students will use software development and diagnostic tools, implement data structures and algorithms and use file management techniques in project settings. They will also develop an understanding of the ethics of computer use and the impact of information technology on the community and will explore post-secondary education and career paths in computer science.

Prerequisite: Computer and Information Science, Grade 11, University/College Preparation

Computer Engineering

Computer Engineering Technology, Grade 10, Open (TEE 20)

This course examines computer hardware and the control of external components from an engineering perspective. Students will learn how to solve problems, and will study the functions of key computer components and peripherals, logic gates, fundamental programming concepts, internal numbering and character representation systems and operating systems and networks. Students will also develop an awareness of potential careers in the field of computer engineering.

Prerequisite: None

Computer Engineering, Grade 11, University/College Preparation (ICE 3M)

This course helps students understand how computer hardware and software are used to solve computer-related problems from an engineering perspective. Students will explore ways of connecting computers, interfaces, and peripherals using their knowledge of logic gates, computer components, peripherals, programming, networks and operating systems. Students will also construct systems that use computer programs to interact with hardware, install and configure key computer hardware and software components, develop an understanding of the ethical use of computers and explore careers in computer engineering.

Prerequisite: None

Computer Engineering, Grade 11, Workplace Preparation (ICE 3E)

This course helps students develop a practical understanding of hardware and software operations, computer networks and operating systems. Students will learn to use utility and application software and to install, maintain and troubleshoot computer systems and networks following proper maintenance and repair procedures. In addition to developing an understanding of the ethical use of computers, students will identify engineering career opportunities and the skill sets required for the workplace, including good customer service practices.

Prerequisite: None

Computer Engineering, Grade 12, University/College Preparation (ICE 4M)

This course helps students understand and apply computer engineering concepts. Students will analyse and design computer components such as logic circuits and interfaces, develop and construct systems and write the associated computer programs to drive real-world devices, such as traffic lights, models and robots, and explore networking hardware, protocols and configurations. As well as developing project management skills, students will examine the ethics of computer use and explore related educational requirements and careers.

Prerequisite: Computer Engineering, Grade 11, University/College Preparation, or Computer and Information Science, Grade 11, University/College Preparation

Computer Engineering, Grade 12, Workplace Preparation (ICE 4E)

This course helps students understand network topologies (how computers are connected in networks) and associated hardware and gain practical knowledge of hardware and software operations and trends. Students will install and maintain computer systems and networks, and diagnose and solve problems in them, develop maintenance and repair protocols and customize utility and application software to meet user needs. As well as developing skills to communicate with customers, students will examine computer ethics and identify skill requirements for computer support positions.

Prerequisite: Computer Engineering, Grade 11, Workplace Preparation

Environmental Systems

**Environmental Systems,
Grade 10, Open (TCH 230)
(Heating, Ventilation, Refrigeration and
Air Conditioning)**

This course provides an overview of the heating, ventilation, refrigeration and air conditioning industry. Students will learn safe work habits and develop a positive attitude towards the safety of others. As well, students will develop skills using tools and test equipment. They will design an operating portable refrigeration system that will be evaluated mechanically, electrically and chemically. Students will explore energy consumption and conservation. Future careers paths will be explored, including post-secondary education, Co-op, pre-apprenticeship and apprenticeship programs.

**Environmental Systems,
Grade 11, College Preparation (2 credits) (TCH 367,
(Heating, Ventilation, Refrigeration and TCH 369)
Air Conditioning)**

This course focuses on heating, ventilation, refrigeration and air conditioning in the areas of safety, components, systems, refrigerants, piping, load estimating, electrical and electronic fundamentals. Students will design and build a pump down air conditioning system that will be tested for system performance. As well, preventative maintenance will be performed on the system. General maintenance of residential heating systems will be studied. As well, students will be able to design single- and three-phase wiring diagrams. The course explores more in depth study of post-secondary learning options in the H.V.R.A.C. fields. Articulation with Humber College, Co-op, pre-apprenticeship and apprenticeship will be explored in depth.

**Environmental Systems,
Grade 12, College Preparation (TEE 460)
(Heating, Ventilation, Refrigeration and
Air Conditioning)**

This specialist program is project-driven and skills are developed in the construction of complex electrical wiring systems for servicing and troubleshooting. Students will learn safe work habits and a positive attitude. Theoretical sections include advanced electricity, electronics, energy management/auditing. Computers are used for electrical simulation of heating, refrigeration and air conditioning systems. This program is articulated with Humber College. Each credit obtained allows advanced standing and exemption from the first-year refrigeration program at Humber College. Pre-apprenticeship and apprenticeship programs are explored.

Prerequisite: TCH 367 and TCH 369

**Environmental Systems, Grade 12,
College Preparation (TEH 460)
(Heating, Ventilation, Refrigeration and Air Conditioning)**

This specialist program is project-driven and skills are developed in the construction of complex systems for servicing and trouble-shooting. Students will learn safe work habits and a positive attitude. Environmental issues and impacts will be studied in the H.V.R.A.C. industry. Theoretical sections include psychometrics, pressure enthalpy and advanced heating. Computers are used for simulation of heating, refrigeration and air conditioning systems. This program is articulated with Humber College. Each credit obtained allows advanced standing and exemption from the first-year refrigeration program at Humber College. Pre-apprenticeship and apprenticeship programs are explored.

Prerequisite: TCH 367 and TCH 369