The Ontario Curriculum
Grades 11 and 12

Course Descriptions
and Prerequisites

2000
Une publication équivalente est disponible en français sous le titre suivant : Le curriculum de l’Ontario, 11e et 12e année - Répertoire des cours, 2000.

This publication is also available on the Ministry of Education’s website at http://edu.gov.on.ca.
Introduction

This document contains the course descriptions for all Grade 11 and 12 courses, along with course lists (including course codes) and prerequisite charts, in the following disciplines:

- The arts
- Business studies
- Canadian and world studies
- Classical studies and international languages
- English
- English as a second language
- English literacy development
- French as a second language
- Guidance and career education
- Health and physical education
- Mathematics
- Native languages
- Native studies
- Science
- Social sciences and humanities
- Technological education

The purpose of this document is to assist Grade 9 students and their parents in selecting the Grade 10 courses (for the 2000–2001 school year) that will put them on the right path to their postsecondary destination. The course descriptions are standard, one-paragraph descriptions that summarize what students will learn in each course. The descriptions are gathered here in a separate section for each discipline, and each section is introduced by a course list and a prerequisite chart. (A prerequisite is a course deemed essential for the successful understanding and completion of a subsequent course.) The prerequisite charts diagram the relationships among courses.

The policy regarding prerequisites is stated as follows in *Ontario Secondary Schools, Grades 9 to 12: Program and Diploma Requirements, 1999* (section 5.3.3):

Courses in Grades 11 and 12 may have prerequisites as a requirement for enrolment. All prerequisite courses will be identified in ministry curriculum policy documents, and no courses apart from these may be identified as prerequisites. Schools must provide parents and students with clear and accurate information on prerequisites.

If a parent or an adult student requests that a prerequisite be waived, the principal will determine whether or not the prerequisite should be waived. A principal may also initiate consideration of whether a prerequisite should be waived. The principal will make his or her decision in consultation with the parent or adult student and appropriate school staff. In cases where the parent or adult student disagrees with the decision of the principal, the parent or adult student may ask the appropriate supervisory officer to review the matter.

The fourteen curriculum policy documents outlining the curriculum expectations for all Grade 11 and 12 courses, and including the course descriptions and information about prerequisites provided here, will be distributed to schools when they are finalized. The curriculum policy document for interdisciplinary studies will be released at a later date. (Please note that the ESL/ELD curriculum policy document released in March 1999 includes all the courses offered in that discipline in the four years of secondary school.)
## THE ARTS

### Courses in the Arts, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Dance</td>
<td>University/College</td>
<td>ATC3M</td>
<td>Grade 9 or 10 Dance, Open</td>
</tr>
<tr>
<td>11</td>
<td>Dance</td>
<td>Open</td>
<td>ATC3O</td>
<td>Grade 9 or 10 Dance, Open</td>
</tr>
<tr>
<td>12</td>
<td>Dance</td>
<td>University/College</td>
<td>ATC4M</td>
<td>Grade 11 Dance, University/College or Open</td>
</tr>
<tr>
<td></td>
<td>Dramatic Arts</td>
<td>University/College</td>
<td>ADA3M</td>
<td>Grade 9 or 10 Dramatic Arts, Open</td>
</tr>
<tr>
<td>11</td>
<td>Dramatic Arts</td>
<td>Open</td>
<td>ADA3O</td>
<td>Grade 9 or 10 Dramatic Arts, Open</td>
</tr>
<tr>
<td>12</td>
<td>Dramatic Arts</td>
<td>University/College</td>
<td>ADA4M</td>
<td>Grade 11 Dramatic Arts, University/College or Open</td>
</tr>
<tr>
<td>12</td>
<td>Dramatic Arts</td>
<td>Open</td>
<td>ADA4O</td>
<td>Grade 11 Dramatic Arts, University/College or Open</td>
</tr>
<tr>
<td></td>
<td>Exploring the Arts</td>
<td>Open</td>
<td>AEA4O</td>
<td>Any Grade 9 or 10 course in the arts</td>
</tr>
<tr>
<td></td>
<td>Media Arts</td>
<td>Open</td>
<td>ASM3O</td>
<td>Grade 9 or 10 Visual Arts, or Grade 10 Media Arts</td>
</tr>
<tr>
<td>11</td>
<td>Media Arts</td>
<td>Open</td>
<td>ASM3O</td>
<td>Grade 11 Visual Arts, University/College or Open, or Grade 11 Media Arts, Open</td>
</tr>
<tr>
<td>Grade</td>
<td>Course Name</td>
<td>Course Type</td>
<td>Course Code</td>
<td>Prerequisite</td>
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<tr>
<td>11</td>
<td>Music</td>
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<td>AMU3M</td>
<td>Grade 9 or 10 Music, Open</td>
</tr>
<tr>
<td>11</td>
<td>Music</td>
<td>Open</td>
<td>AMU3O</td>
<td>Grade 9 or 10 Music, Open</td>
</tr>
<tr>
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<td>Music</td>
<td>University/College</td>
<td>AMU4M</td>
<td>Grade 11 Music, University/College or Open</td>
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Visual Arts

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
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<tbody>
<tr>
<td>11</td>
<td>Visual Arts</td>
<td>University/College</td>
<td>AVI3M</td>
<td>Grade 9 or 10 Visual Arts, Open</td>
</tr>
<tr>
<td>11</td>
<td>Visual Arts</td>
<td>Open</td>
<td>AVI3O</td>
<td>Grade 9 or 10 Visual Arts, Open</td>
</tr>
<tr>
<td>12</td>
<td>Visual Arts</td>
<td>University/College</td>
<td>AVI4M</td>
<td>Grade 11 Visual Arts, University/College or Open</td>
</tr>
</tbody>
</table>

*Note: Each of the courses listed above is worth one credit.*
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.
Course Descriptions for the Arts

Dance

Dance, Grade 11, University/College Preparation

ATC3M

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.

Dance, Grade 11, Open

ATC3O

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.

Dance, Grade 12, University/College Preparation

ATC4M

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.

Dramatic Arts

Dramatic Arts, Grade 11, University/College Preparation

ADA3M

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.

Dramatic Arts, Grade 11, Open

ADA3O

This course requires students to put together and present dramatic works dealing with stories, personal experiences, and local issues. Students will do research on and study contemporary theatrical forms, such 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.
Dramatic Arts, Grade 12, University/College Preparation ADA4M
This course requires students to experiment with forms and conventions in dramatic literature, and to create, script, and present original and adapted 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 interpreting dramatic literature, including Canadian works and works from various cultures in the late twentieth century. Students will also examine the significance of dramatic arts in various cultures.

Dramatic Arts, Grade 12, Open ADA4O
This course requires students to put together 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, administration, and marketing. Students will also explore possible careers related to the dramatic arts.

Exploring the Arts

Exploring the Arts, Grade 12, Open AEA4O
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.)

Media Arts

Media Arts, Grade 11, Open ASM3O
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 analysing 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).
**Media Arts, Grade 12, Open**  
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 works). Students will analyse and evaluate media art works, and will create their own works using a variety of technical elements and processes (e.g., computer graphics, photo-imaging, digital video production techniques, electroacoustics). Students will maintain a portfolio of their media art works.

**Music**

**Music, Grade 11, University/College Preparation**  
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.

**Music, Grade 11, Open**  
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.

**Music, Grade 12, University/College Preparation**  
This course emphasizes the appreciation, analysis, and performance of music from the romantic period and from the twentieth century, including jazz, popular music, art music, and Canadian and non-Western music. Students will concentrate on developing interpretive skills and the ability to work independently. They will also complete complex creative projects in which they make use of new technologies.

**Visual Arts**

**Visual Arts, Grade 11, University/College Preparation**  
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.
**Visual Arts, Grade 11, Open** AVI3O
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 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.

**Visual Arts, Grade 12, University/College Preparation** AVI4M
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 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.
## BUSINESS STUDIES

### Courses in Business Studies, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Accounting</strong></td>
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</tr>
<tr>
<td>11</td>
<td>Introduction to Financial Accounting</td>
<td>University/College</td>
<td>BAF3M</td>
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</tr>
<tr>
<td>11</td>
<td>Introduction to Accounting</td>
<td>Workplace</td>
<td>BAI3E</td>
<td>None</td>
</tr>
<tr>
<td>12</td>
<td>Principles of Financial Accounting</td>
<td>University/College</td>
<td>BAT4M</td>
<td>Grade 11 Introduction to Financial Accounting, University/College</td>
</tr>
<tr>
<td>12</td>
<td>Accounting for a Small Business</td>
<td>Workplace</td>
<td>BAN4E</td>
<td>Grade 11 Introduction to Accounting, Workplace</td>
</tr>
<tr>
<td></td>
<td><strong>Entrepreneurial Studies</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Introduction to Entrepreneurial Studies</td>
<td>College</td>
<td>BDI3C</td>
<td>None</td>
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<tr>
<td>11</td>
<td>The Enterprising Person</td>
<td>Open</td>
<td>BDP3O</td>
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<tr>
<td>12</td>
<td>Entrepreneurial Studies: Venture Planning</td>
<td>College</td>
<td>BDV4C</td>
<td>Grade 11 Introduction to Entrepreneurial Studies, College</td>
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<tr>
<td></td>
<td><strong>Information Technology</strong></td>
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<td></td>
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<td>Information Technology Applications in Business</td>
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<td>BTA3O</td>
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<td>12</td>
<td>Information Technology in Business</td>
<td>College</td>
<td>BTX4C</td>
<td>Grade 11 Information Technology Applications in Business, Open</td>
</tr>
<tr>
<td>Grade</td>
<td>Course Name</td>
<td>Course Type</td>
<td>Course Code</td>
<td>Prerequisite</td>
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</tr>
<tr>
<td>12</td>
<td>Information Technology in Business</td>
<td>Workplace</td>
<td>BTX4E</td>
<td>Grade 11 Information Technology Applications in Business, Open</td>
</tr>
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**International Business**

<table>
<thead>
<tr>
<th>12</th>
<th>Introduction to International Business</th>
<th>University/College</th>
<th>BBB4M</th>
<th>Any university, university/college, or college preparation course in business studies or Canadian and world studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Introduction to International Business</td>
<td>Workplace</td>
<td>BBB4E</td>
<td>None</td>
</tr>
</tbody>
</table>

**Marketing**

<table>
<thead>
<tr>
<th>11</th>
<th>Introduction to Marketing</th>
<th>College</th>
<th>BMI3C</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Introduction to Retail and Services Marketing</td>
<td>Workplace</td>
<td>BMX3E</td>
<td>None</td>
</tr>
</tbody>
</table>

**Organizational Studies**

<table>
<thead>
<tr>
<th>12</th>
<th>Organizational Studies: Organizational Behaviour and Human Resources</th>
<th>University/College</th>
<th>BOH4M</th>
<th>Any university, university/college, or college preparation course in business studies or Canadian and world studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Organizational Studies: Managing a Small Business</td>
<td>Workplace</td>
<td>BOG4E</td>
<td>None</td>
</tr>
</tbody>
</table>

*Note: Each of the courses listed above is worth one credit.*
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.

- Introduction to Information Technology in Business
  Grade 9 or 10, Open

- Introduction to Business
  Grade 9 or 10, Open

- Introduction to Financial Accounting
  Grade 11, University/College

- Principles of Financial Accounting
  Grade 12, University/College

- Introduction to International Business
  Grade 12, University/College

- Organizational Studies: Organizational Behaviour and Human Resources
  Grade 12, University/College

- Entrepreneurial Studies: Venture Planning
  Grade 12, College

- Information Technology Applications in Business
  Grade 11, Open

- Information Technology in Business
  Grade 12, College

- The Enterprising Person
  Grade 11, Open

- Information Technology in Business
  Grade 12, Workplace

- Introduction to Accounting
  Grade 11, Workplace

- Accounting for a Small Business
  Grade 12, Workplace

- Introduction to Retail and Services Marketing
  Grade 11, Workplace

- Introduction to International Business
  Grade 12, Workplace

- Organizational Studies: Managing a Small Business
  Grade 12, Workplace
Course Descriptions for Business Studies

**Accounting**

**Introduction to Financial Accounting, Grade 11, University/College Preparation** BAF3M
This course introduces students to the fundamental principles and procedures of accounting, with emphasis on accounting procedures used in service and merchandising businesses. Students will develop an understanding of the connections between financial analysis, control, and decision making in the management of a business, as well as the effects of technology and globalization on accounting procedures and the role of the accountant.

**Introduction to Accounting, Grade 11, Workplace Preparation** BAI3E
This course introduces students to the use of accounting in business. Students will study various types of businesses and business ownership, and ways in which accounting procedures are applied in the different types of businesses with regard to recording transactions, preparing financial statements, and analysing the process of cash management. They will learn about risks related to credit sales and about the collection of debts, and will use accounting software.

**Principles of Financial Accounting, Grade 12, University/College Preparation** BAT4M
This course emphasizes study of accounting principles related to financial statements. Students will learn about ways in which information in these statements is used in making business decisions, and about the effects on financial statements of using different methods of inventory valuation and adjusting and reversing entries. Students will also study various means of financing a business and ways in which the strength of a corporation can be determined through the reading of its annual report.

**Accounting for a Small Business, Grade 12, Workplace Preparation** BAN4E
This course expands upon the fundamentals of accounting introduced in the Grade 11 course by examining each component of the accounting cycle, with emphasis on practical application. Students will learn how accounting is practised in the workplace by acquiring an understanding of payroll systems, inventory, specialized journals, subsidiary ledgers, sales taxes, and cash management, and will use accounting software programs.

**Entrepreneurial Studies**

**Introduction to Entrepreneurial Studies, Grade 11, College Preparation** BDI3C
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 personal goals by satisfying the needs of others. Students will learn about values, traits, and skills most often associated with successful entrepreneurial activity.
The Enterprising Person, Grade 11, Open BDP3O
This course examines the importance of enterprising employees to organizations affected by rapid change in an increasingly competitive marketplace. Students will learn about the skills and attributes of enterprising employees, the distinguishing features of enterprising work environments, and the challenges and rewards of becoming an enterprising person. They will also have an opportunity to participate in the entrepreneurial process by planning a venture.

Entrepreneurial Studies: Venture Planning, Grade 12, College Preparation BDV4C
This course focuses on the application of entrepreneurial characteristics and skills. Students will learn how to develop a venture plan. In making the plan, they will consider available resources, analyse the potential market base, identify legal requirements and available financing, evaluate all aspects of the plan, and identify the management skills and technology that would be required in carrying out their plan.

Information Technology

Information Technology Applications in Business, Grade 11, Open BTA3O
This course provides students with the opportunity to develop the information technology skills and knowledge required in a business. Students will learn about the information technology work environment, use industry-standard software, conduct electronic research, investigate electronic business, and explore occupations and postsecondary programs that require information technology skills.

Information Technology in Business, Grade 12, College Preparation BTX4C
This course provides students with the opportunity to develop further the information technology knowledge and skills needed in the business world. Students will develop their understanding of electronic business environments, improve their skills in electronic research and in using business application software in the preparation of business documents, manage information, and apply project team management strategies.

Information Technology in Business, Grade 12, Workplace Preparation BTX4E
This course provides students with the opportunity to develop essential skills in information technology needed in the workplace. Students will learn about the impact of new technologies on business operations, the place of information technology in the globalization process, and the development of new ways of doing business (e.g., use of web pages, electronic commerce). Students will use advanced software features and functions, manage information, conduct electronic research for business tasks, and develop project team management skills.
**International Business**

**Introduction to International Business, Grade 12, University/College Preparation** (BBB4M)
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.

**Introduction to International Business, Grade 12, Workplace Preparation** (BBB4E)
This course provides an introduction to international business, including an investigation of the economic relationships that Canadian governments and Canadian businesses have developed with other nations and the effects on productivity, prices, and variety of goods. Students will learn about the requirements for competing in international markets, conducting business in other countries, and pursuing careers in the field of international business.

**Marketing**

**Introduction to Marketing, Grade 11, College Preparation** (BMI3C)
This course introduces the fundamental concepts of marketing, with an emphasis on in-depth analysis of the influence of changes in the economy and global marketplace, trends and issues, and the impact of technology. Students will analyse the buying patterns of various consumers and the effect of marketing strategies, and will engage in marketing research. Students will also develop and present a marketing plan for a specific product.

**Introduction to Retail and Services Marketing, Grade 11, Workplace Preparation** (BMX3E)
This course focuses on developing knowledge and applying skills in the context of retail and services marketing. Students will learn about the importance of customer service, analyse the methods used to maintain customer loyalty, examine ways in which product presentation influences buyers, and investigate the critical factors in inventory control, including the role of technology.

**Organizational Studies**

**Organizational Studies: Organizational Behaviour and Human Resources, Grade 12, University/College Preparation** (BOH4M)
This course focuses on ways in which organizations deal with issues affecting their competitiveness in a changing technological and global business environment. Students will analyse various leadership techniques, and study various issues such as ethics in business, social responsibility, management of group dynamics, uses of information technology, workplace stress and conflict, motivation of employees, and globalization. Students will also investigate the management of a diverse workforce within an organization and the importance of strategic planning.
Workplace Preparation
This course focuses on the core skills and concepts required to manage a small business. Students will deal with various aspects of operations management, such as inventory, marketing, financial issues, communication, and human resources. Students will also explore the challenges facing small businesses, including hiring and training, motivating employees, and complying with legal requirements.
### CANADIAN AND WORLD STUDIES

Courses in Canadian and World Studies, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Economics</strong></td>
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<tr>
<td>11</td>
<td>The Individual and the Economy</td>
<td>University/College</td>
<td>CIE3M</td>
<td>Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
</tr>
<tr>
<td>11</td>
<td>Making Economic Choices</td>
<td>Workplace</td>
<td>CIC3E</td>
<td>Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
</tr>
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<td>Analysing Current Economic Issues</td>
<td>University</td>
<td>CIA4U</td>
<td>Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities</td>
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<tr>
<td></td>
<td><strong>Geography</strong></td>
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<tr>
<td>11</td>
<td>The Americas: Geographic Patterns and Issues</td>
<td>University/College</td>
<td>CGD3M</td>
<td>Grade 9 Geography of Canada, Academic or Applied</td>
</tr>
<tr>
<td>11</td>
<td>Physical Geography: Patterns, Processes, and Interactions</td>
<td>University/College</td>
<td>CGF3M</td>
<td>Grade 9 Geography of Canada, Academic or Applied</td>
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<tr>
<td>11</td>
<td>Geographics: The Geographer’s Toolkit</td>
<td>Workplace</td>
<td>CGT3E</td>
<td>Grade 9 Geography of Canada, Academic or Applied</td>
</tr>
<tr>
<td>11</td>
<td>Regional Geography: Travel and Tourism</td>
<td>Open</td>
<td>CGG3O</td>
<td>Grade 9 Geography of Canada, Academic or Applied</td>
</tr>
<tr>
<td>Grade</td>
<td>Course Name</td>
<td>Course Type</td>
<td>Course Code</td>
<td>Prerequisite</td>
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</tr>
<tr>
<td>12</td>
<td>Canadian and World Issues: A Geographic Analysis</td>
<td>University</td>
<td>CGW4U</td>
<td>Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities</td>
</tr>
<tr>
<td>12</td>
<td>World Geography: Human Patterns and Interactions</td>
<td>University</td>
<td>CGU4U</td>
<td>Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities</td>
</tr>
<tr>
<td>12</td>
<td>Environment and Resource Management</td>
<td>University/College</td>
<td>CGR4M</td>
<td>Any university, university/college, or college preparation course in Canadian and world studies, English, or social sciences and humanities</td>
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<tr>
<td>12</td>
<td>Geomatics: Geotechnologies in Action</td>
<td>University/College</td>
<td>CGO4M</td>
<td>Any university, university/college, or college preparation course in Canadian and world studies, English, or social sciences and humanities</td>
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<tr>
<td>12</td>
<td>World Geography: Urban Patterns and Interactions</td>
<td>College</td>
<td>CGU4C</td>
<td>Any university, university/college, or college preparation course in Canadian and world studies, English, or social sciences and humanities</td>
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<td>Grade</td>
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<td>Course Type</td>
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<td>11</td>
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<td>Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
</tr>
<tr>
<td>11</td>
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<td>CHW3M</td>
<td>Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
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<td>CHH3C</td>
<td>Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
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<td>Canadian History and Politics Since 1945</td>
<td>Workplace</td>
<td>CHH3E</td>
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<tr>
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<td>Twentieth-Century History: Global and Regional Perspectives</td>
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<td>Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
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<tr>
<td>12</td>
<td>Canada: History, Identity, and Culture</td>
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<td>CHI4U</td>
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<tr>
<td>12</td>
<td>World History: The West and the World</td>
<td>College</td>
<td>CHY4C</td>
<td>Any university, university/college, or college preparation course in Canadian and world studies, English, or social sciences and humanities</td>
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<td>CHM4E</td>
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<td>Understanding Canadian Law</td>
<td>University/College</td>
<td>CLU3M</td>
<td>Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
</tr>
<tr>
<td>11</td>
<td>Understanding Canadian Law</td>
<td>Workplace</td>
<td>CLU3E</td>
<td>Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
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<tr>
<td>12</td>
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<td>University</td>
<td>CLN4U</td>
<td>Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities</td>
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<tr>
<td></td>
<td><strong>Politics</strong></td>
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<tr>
<td>11</td>
<td>Canadian Politics and Citizenship</td>
<td>Open</td>
<td>CPC3O</td>
<td>Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
</tr>
<tr>
<td>12</td>
<td>Canadian and World Politics</td>
<td>University</td>
<td>CPW4U</td>
<td>Any university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities</td>
</tr>
</tbody>
</table>

*Note: Each of the courses listed above is worth one credit.*
Prerequisite Chart for Canadian and World Studies – Geography

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.
Prerequisite Chart for Canadian and World Studies – History

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.

- Canadian History in the Twentieth Century
  - Grade 10, Academic

- Canadian History in the Twentieth Century
  - Grade 10, Applied

- Civics
  - Grade 10, Open (half-credit)

- American History
  - Grade 11, University

- World History to the Sixteenth Century
  - Grade 11, University/College

- Any Grade 11 or 12 university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities

- Canadian History and Politics
  - Since 1945
  - Grade 11, College

- Any Grade 11 or 12 college preparation course in Canadian and world studies, English, or social sciences and humanities

- Canadian History and Politics
  - Since 1945
  - Grade 11, Workplace

- Twentieth-Century History: Global and Regional Perspectives
  - Grade 11, Open

- Canada: History, Identity, and Culture
  - Grade 12, University

- World History: The West and the World
  - Grade 12, University

- World History: The West and the World
  - Grade 12, College

- Adventures in World History
  - Grade 12, Workplace
Prerequisite Chart for Canadian and 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.

**Economics**
- The Individual and the Economy
  - Grade 11, University/College
- Making Economic Choices
  - Grade 11, Workplace

**Law**
- Understanding Canadian Law
  - Grade 11, University/College
- Understanding Canadian Law
  - Grade 11, Workplace

**Politics**
- Canadian Politics and Citizenship
  - Grade 11, Open

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- Any Grade 11 or 12 university or university/college preparation course in Canadian and world studies, English, or social sciences and humanities

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- Canadian History in the Twentieth Century
  - Grade 10, Academic

- Canadian History in the Twentieth Century
  - Grade 10, Applied

- Canadian and International Law
  - Grade 12, University

- Canadian Politics and Citizenship
  - Grade 11, Open

- Analyzing Current Economic Issues
  - Grade 12, University

- Understanding Canadian Law
  - Grade 11, University/College

- Understanding Canadian Law
  - Grade 11, Workplace

- Canadian and World Politics
  - Grade 12, University
Course Descriptions for Canadian and World Studies

**Economics**

**The Individual and the Economy, Grade 11, University/College Preparation**
This course explores elements of the Canadian economic system that will help students make informed decisions about how to use resources to satisfy wants and needs. Students will use economic concepts and models, as well as methods of economic inquiry, to analyse the choices they will make during their lives as consumers, contributors, and citizens in a mixed economy.

**Making Economic Choices, Grade 11, Workplace Preparation**
This course explores the economic choices that students will need to make as consumers and contributors in a mixed economy. Students will acquire practical knowledge and skills that will help them manage their economic affairs and improve their economic well-being.

**Analysing Current Economic Issues, Grade 12, University Preparation**
This course explores the choices that individuals and societies make about the use of resources in a competitive global economy. Students will use economic concepts and models, as well as methods of economic inquiry, to analyse current economic issues and make informed economic choices based on their analysis.

**Geography**

**The Americas: Geographic Patterns and Issues, Grade 11, University/College Preparation**
This course explores the growing interdependence of the Americas, from northern Canada to southern South America, through the study of geographical systems, patterns, and issues. Students will use geographical methods and skills to investigate a wide range of topics, including natural systems, resource development, population patterns and trends, evolving trading blocs, and geopolitical partnerships.

**Physical Geography: Patterns, Processes, and Interactions, Grade 11, University/College Preparation**
This course examines the main elements of the physical environment (climate, soils, landforms, oceans, vegetation), the processes that shape them, and the relationship between the environment and human beings. Students will apply a wide range of geographic tools and methods to explore the distribution and ongoing evolution of the elements of the physical environment on a variety of scales, from local to global.
Geographics: The Geographer's Toolkit, Grade 11, Workplace Preparation  
This course examines the use of geotechnologies, such as cartography, remote sensing, surveying, and geographic information systems (GIS), in the workplace, with an emphasis on applications relevant to business, government, and the local community. Students will acquire practical experience in the collection, manipulation, interpretation, and display of geographic information, with a view to developing skills in areas such as desktop mapping, graphic presentation, image interpretation, database management, and GIS analysis.

Regional Geography: Travel and Tourism, Grade 11, Open  
This course focuses on travel and tourism to examine the unique characteristics of selected world regions from a geographic perspective. Students will develop an understanding and appreciation of the ways in which the natural environments, economies, cultures, and other aspects of world regions interact.

Canadian and World Issues: A Geographic Analysis, Grade 12, University Preparation  
This course draws on geographic concepts, skills, methods, and technologies to analyse significant issues facing Canadians as citizens of an interdependent world. Students will examine the challenges of creating a sustainable and equitable future through the study of a range of topics, including economic interdependence; geopolitical conflict; regional disparities in the ability to meet basic human needs; and protection of the planet’s life-support systems.

World Geography: Human Patterns and Interactions, Grade 12, University Preparation  
This course examines how cultures in different parts of the world interact with their environments and with each other. Students will use geographical concepts, methods, and tools to explore settlement patterns, human migration, cultural change, globalization, environmental issues, and other topics relevant to an understanding of how spatial and cultural factors affect human affairs.

Environment and Resource Management, Grade 12, University/College Preparation  
This course investigates the complexity and fragility of ecosystems and the effects of human activities on them. Students will study the principles of sustainability and resource management and evaluate various approaches to achieving a more sustainable relationship between the environment, society, and the economy.

Geomatics: Geotechnologies in Action, Grade 12, University/College Preparation  
This course examines the approaches and techniques that geographers and other professionals use to acquire, manage, map, analyse, and communicate information about the Earth's surface. Students will receive a systematic introduction to the four pillars of geomatics – surveying, remote sensing, cartography, and geographic information systems (GIS) – and will learn how to apply their knowledge and skills to a variety of real-world situations relating to physical and human geography.
World Geography: Urban Patterns and Interactions, Grade 12, CGU4C

College Preparation

This course examines cities around the world and the social, economic, and physical factors that shape them. Students will use geographic concepts, methods, and tools to examine such topics as urban structures and systems, spatial interactions, environmental impacts, rural-urban migration, cultural interactions, and urban problems.

Environment and Resource Management, Grade 12, Workplace Preparation CGR4E

This course examines the impact of human activities on the natural environment and emphasizes responsible resource management, mainly in the context of the local environment. Students will learn about ecosystem structures and processes, the ecological impact of human activities, and sustainable resource management, and will develop practical solutions to environmental and resource management issues.

History

American History, Grade 11, University Preparation CHA3U

This course examines the development of American social, political, and economic structures from colonial times to the present. Students will analyse the chronology of events and evaluate the roles played by specific individuals and groups throughout American history. Students will conduct research and analysis, and communicate, in a variety of ways, their knowledge and understanding of the country that is Canada’s closest neighbour and most important cultural influence and economic partner.

World History to the Sixteenth Century, Grade 11, University/College Preparation CHW3M

This course investigates the history of humanity from earliest times to the sixteenth century. Students will analyse diverse societies from around the world, with particular regard to the political, cultural, and economic structures and historical forces that form the foundation of the modern world. They will examine the influence of selected individuals and groups, as well as of particular innovations, and will develop skills of historical inquiry, organization, analysis, and communication.

Canadian History and Politics Since 1945, Grade 11, College Preparation CHH3C

This course examines aspects of Canadian history since 1945, focusing on issues that are of particular relevance to Canadians today. Students will analyse the history of Canadian social, political, and economic issues, including technological change, globalization, labour relations, equity, and multiculturalism. As well, students will be given the opportunity to develop their communication skills and their knowledge of pertinent topics so that they can discuss current Canadian issues effectively.
Canadian History and Politics Since 1945, Grade 11, Workplace Preparation  
This course examines Canadian issues in the period from the end of World War II to the present. Students will learn about a broad range of Canadian social, political, and economic topics, including technological change, globalization, labour relations, equity, and multiculturalism. In addition, students will learn about historical forces that might affect their civic responsibilities and their economic and social conditions.

Twentieth-Century History: Global and Regional Perspectives, Grade 11, Open  
This course focuses on events and issues in twentieth-century world history. Students will analyse issues relating to the two world wars, the Cold War, post-1945 regional conflicts, human rights, changes in everyday life, and the problems facing developing countries. The skills and knowledge developed in the course will help students understand and analyse the challenges facing peoples, both historically and at the present time, in various parts of the world.

Canada: History, Identity, and Culture, Grade 12, University Preparation  
This course examines the evolution of a Canadian national identity. Students will learn how modern Canada was shaped by the interaction among Aboriginal peoples, the French, the English, and subsequent immigrant groups. This course will enable students to evaluate major social, economic, and political changes in Canadian history. The understanding students gain through their examination of Canada’s historical and cultural roots will allow them to formulate a definition of what it means to be Canadian.

World History: The West and the World, Grade 12, University Preparation  
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. The skills and knowledge developed in this course will enable the student to understand and appreciate both the character of historical change and the historical roots of contemporary issues.

World History: The West and the World, Grade 12, College Preparation  
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 acquire sound skills of historical inquiry and will develop an appreciation of the forces that have formed our modern world.
Adventures in World History, Grade 12, Workplace Preparation  
CHM4E
This course examines a variety of human experiences in world history from earliest times to the present. Students will learn about a wide range of social, cultural, economic, and political topics, including technological development and cultural expression, social and political structures, and the values of community and individualism. As well, students will be given opportunities to develop their awareness of historical experience, to practise their skills of analysis and communication, and to cultivate a lifelong interest in the adventures of world history.

Law

Understanding Canadian Law, Grade 11, University/College Preparation  
CLU3M
This course explores legal issues that directly affect students’ lives. Students will acquire a practical knowledge of Canada’s legal system and learn how to analyse legal issues. They will also be given opportunities to develop informed opinions on legal issues and to defend those opinions and communicate legal knowledge in a variety of ways and settings, including legal research projects, mock trials, and debates.

Understanding Canadian Law, Grade 11, Workplace Preparation  
CLU3E
This course explores elements of Canadian law that are relevant to students as they prepare to enter the labour force. Students will learn to develop informed opinions on legal issues and to express and defend their opinions in a variety of ways. Practical experience and active learning strategies will be emphasized.

Canadian and International Law, Grade 12, University Preparation  
CLN4U
This course explores elements of Canadian law and the role of law in social, political, and global contexts. Students will learn about the connections between the historical and philosophical sources of law and issues in contemporary society. They will also learn to analyse legal issues, conduct independent research, and communicate the results of their inquiries in a variety of ways.

Politics

Canadian Politics and Citizenship, Grade 11, Open  
CPC3O
This course explores the role of politics in people’s lives. Students will investigate the different ways in which individuals and groups can participate in the political process, examine the influence of citizen action on public policy, and assess the effectiveness of political systems and institutions in meeting people’s needs and promoting the common good. In addition, students will learn to distinguish between the legitimate and illegitimate exercise of power by individuals, groups, and governments.
Canadian and World Politics, Grade 12, University Preparation

This course examines national and international political issues from a variety of perspectives. Students will learn about the rights and responsibilities of individuals, groups, and states within the international community; analyse the different ways in which Canada tries to settle its conflicts with other nations; and evaluate the role of nationalist and internationalist ideologies in shaping relations among states.
# CLASSICAL STUDIES AND INTERNATIONAL LANGUAGES

Courses in Classical Studies and International Languages, Grades 11 and 12

<table>
<thead>
<tr>
<th>Level/Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
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<tbody>
<tr>
<td>Classical Studies</td>
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<tr>
<td>Level 2</td>
<td>Classical Languages</td>
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<td>(Greek) LVGBU (Latin) LVLBU</td>
<td>Level 1 Classical Languages, Academic</td>
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<td>Level 3</td>
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<td>University</td>
<td>(Greek) LVGCU (Latin) LVLCU</td>
<td>Level 2 Classical Languages, University</td>
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<td>Classical Civilization</td>
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<td>International Languages</td>
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<td>Level 2 International Languages, Academic</td>
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<tr>
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<td>LBADU–LYXDU</td>
<td>Level 3 International Languages, University</td>
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<td>LBADO–LYXDO</td>
<td>Level 3 International Languages, University or Open</td>
</tr>
</tbody>
</table>

*Note: Each of the courses listed above is worth one credit.*
Prerequisite Charts for Classical Studies and 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

- English
  Grade 10, Academic or Applied
  → Classical Civilization
  Grade 12, University

- Classical Languages
  Level 1, Academic
  → Classical Languages
  Level 2, University
  → Classical Languages
  Level 3, University

International Languages

- International Languages
  Level 1, Academic
- International Languages
  Level 2, Academic
  → International Languages
  Level 3, University
  → International Languages
  Level 4, University

- International Languages
  Level 1, Open
- International Languages
  Level 2, Open
  → International Languages
  Level 3, Open
  → International Languages
  Level 4, Open

Notes

Boards and schools may choose to offer their program in international languages 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.
Course Descriptions for Classical Studies and International Languages

Classical Studies

Classical Languages, Level 2, University Preparation    LVGBU (Greek), LVLBU (Latin)
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.

Classical Languages, Level 3, University Preparation    LVGCU (Greek), LVLCU (Latin)
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 prose and 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.

Classical Civilization, Grade 12, University Preparation    LVV4U
This course allows students to explore the beliefs and achievements of the ancient 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.

International Languages

International Languages, Level 3, University Preparation    LBACU–LYXCU
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.
International Languages, Level 3, Open

This course provides students with opportunities to further develop their communication skills in the international language and increase their confidence in applying them 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.

International Languages, Level 4, University Preparation

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.

International Languages, Level 4, Open

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.
### Courses in English, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
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<tr>
<td><strong>Compulsory Courses</strong></td>
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<tr>
<td>11</td>
<td>English</td>
<td>University</td>
<td>ENG3U</td>
<td>Grade 10 English, Academic</td>
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<td>11</td>
<td>English</td>
<td>College</td>
<td>ENG3C</td>
<td>Grade 10 English, Applied</td>
</tr>
<tr>
<td>11</td>
<td>English</td>
<td>Workplace</td>
<td>ENG3E</td>
<td>Grade 10 English, Applied</td>
</tr>
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<td>12</td>
<td>English</td>
<td>University</td>
<td>ENG4U</td>
<td>Grade 11 English, University</td>
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<td>English</td>
<td>College</td>
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<td>12</td>
<td>English</td>
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<td>ENG4E</td>
<td>Grade 11 English, Workplace</td>
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<tr>
<td><strong>Optional Courses</strong></td>
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<tr>
<td>11</td>
<td>Canadian Literature</td>
<td>University/College</td>
<td>ETC3M</td>
<td>Grade 10 English, Academic or Applied</td>
</tr>
<tr>
<td>11</td>
<td>Literacy Skills: Reading and Writing</td>
<td>Open</td>
<td>ELS3O</td>
<td>None</td>
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<tr>
<td>11</td>
<td>Media Studies</td>
<td>Open</td>
<td>EMS3O</td>
<td>Grade 10 English, Academic or Applied</td>
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<tr>
<td>11</td>
<td>Presentation and Speaking Skills</td>
<td>Open</td>
<td>EPS3O</td>
<td>Grade 10 English, Academic or Applied</td>
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<tr>
<td>12</td>
<td>Studies in Literature</td>
<td>University</td>
<td>ETS4U</td>
<td>Grade 11 English, University</td>
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<tr>
<td>12</td>
<td>The Writer’s Craft</td>
<td>University</td>
<td>EWC4U</td>
<td>Grade 11 English, University</td>
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<tr>
<td>12</td>
<td>Studies in Literature</td>
<td>College</td>
<td>ETS4C</td>
<td>Grade 11 English, College</td>
</tr>
<tr>
<td>Grade</td>
<td>Course Name</td>
<td>Course Type</td>
<td>Course Code</td>
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<tr>
<td>12</td>
<td>The Writer’s Craft</td>
<td>College</td>
<td>EWC4C</td>
<td>Grade 11 English, College</td>
</tr>
<tr>
<td>12</td>
<td>Communication in the World of Business and Technology</td>
<td>Open</td>
<td>EBT4O</td>
<td>Grade 11 English, University, College, or Workplace</td>
</tr>
</tbody>
</table>

*Note:* Each of the courses listed above is worth one credit.
Prerequisite Charts for English
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.

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.
Course Descriptions for English

**Compulsory Courses**

**English, Grade 11, University Preparation** (ENG3U)
This course emphasizes the development of literacy, critical thinking, and communication skills. Students will analyse challenging texts, both contemporary and historical; conduct research and analyse the information gathered; write persuasive and literary essays; and analyse the relationship among media forms, audiences, and media industry practices. An important focus will be on understanding the development of the English language.

**English, Grade 11, College Preparation** (ENG3C)
This course emphasizes the development of literacy, critical thinking, and communication skills. Students will study the content, form, and style of informational texts and literary works from Canada and other countries; write reports, correspondence, and persuasive essays; and analyse media forms, audiences, and media industry practices. An important focus will be on establishing appropriate voice and using business and technical language with precision and clarity.

**English, Grade 11, Workplace Preparation** (ENG3E)
This course emphasizes the development of literacy, critical thinking, and communication skills. Students will study the content, form, and style of informational texts and literary works; write explanations, letters, and reports; and investigate the connections among media forms, audiences, and media industry practices. An important focus will be on using language clearly, accurately, and effectively in a variety of contexts.

**English, Grade 12, University Preparation** (ENG4U)
This course emphasizes consolidation of literacy, critical thinking, and communication skills. Students will analyse a range of challenging texts from various time periods, countries, and cultures; write analytical and argumentative essays and a major paper for an independent literary research project; and apply key concepts to analyse media works. An important focus will be on understanding academic language and using it coherently and confidently in discussion and argument.

**English, Grade 12, College Preparation** (ENG4C)
This course emphasizes consolidation of literacy, critical thinking, and communication skills. Students will analyse informational texts and literary works from various time periods, countries, and cultures; write research reports, summaries, and short analytical essays; complete an independent study project; and analyse the interactions among media forms, audiences, and media industry practices. An important focus will be on establishing appropriate style and using business and technical language effectively.
English, Grade 12, Workplace Preparation ENG4E
This course emphasizes consolidation of literacy, critical thinking, and communication skills. Students will study informational texts and literature from various countries and cultures; write summaries, reports, résumés, and short essays; complete an independent research project; and explain the connections among media forms, audiences, and media industry practices. An important focus will be on using specialized language related to the workplace accurately and coherently in appropriate contexts.

Optional Courses

Canadian Literature, Grade 11, University/College Preparation ETC3M
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 contemporary and historical literary texts representative of the diverse cultures and regions of Canada, and will respond personally, critically, and creatively to them.

Literacy Skills: Reading and Writing, Grade 11, Open ELS3O
This course emphasizes the strengthening of essential reading and writing skills. Students will read short plays, short stories, novels, poems, and newspaper and magazine articles and opinion pieces, with particular attention to locating important information, identifying main ideas and supporting details, extending personal knowledge, responding imaginatively, and using specific strategies to expand vocabulary. An important focus will be on writing clear, accurate, and coherent narratives, summaries, reports, letters, and short essays, using correct grammar, punctuation, and spelling.

Media Studies, Grade 11, Open EMS3O
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.

Presentation and Speaking Skills, Grade 11, Open EPS3O
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.
Studies in Literature, Grade 12, University Preparation  
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.

The Writer's Craft, Grade 12, University Preparation  
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.

Studies in Literature, Grade 12, College Preparation  
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.

The Writer's Craft, Grade 12, College Preparation  
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.

Communication in the World of Business and Technology, Grade 12, Open  
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.
ENGLISH AS A SECOND LANGUAGE  
AND ENGLISH LITERACY DEVELOPMENT

Courses in English as a Second Language and English Literacy Development, Grades 11 and 12

<table>
<thead>
<tr>
<th>Level/Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English As a Second Language</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>Beginning Communication in English</td>
<td>Open</td>
<td>ESLAO</td>
<td>None</td>
</tr>
<tr>
<td>Level 2</td>
<td>English in Daily Life</td>
<td>Open</td>
<td>ESLBO</td>
<td>ESL 1 or equivalent*</td>
</tr>
<tr>
<td>Level 3</td>
<td>English for School and Work</td>
<td>Open</td>
<td>ESLCO</td>
<td>ESL 2 or equivalent*</td>
</tr>
<tr>
<td>Level 4</td>
<td>Study Skills in English</td>
<td>Open</td>
<td>ESLDO</td>
<td>ESL 3 or equivalent*</td>
</tr>
<tr>
<td>Level 5</td>
<td>Bridge to English</td>
<td>Open</td>
<td>ESLEO</td>
<td>ESL 4 or equivalent*</td>
</tr>
<tr>
<td><strong>English Literacy Development</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>Beginning Literacy</td>
<td>Open</td>
<td>ELDAO</td>
<td>None</td>
</tr>
<tr>
<td>Level 2</td>
<td>Basic Literacy Skills</td>
<td>Open</td>
<td>ELDOB</td>
<td>ELD 1 or equivalent*</td>
</tr>
<tr>
<td>Level 3</td>
<td>Literacy in Daily Life</td>
<td>Open</td>
<td>ELDCO</td>
<td>ELD 2 or equivalent*</td>
</tr>
<tr>
<td>Level 4</td>
<td>Literacy for School and Work</td>
<td>Open</td>
<td>ELDDO</td>
<td>ELD 3 or equivalent*</td>
</tr>
</tbody>
</table>

*Note: Each of the courses listed above is worth one credit.

* “Equivalent” may be an equivalent course of study in other provinces in Canada or in other countries, or a proficiency level determined though initial assessment.
Prerequisite Charts for English As a Second Language and English Literacy Development

**English As a Second Language**

- **Beginning Communication in English**
  - *Level 1, Open*
  - English in Daily Life
    - *Level 2, Open (or equivalent)*
  - English for School and Work
    - *Level 3, Open (or equivalent)*
  - Study Skills in English
    - *Level 4, Open (or equivalent)*
  - Bridge to English
    - *Level 5, Open*

**English Literacy Development**

- **Beginning Literacy**
  - *Level 1, Open*
  - Basic Literacy Skills
    - *Level 2, Open (or equivalent)*
  - Literacy in Daily Life
    - *Level 3, Open (or equivalent)*
  - Literacy for School and Work
    - *Level 4, Open*
Course Descriptions for English As a Second Language and English Literacy Development

English As a Second Language

Beginning Communication in English, ESL Level 1, Open
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 develop the ability to use oral and written English for daily needs, acquire basic conversation skills and vocabulary, and use simple sentence patterns. Students will also acquire basic orientation information related to their needs as newcomers to Canada.

English in Daily Life, ESL Level 2, Open
This course expands students’ essential English communication skills and cultural knowledge and introduces the language of classroom studies. Students will develop oral classroom skills and reading strategies, expand their vocabulary, and use more complex sentence patterns. Students will also learn how to use some school and community resources.

English for School and Work, ESL Level 3, Open
This course is designed to improve students’ accuracy in using English in classroom situations, for personal and career planning, and to understand the changing world around them. Students will study and interpret a range of texts and produce a variety of forms of writing. Activities will also help students to develop their oral presentation skills and acquire study skills (including note-taking and summarizing skills) that will enhance their ability to learn in all subjects.

Study Skills in English, ESL Level 4, Open
This course prepares students to use English with increasing accuracy in most classroom and social situations and to participate in society as informed citizens. Students will develop the reading, writing, and oral presentation skills required for success in all subjects. Students will study and interpret a variety of grade-level texts, develop oral communication skills through participation in informal debates and seminars, and extend their range of research skills.

Bridge to English, ESL Level 5, Open
This course prepares students for secondary school English and other courses at the college and university preparation levels. Students will be encouraged to develop independence in reading literary works and academic texts, in writing essays and narratives, and in applying learning strategies and research skills effectively. Students will also learn to respond critically to print and media works.
**English Literacy Development**

**Beginning Literacy, ELD Level 1, Open**
ELDAO
This course builds on students’ previous education and language knowledge to introduce basic literacy skills and to help students adjust to their new cultural environment. Students will learn to read and write for everyday purposes, personal development, and enjoyment. Students will also learn school routines and personal management skills.

**Basic Literacy Skills, ELD Level 2, Open**
ELDBO
This course helps students to develop basic literacy skills and to understand the changing world around them. Students will read for information and enjoyment, expand their vocabulary, produce some simple forms of writing, and develop and use fundamental study skills. Students will also learn to participate effectively in group tasks and to use school and community resources.

**Literacy in Daily Life, ELD Level 3, Open**
ELDCO
This course helps students to expand their reading and writing skills and their ability to use language to analyse the changing world around them. Students will learn effective study skills and personal management and career-planning strategies. Students will improve their language proficiency through a variety of practical reading and writing tasks, short guided research projects, classroom discussions, and oral presentations.

**Literacy for School and Work, ELD Level 4, Open**
ELDDO
This course prepares students to participate in the educational program that will allow them to continue their education, seek employment, and participate in Canadian society as informed citizens. Students will acquire a wide variety of literacy skills and learning strategies through guided reading and writing tasks, the use of a range of media resources in guided research projects, and opportunities to communicate in a variety of formal and informal situations.
## FRENCH AS A SECOND LANGUAGE

Courses in French As a Second Language, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Core French</td>
<td>University</td>
<td>FSF3U</td>
<td>Grade 10 Core French, Academic</td>
</tr>
<tr>
<td>11</td>
<td>Core French</td>
<td>Open</td>
<td>FSF3O</td>
<td>Grade 10 Core French, Applied or Academic</td>
</tr>
<tr>
<td>12</td>
<td>Core French</td>
<td>University</td>
<td>FSF4U</td>
<td>Grade 11 Core French, University</td>
</tr>
<tr>
<td>12</td>
<td>Core French</td>
<td>Open</td>
<td>FSF4O</td>
<td>Grade 11 Core French, Open or University</td>
</tr>
<tr>
<td>11</td>
<td>Extended French</td>
<td>University</td>
<td>FEF3U</td>
<td>Grade 10 Extended French</td>
</tr>
<tr>
<td>12</td>
<td>Extended French</td>
<td>University</td>
<td>FEF4U</td>
<td>Grade 11 Extended French</td>
</tr>
<tr>
<td>11</td>
<td>French Immersion</td>
<td>University</td>
<td>FIF3U</td>
<td>Grade 10 French Immersion</td>
</tr>
<tr>
<td>12</td>
<td>French Immersion</td>
<td>University</td>
<td>FIF4U</td>
<td>Grade 11 French Immersion</td>
</tr>
</tbody>
</table>

*Note: Each of the courses listed above is worth one credit.*
Prerequisite Chart for French As a Second Language (FSL)

Notes
1. The prerequisite for Grade 9 Extended French is the elementary Extended French program or the elementary Immersion French program, or equivalent.
2. The prerequisite for Grade 9 Immersion French is the elementary Immersion French 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.
Course Descriptions for French As a Second Language

Core French, Grade 11, University Preparation  FSF3U
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 a play. Students will produce various written assignments, including a formal essay. The use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Core French, Grade 11, Open  FSF3O
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 use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Core French, Grade 12, University Preparation  FSF4U
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 use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Core French, Grade 12, Open  FSF4O
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 use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

Extended French, Grade 11, University Preparation  FEF3U
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 use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.
Extended French, Grade 12, University Preparation FEF4U
This course emphasizes the refinement 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 a written and oral presentation. The use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

French Immersion, Grade 11, University Preparation FIF3U
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 use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.

French Immersion, Grade 12, University Preparation FIF4U
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 use of correct grammar and appropriate language conventions in both spoken and written French will be emphasized throughout the course.
## GUIDANCE AND CAREER EDUCATION

### Courses in Guidance and Career Education, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Designing Your Future</td>
<td>Open</td>
<td>GWL3O</td>
<td>Grade 10 Career Studies, Open</td>
</tr>
<tr>
<td>11</td>
<td>Leadership and Peer Support</td>
<td>Open</td>
<td>GPP3O</td>
<td>Grade 10 Career Studies, Open</td>
</tr>
<tr>
<td>12</td>
<td>Advanced Learning Strategies: Skills for Success After Secondary School*</td>
<td>Open</td>
<td>GLS4O</td>
<td>Grade 10 Career Studies, Open</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GLE4O</td>
<td>Recommendation of Principal</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>GLE3O</td>
<td>Recommendation of Principal</td>
</tr>
</tbody>
</table>

* The Grade 12 Advanced Learning Strategies course may be modified for students in Grade 12 (GLE 4O) who have an IEP, as well as for students in Grade 11 (GLE 3O) who have an IEP.

*Note: Each of the courses listed above is worth one credit.*
Prerequisite Chart for Guidance and Career 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.

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

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

- **Leadership and Peer Support**
  - Grade 11, Open

- **Designing Your Future**
  - Grade 11, Open

- **Advanced Learning Strategies:**
  - Skills for Success After Secondary School
  - Grade 12, Open
Course Descriptions for Guidance and Career Education

**Designing Your Future, Grade 11, Open**  
GWL3O  
This course prepares students to make successful transitions to postsecondary 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 postsecondary education or training options and begin to implement an action plan for postsecondary success.

**Leadership and Peer Support, Grade 11, Open**  
GPP3O  
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 them 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.

**Advanced Learning Strategies: Skills for Success After Secondary School, Grade 12, Open**  
GLS4O, GLE4O, GLE3O  
This course improves students’ learning skills, preparing them to make successful transitions to work and postsecondary 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 postsecondary education or training and develop plans for learning after secondary school.
## HEALTH AND PHYSICAL EDUCATION

### Courses in Health and Physical Education, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Healthy Active Living Education</td>
<td>Open</td>
<td>PPL3O</td>
<td>None</td>
</tr>
<tr>
<td>11</td>
<td>Health for Life</td>
<td>Open</td>
<td>PPZ3O</td>
<td>None</td>
</tr>
<tr>
<td>12</td>
<td>Healthy Active Living Education</td>
<td>Open</td>
<td>PPL4O</td>
<td>None</td>
</tr>
<tr>
<td>12</td>
<td>Exercise Science</td>
<td>University</td>
<td>PSE4U</td>
<td>Any Grade 11 university or university/college preparation course in science, or any Grade 11 or 12 open course in health and physical education</td>
</tr>
<tr>
<td>12</td>
<td>Recreation and Fitness Leadership</td>
<td>College</td>
<td>PLF4C</td>
<td>Any Grade 11 or 12 open course in health and physical education</td>
</tr>
</tbody>
</table>

*Note: Each of the courses listed above is worth one credit.*
Prerequisite Chart for Health and 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.

Healthy Active Living Education
Grade 9, Open

Healthy Active Living Education
Grade 10, Open

Health for Life
Grade 11, Open

Any Grade 11 university or university/college preparation course in science

Exercise Science
Grade 12, University

Recreation and Fitness Leadership
Grade 12, College

Healthy Active Living Education
Grade 11, Open

Healthy Active Living Education
Grade 12, Open
Course Descriptions for Health and Physical Education

Healthy Active Living Education, Grade 11, Open  
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 practise 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.

Health for Life, Grade 11, Open  
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.

Healthy Active Living Education, Grade 12, Open  
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 enhancing their mental health and their relationships with others.

Exercise Science, Grade 12, University Preparation  
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.

Recreation and Fitness Leadership, Grade 12, College Preparation  
This course focuses on the development of leadership and coordination 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.
# MATHEMATICS

## Courses in Mathematics, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Functions and Relations</td>
<td>University</td>
<td>MCR3U</td>
<td>Grade 10 Principles of Mathematics, Academic</td>
</tr>
<tr>
<td>11</td>
<td>Functions</td>
<td>University/College</td>
<td>MCF3M</td>
<td>Grade 10 Principles of Mathematics, Academic</td>
</tr>
<tr>
<td>11</td>
<td>Mathematics of Personal Finance</td>
<td>College</td>
<td>MBF3C</td>
<td>Grade 10 Foundations of Mathematics, Applied</td>
</tr>
<tr>
<td>11</td>
<td>Mathematics for Everyday Life</td>
<td>Workplace</td>
<td>MEL3E</td>
<td>Grade 9 Mathematics, Academic or Applied</td>
</tr>
<tr>
<td>12</td>
<td>Advanced Functions and Introductory Calculus</td>
<td>University</td>
<td>MCB4U</td>
<td>Grade 11 Functions and Relations, University, or Grade 11 Functions, University/College</td>
</tr>
<tr>
<td>12</td>
<td>Geometry and Discrete Mathematics</td>
<td>University</td>
<td>MGA4U</td>
<td>Grade 11 Functions and Relations, University</td>
</tr>
<tr>
<td>12</td>
<td>Mathematics of Data Management</td>
<td>University</td>
<td>MDM4U</td>
<td>Grade 11 Functions and Relations, University, or Grade 11 Functions, University/College</td>
</tr>
<tr>
<td>12</td>
<td>College and Apprenticeship Mathematics</td>
<td>College</td>
<td>MAP4C</td>
<td>Grade 11 Mathematics of Personal Finance, College, or Grade 11 Functions, University/College</td>
</tr>
<tr>
<td>12</td>
<td>Mathematics for College Technology</td>
<td>College</td>
<td>MCT4C</td>
<td>Grade 11 Functions, University/College</td>
</tr>
<tr>
<td>12</td>
<td>Mathematics for Everyday Life</td>
<td>Workplace</td>
<td>MEL4E</td>
<td>Grade 11 Mathematics for Everyday Life, Workplace</td>
</tr>
</tbody>
</table>

*Note: Each of the courses listed above is worth one credit.*
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.
Course Descriptions for Mathematics

Functions and Relations, Grade 11, University Preparation  MCR3U
This course introduces some financial applications of mathematics, extends students’ experiences
with functions, and introduces second-degree relations. Students will solve problems in personal
finance involving applications of sequences and series; investigate properties and applications of
trigonometric functions; develop facility in operating with polynomial, rational, and exponential
expressions; develop an understanding of inverses and transformations of functions; and develop
facility in using function notation and in communicating mathematical reasoning. Students will
also investigate loci and the properties and applications of conics.

Functions, Grade 11, University/College Preparation  MCF3M
This course introduces some financial applications of mathematics and extends students’
experiences with functions. Students will solve problems in personal finance involving
applications of sequences and series; investigate properties and applications of trigonometric
functions; develop facility in operating with polynomial, rational, and exponential expressions;
develop an understanding of inverses and transformations of functions; and develop facility in
using function notation and in communicating mathematical reasoning.

Mathematics of Personal Finance, Grade 11, College Preparation  MBF3C
This course enables students to broaden their understanding of exponential growth and of
important areas of personal finance. Students will investigate properties of exponential functions
and develop skills in manipulating exponential expressions; solve problems and investigate
financial applications involving compound interest and annuities; and apply mathematics in
making informed decisions about transportation, accommodation, and career choices.

Mathematics for Everyday Life, Grade 11, Workplace Preparation  MEL3E
This course enables students to broaden their understanding of mathematics as it is applied in
important areas of day-to-day living. Students will solve problems associated with earning
money, paying taxes, and making purchases; apply calculations of simple and compound interest
in saving, investing, and borrowing; and calculate the costs of transportation and travel in a
variety of situations.

Advanced Functions and Introductory Calculus, Grade 12,  MCB4U
University Preparation
This course builds on students’ experience with functions and introduces the basic concepts and
skills of calculus. Students will investigate and apply the properties of polynomial, exponential,
and logarithmic functions; broaden their understanding of the mathematics associated with rates
of change; and develop facility with the concepts and skills of differential calculus as applied to
polynomial, rational, exponential, and logarithmic functions. Students will apply these skills to
problem solving in a range of applications.
Geometry and Discrete Mathematics, Grade 12, University Preparation  
MGA4U  
This course enables students to broaden mathematical knowledge and skills related to abstract mathematical topics and to the solving of complex problems. Students will solve problems involving geometric and Cartesian vectors, and intersections of lines and planes in three-space. They will also develop an understanding of proof, using deductive, algebraic, vector, and indirect methods. Students will solve problems involving counting techniques and prove results using mathematical induction.

Mathematics of Data Management, Grade 12, University Preparation  
MDM4U  
This course broadens students’ understanding of mathematics as it relates to managing information. Students will apply methods for organizing large amounts of information; apply counting techniques, probability, and statistics in modelling and solving problems; and carry out a culminating project that integrates the expectations of the course and encourages perseverance and independence. Students planning to pursue university programs in business, the social sciences, or the humanities will find this course of particular interest.

College and Apprenticeship Mathematics, Grade 12, College Preparation  
MAP4C  
This course equips students with the mathematical knowledge and skills they will need in many college programs. Students will use statistical methods to analyse problems; solve problems involving the application of principles of geometry and measurement to the design and construction of physical models; solve problems involving trigonometry in triangles; and consolidate their skills in analysing and interpreting mathematical models.

Mathematics for College Technology, Grade 12, College Preparation  
MCT4C  
This course equips students with the mathematical knowledge and skills needed for entry into college technology programs. Students will investigate and apply properties of polynomial, exponential, and logarithmic functions; solve problems involving inverse proportionality; and explore the properties of reciprocal functions. They will also analyse models of a variety of functions, solve problems involving piecewise-defined functions, solve linear-quadratic systems, and consolidate key manipulation and communication skills.

Mathematics for Everyday Life, Grade 12, Workplace Preparation  
MEL4E  
This course enables students to broaden their understanding of mathematics as it is applied in important areas of day-to-day living. Students will use statistics in investigating questions of interest and apply principles of probability in familiar situations. They will also investigate accommodation costs and create household budgets; solve problems involving estimation and measurement; and apply concepts of geometry in the creation of designs.
### NATIVE LANGUAGES

**Courses in Native Languages, Grades 11 and 12**

<table>
<thead>
<tr>
<th>Level</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Native Languages</td>
<td>Open</td>
<td>LNADO–LNODO</td>
<td>Native Languages, Level 3, or demonstrated proficiency</td>
</tr>
<tr>
<td>5</td>
<td>Native Languages</td>
<td>Open</td>
<td>LNAEO–LNOEO</td>
<td>Native Languages, Level 4, or demonstrated proficiency</td>
</tr>
</tbody>
</table>

*Note: Each of the courses listed above is worth one credit.*
Prerequisite Chart for Native Languages

Native Languages (NL1)
Level 1, Open

Four years of Native language instruction in elementary school or demonstrated proficiency

Native Languages (NL2)
Level 2, Open
(or demonstrated proficiency)

Native Languages (NL3)
Level 3, Open
(or demonstrated proficiency)

Native Languages (NL4)
Level 4, Open
(or demonstrated proficiency)

Native Languages (NL5)
Level 5, Open
Course Descriptions for Native Languages

Native Languages, Level 4, Open
This course will provide students with opportunities to further develop their knowledge of a Native language and of Native philosophy, spirituality, and values, and to enhance their sense of identity and self-worth. Students will increase their vocabulary and their facility in using idioms, and will use the Native language to analyse literature, discuss various issues that affect the local community, and exchange information electronically.

Native Languages, Level 5, Open
This course provides students with opportunities to increase their knowledge of a Native language and culture. Students will increase their vocabulary; use complex language structures and formal language; and use the Native language to analyse literature, discuss issues (e.g., economic development, personal development), and study Native customs, traditions, and world views. They will examine differences in dialects while communicating with others electronically.
## NATIVE STUDIES

### Courses in Native Studies, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>English: Contemporary Aboriginal Voices</td>
<td>University</td>
<td>NBE3U</td>
<td>Grade 10 English, Academic</td>
</tr>
<tr>
<td>11</td>
<td>Current Aboriginal Issues in Canada</td>
<td>University/College</td>
<td>NDA3M</td>
<td>Grade 10 Aboriginal Peoples in Canada, Open, or Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
</tr>
<tr>
<td>11</td>
<td>Aboriginal Beliefs, Values, and Aspirations in Contemporary Society</td>
<td>College</td>
<td>NBV3C</td>
<td>Grade 10 Aboriginal Peoples in Canada, Open, or Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
</tr>
<tr>
<td>11</td>
<td>English: Contemporary Aboriginal Voices</td>
<td>College</td>
<td>NBE3C</td>
<td>Grade 10 English, Academic or Applied</td>
</tr>
<tr>
<td>11</td>
<td>Aboriginal Beliefs, Values, and Aspirations in Contemporary Society</td>
<td>Workplace</td>
<td>NBV3E</td>
<td>Grade 10 Aboriginal Peoples in Canada, Open, or Grade 10 Canadian History in the Twentieth Century, Academic or Applied</td>
</tr>
<tr>
<td>11</td>
<td>English: Contemporary Aboriginal Voices</td>
<td>Workplace</td>
<td>NBE3E</td>
<td>Grade 10 English, Academic or Applied</td>
</tr>
<tr>
<td>Grade</td>
<td>Course Name</td>
<td>Course Type</td>
<td>Course Code</td>
<td>Prerequisite</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------------------</td>
<td>----------------------</td>
<td>-------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12</td>
<td>Aboriginal Governance: Emerging Directions</td>
<td>University/College</td>
<td>NDG4M</td>
<td>Any Grade 11 university, university/college, or college preparation course in Native studies</td>
</tr>
<tr>
<td>12</td>
<td>Aboriginal Issues in a Global Context</td>
<td>University/College</td>
<td>NDW4M</td>
<td>Any Grade 11 university, university/college, or college preparation course in Native studies</td>
</tr>
</tbody>
</table>

*Note: Each of the courses listed above is worth one credit.*
Prerequisite Chart for Native 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.

Expressing Aboriginal Cultures
Grade 9, Open

English
Grade 10, Academic

English
Grade 10, Applied

Aboriginal Peoples in Canada
Grade 10, Open

Canadian History in the Twentieth Century
Grade 10, Academic or Applied

English: Contemporary Aboriginal Voices
Grade 11, University

English: Contemporary Aboriginal Voices
Grade 11, College

Aboriginal Beliefs, Values, and Aspirations in Contemporary Society
Grade 11, Workplace

Aboriginal Beliefs, Values, and Aspirations in Contemporary Society
Grade 11, College

Current Aboriginal Issues in Canada
Grade 11, University/College

Aboriginal Governance: Emerging Directions
Grade 12, University/College

Aboriginal Issues in a Global Context
Grade 12, University/College

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.
Course Descriptions for Native Studies

**English: Contemporary Aboriginal Voices, Grade 11, University Preparation**  NBE3U
This course emphasizes the development of literacy, critical thinking, and communication skills through the study of works in English by Aboriginal writers. Through the analysis of texts, students will develop an appreciation of the wealth and complexity of Aboriginal writing. Students will conduct research and analyse the information gathered; write persuasive and literary essays; and analyse the relationship between media forms and audiences. An important focus will be the further development of students’ understanding of English-language usage and conventions.

**Current Aboriginal Issues in Canada, Grade 11, University/College Preparation**  NDA3M
This course focuses on existing and emerging issues of importance to Aboriginal peoples in Canada. Students will investigate issues related to identity, relationships among Aboriginal peoples and between Aboriginal peoples and other Canadians, sovereignty principles as presented by Aboriginal peoples, and the contemporary challenges posed by these issues. Students will also examine such topics as language preservation, the responsibilities of Aboriginal women and men, and the need for dialogue between Aboriginal and non-Aboriginal peoples.

**Aboriginal Beliefs, Values, and Aspirations in Contemporary Society,**
Grade 11, College Preparation  NBV3C
This course focuses on the beliefs, values, and aspirations of Aboriginal peoples in Canada. Students will examine world views of Aboriginal peoples and political, economic, cultural, and social challenges facing individuals and communities. Students will also learn how traditional and contemporary beliefs and values influence the aspirations and actions of Aboriginal peoples.

**English: Contemporary Aboriginal Voices, Grade 11, College Preparation**  NBE3C
This course emphasizes the development of literacy, critical thinking, and communication skills through the study of works in English by Aboriginal writers. Students will study the content, form, and style of informational texts and literary works, and will develop an appreciation of the wealth and complexity of Aboriginal writing. They will write reports, correspondence, and persuasive essays and analyse the relationship between media forms and audiences. An important focus will be on establishing appropriate voice and using business and technical language with precision and clarity.

**Aboriginal Beliefs, Values, and Aspirations in Contemporary Society, Grade 11,**
Workplace Preparation  NBV3E
This course focuses on the beliefs, values, and aspirations of Aboriginal peoples in Canada. Students will examine issues of identity facing Indian, Métis, and Inuit peoples, and their relationships to land and nature, as well as to one another within their communities and working environments. Students will also learn how traditional and contemporary beliefs and values influence the present-day aspirations and actions of Aboriginal peoples.
English: Contemporary Aboriginal Voices, Grade 11, Workplace Preparation  NBE3E
This course emphasizes the development of literacy, critical thinking, and communication skills through the study of works in English by Aboriginal writers. Students will study the content, form, and style of informational texts and literary works, and will develop an appreciation of the wealth and complexity of Aboriginal writing. Students will write explanations, letters, and reports; and investigate the connections between media forms and audiences. An important focus will be on using language clearly, accurately, and effectively in a variety of contexts.

Aboriginal Governance: Emerging Directions, Grade 12, University/College Preparation  NDG4M
This course investigates how Aboriginal governments exercise authority and demonstrate responsibilities associated with governance in Canada. Students will explore Aboriginal world views regarding identity, relationships among Aboriginal peoples and between Aboriginal peoples and other Canadians, and Aboriginal definitions of sovereignty. Students will also compare traditional and contemporary forms of Aboriginal governance and will examine Aboriginal and Canadian relations, focusing on empowerment and the inherent right to self-government.

Aboriginal Issues in a Global Context, Grade 12, University/College Preparation  NDW4M
This course provides students with an overview of the issues and challenges that confront Aboriginal peoples worldwide. Students will develop an understanding of the concerns and aspirations of the world’s Aboriginal population, plan and conduct research on global issues that have an impact on Aboriginal peoples, and use information technology to consult materials related to the views of Aboriginal peoples throughout the world.
## SCIENCE

### Courses in Science, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology</td>
<td>Biology</td>
<td>University</td>
<td>SBI3U</td>
<td>Grade 10 Science, Academic</td>
</tr>
<tr>
<td>11</td>
<td>Biology</td>
<td>College</td>
<td>SBI3C</td>
<td>Grade 10 Science, Academic or Applied</td>
</tr>
<tr>
<td>12</td>
<td>Biology</td>
<td>University</td>
<td>SBI4U</td>
<td>Grade 11 Biology, University</td>
</tr>
<tr>
<td>Chemistry</td>
<td>Chemistry</td>
<td>University</td>
<td>SCH3U</td>
<td>Grade 10 Science, Academic</td>
</tr>
<tr>
<td>11</td>
<td>Chemistry</td>
<td>University</td>
<td>SCH4U</td>
<td>Grade 11 Chemistry, University</td>
</tr>
<tr>
<td>12</td>
<td>Chemistry</td>
<td>College</td>
<td>SCH4C</td>
<td>Grade 10 Science, Academic or Applied</td>
</tr>
<tr>
<td>Earth and Space Science</td>
<td>Earth and Space</td>
<td>University</td>
<td>SES4U</td>
<td>Grade 10 Science, Academic</td>
</tr>
<tr>
<td>12</td>
<td>Earth and Space</td>
<td>Science</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physics</td>
<td>Physics</td>
<td>University</td>
<td>SPH3U</td>
<td>Grade 10 Science, Academic</td>
</tr>
<tr>
<td>11</td>
<td>Physics</td>
<td>University</td>
<td>SPH4U</td>
<td>Grade 11 Physics, University</td>
</tr>
<tr>
<td>12</td>
<td>Physics</td>
<td>College</td>
<td>SPH4C</td>
<td>Grade 10 Science, Academic or Applied</td>
</tr>
<tr>
<td>Science</td>
<td>Science</td>
<td>University/College</td>
<td>SNC3M</td>
<td>Grade 10 Science, Academic or Applied</td>
</tr>
<tr>
<td>11</td>
<td>Science</td>
<td>Workplace</td>
<td>SNC3E</td>
<td>Grade 9 Science, Academic or Applied</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Science</td>
<td>University/College</td>
<td>SNC4M</td>
<td>Grade 11 Science, University/College</td>
</tr>
<tr>
<td>12</td>
<td>Science</td>
<td>Workplace</td>
<td>SNC4E</td>
<td>Grade 11 Science, Workplace</td>
</tr>
</tbody>
</table>

*Note: Each of the courses listed above is worth one credit.*
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.
Course Descriptions for Science

Biology

Biology, Grade 11, University Preparation SBI3U
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.

Biology, Grade 11, College Preparation SBI3C
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.

Biology, Grade 12, University Preparation SBI4U
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 the various branches of life sciences and related fields.

Chemistry

Chemistry, Grade 11, University Preparation SCH3U
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.

Chemistry, Grade 12, University Preparation SCH4U
This course enables students to deepen their understanding of chemistry through the study of organic chemistry, energy changes and rates of reaction, chemical equilibrium, atomic and molecular structure, and electrochemistry. 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.
Chemistry, Grade 12, College Preparation  
This course introduces students to the concepts that form the basis of modern chemistry. Students will study qualitative analysis, quantitative relationships 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 of data collection and scientific analysis, and communicate scientific information using appropriate terminology. Emphasis will be placed on the role of chemistry in daily life and in the development of new technologies and products.

Earth and Space Science

Earth and Space Science, Grade 12, University Preparation  
This course focuses on the basic concepts and theories of Earth and space science, and their relevance to everyday life. Students will first study the origin and evolution of the universe, and then explore the materials and the internal and surficial processes of the Earth as they study the planet’s history. The course draws on biology, chemistry, mathematics, and physics in its consideration of geological processes that can be observed directly or inferred from geological evidence.

Physics

Physics, Grade 11, University Preparation  
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 interrelationships between physics and technology, and consider the impact of technological applications of physics on society and the environment.

Physics, Grade 12, University Preparation  
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.
Physics, Grade 12, College Preparation

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.

Science

Science, Grade 11, University/College Preparation

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

Science, Grade 11, Workplace Preparation

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.

Science, Grade 12, University/College Preparation

This course enables students, including those who do not intend to pursue science-related programs at the postsecondary 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; communication systems; and contemporary scientific discoveries and dilemmas. 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.

Science, Grade 12, Workplace Preparation

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; horticulture, forestry, and gardening; 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.
### Social Sciences and Humanities

Courses in Social Sciences and Humanities, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Living and Working With Children</td>
<td>College</td>
<td>HPW3C</td>
<td>None</td>
</tr>
<tr>
<td>11</td>
<td>Managing Personal and Family Resources</td>
<td>College</td>
<td>HIR3C</td>
<td>None</td>
</tr>
<tr>
<td>11</td>
<td>Managing Personal Resources</td>
<td>Workplace</td>
<td>HIP3E</td>
<td>None</td>
</tr>
<tr>
<td>11</td>
<td>Fashion and Creative Expression</td>
<td>Open</td>
<td>HNA3O</td>
<td>None</td>
</tr>
<tr>
<td>11</td>
<td>Living Spaces and Shelter</td>
<td>Open</td>
<td>HLS3O</td>
<td>None</td>
</tr>
<tr>
<td>11</td>
<td>Parenting</td>
<td>Open</td>
<td>HPC3O</td>
<td>None</td>
</tr>
<tr>
<td>12</td>
<td>Food and Nutrition Sciences</td>
<td>University/College</td>
<td>HFA4M</td>
<td>Any university, university/college, or college preparation course in social sciences and humanities, English, or Canadian and world studies</td>
</tr>
<tr>
<td>12</td>
<td>Individuals and Families in a Diverse Society</td>
<td>University/College</td>
<td>HHS4M</td>
<td>Any university, university/college, or college preparation course in social sciences and humanities, English, or Canadian and world studies</td>
</tr>
<tr>
<td>12</td>
<td>Issues in Human Growth and Development</td>
<td>University/College</td>
<td>HHG4M</td>
<td>Any university, university/college, or college preparation course in social sciences and humanities, English, or Canadian and world studies</td>
</tr>
<tr>
<td>Grade</td>
<td>Course Name</td>
<td>Course Type</td>
<td>Course Code</td>
<td>Prerequisite</td>
</tr>
<tr>
<td>-------</td>
<td>------------------------------------------------</td>
<td>-------------</td>
<td>-------------</td>
<td>----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>12</td>
<td>Parenting and Human Development</td>
<td>Workplace</td>
<td>HPD4E</td>
<td>None</td>
</tr>
<tr>
<td>12</td>
<td>The Fashion Industry</td>
<td>Open</td>
<td>HNB4O</td>
<td>None</td>
</tr>
</tbody>
</table>

### General Social Science

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Introduction to Anthropology, Psychology, and Sociology</td>
<td>University/College</td>
<td>HSP3M</td>
<td>None</td>
</tr>
<tr>
<td>12</td>
<td>Challenge and Change in Society</td>
<td>University/College</td>
<td>HSB4M</td>
<td>Any university, university/college, or college preparation course in social sciences and humanities, English, or Canadian and world studies</td>
</tr>
</tbody>
</table>

### Philosophy

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>Philosophy: The Big Questions</td>
<td>Open</td>
<td>HZB3O</td>
<td>None</td>
</tr>
<tr>
<td>12</td>
<td>Philosophy: Questions and Theories</td>
<td>University</td>
<td>HZT4U</td>
<td>Any university or university/college preparation course in social sciences and humanities, English, or Canadian and world studies</td>
</tr>
</tbody>
</table>

### World Religions

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>World Religions: Beliefs, Issues, and Religious Traditions</td>
<td>University/College</td>
<td>HRT3M</td>
<td>None</td>
</tr>
<tr>
<td>11</td>
<td>World Religions: Beliefs and Daily Life</td>
<td>Open</td>
<td>HRW3O</td>
<td>None</td>
</tr>
</tbody>
</table>

Note: Each of the courses listed above is worth one credit.
Prerequisite Chart for Social Sciences and 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.

Individual and Family Living
Grade 9 or 10, Open

Food and Nutrition
Grade 9 or 10, Open

Any Grade 11 or 12 university or university/college preparation course in social sciences and humanities, English, or Canadian and world studies

Introduction to Anthropology, Psychology, and Sociology
Grade 11, University/College

World Religions: Beliefs, Issues, and Religious Traditions
Grade 11, University/College

Any Grade 11 or 12 college preparation course in social sciences and humanities, English, or Canadian and world studies

Living and Working With Children
Grade 11, College

Managing Personal and Family Resources
Grade 11, College

Managing Personal Resources
Grade 11, Workplace

Fashion and Creative Expression
Grade 11, Open

Living Spaces and Shelter
Grade 11, Open

Parenting
Grade 11, Open

World Religions: Beliefs and Daily Life
Grade 11, Open

Philosophy: The Big Questions
Grade 11, Open

Philosophy: Questions and Theories
Grade 12, University

Challenge and Change in Society
Grade 12, University/College

Food and Nutrition Sciences
Grade 12, University/College

Individuals and Families in a Diverse Society
Grade 12, University/College

Issues in Human Growth and Development
Grade 12, University/College

Parenting and Human Development
Grade 12, Workplace

The Fashion Industry
Grade 12, Open
Course Descriptions for Social Sciences and Humanities

Family Studies

Living and Working With Children, Grade 11, College Preparation HPW3C
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.

Managing Personal and Family Resources, Grade 11, College Preparation HIR3C
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 postsecondary 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.

Managing Personal Resources, Grade 11, Workplace Preparation H1P3E
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.

Fashion and Creative Expression, Grade 11, Open HNA3O
This course explores what clothing communicates about the wearer and how it becomes a creative and entrepreneurial outlet through the design and production processes. 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 and care 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.

Living Spaces and Shelter, Grade 11, Open HLS3O
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.
Parenting, Grade 11, Open  
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.

Food and Nutrition Sciences, Grade 12, University/College Preparation  
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.

Individuals and Families in a Diverse Society, Grade 12, University/College Preparation  
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.

Issues in Human Growth and Development, Grade 12, University/College Preparation  
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.

Parenting and Human Development, Grade 12, Workplace Preparation  
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.
The Fashion Industry, Grade 12, Open  
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.

General Social Science

Introduction to Anthropology, Psychology, and Sociology, Grade 11, University/College Preparation  
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.

Challenge and Change in Society, Grade 12, University/College Preparation  
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 the 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.

Philosophy

Philosophy: The Big Questions, Grade 11, Open  
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.

Philosophy: Questions and Theories, Grade 12, University Preparation  
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.
World Religions

World Religions: Beliefs, Issues, and Religious Traditions, Grade 11, University/College Preparation
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.

World Religions: Beliefs and Daily Life, Grade 11, Open
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.
# TECHNOLOGICAL EDUCATION

## Courses in Technological Education, Grades 11 and 12

<table>
<thead>
<tr>
<th>Grade</th>
<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
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</thead>
<tbody>
<tr>
<td></td>
<td><strong>PART A: BROAD-BASED TECHNOLOGY</strong></td>
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<tr>
<td></td>
<td><strong>Communications Technology</strong></td>
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<tr>
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<tr>
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<td>Grade</td>
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<td>Grade</td>
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<td>Course Code</td>
<td>Prerequisite</td>
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**PART B: COMPUTER STUDIES**

<table>
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<tr>
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<th>Course Name</th>
<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
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**Computer Engineering**

<table>
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<tr>
<th>Grade</th>
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<th>Course Type</th>
<th>Course Code</th>
<th>Prerequisite</th>
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<td>ICE4M</td>
<td>Grade 11 Computer Engineering, University/College, or Grade 11 Computer and Information Science, University/College</td>
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<td>Computer Engineering</td>
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<td>ICE4E</td>
<td>Grade 11 Computer Engineering. Workplace</td>
</tr>
</tbody>
</table>

*Note:* Each of the courses listed above is worth one credit. Courses that lead to apprenticeship, however, may be planned for more than 110 hours of scheduled instructional time, to allow for the practice and refinement of skills needed to achieve performance levels required for certification or entry into apprenticeship programs. For each 55-hour increment, students earn an additional half-credit. The number of additional credits and the nature of the assignments to be completed must be established before the start of the course.
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

Integrated Technologies
Grade 9, Open

Construction Technology

Integrated Technologies
Grade 9, Open

Health and Personal Services

Integrated Technologies
Grade 9, Open

Health and Personal Services Technology
Grade 10, Open

Hospitality and Tourism

Integrated Technologies
Grade 9, Open

Hospitality and Tourism
Grade 10, Open

Hospitality and Tourism
Grade 11, Workplace

Hospitality and Tourism
Grade 12, Workplace

Communications Technology
Grade 11, Open

Communications Technology
Grade 10, Open

Communications Technology
Grade 11, Workplace

Communications Technology
Grade 12, Workplace

Communications Technology
Grade 11, University/College

Communications Technology
Grade 12, University/College

Construction Technology
Grade 11, College

Construction Technology
Grade 12, College

Construction Technology
Grade 11, Workplace

Construction Technology
Grade 12, Workplace

Health Care
Grade 11, College

Medical Technologies
Grade 12, College

Child Development and Gerontology
Grade 12, College

Hair styling and Aesthetics
Grade 11, Workplace

Hair styling and Aesthetics
Grade 12, Workplace

Hospitality
Grade 11, College

Tourism
Grade 12, College

Hospitality and Tourism
Grade 11, Workplace

Hospitality and Tourism
Grade 12, Workplace
Prerequisite Charts for Technological Education, Part A: Broad-based Technology (cont.)

**Manufacturing Technology**

- Integrated Technologies  
  *Grade 9, Open*
- Manufacturing Technology  
  *Grade 10, Open*
- Manufacturing Technology  
  *Grade 11, College*
- Manufacturing Engineering Technology  
  *Grade 12, College*

**Technological Design**

- Integrated Technologies  
  *Grade 9, Open*
- Technological Design  
  *Grade 10, Open*
- Technological Design  
  *Grade 11, University/College*
- Technological Design  
  *Grade 12, University/College*

**Transportation Technology**

- Integrated Technologies  
  *Grade 9, Open*
- Transportation Technology  
  *Grade 10, Open*
- Transportation Technology  
  *Grade 11, College*
- Transportation Technology  
  *Grade 12, College*
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

- Computer and Information Science
  - Grade 10, Open

- Computer and Information Science
  - Grade 11, University/College

- Computer and Information Science
  - Grade 12, University/College

**Computer Engineering**

- Integrated Technologies
  - Grade 9, Open

- Computer Engineering
  - Grade 10, Open

- Computer Engineering
  - Grade 11, University/College

- Computer Engineering
  - Grade 12, University/College

- Computer Engineering
  - Grade 11, Workplace

- Computer Engineering
  - Grade 12, Workplace
Course Descriptions for Technological Education, Part A: Broad-based Technology

Communications Technology

Communications Technology, Grade 11, University/College Preparation TGJ3M
This course examines communications systems and design and production processes in one or more of 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.

Communications Technology, Grade 11, Workplace Preparation TGJ3E
This course examines communications systems and design and production processes in one or more of 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.

Communications Technology, Grade 12, University/College Preparation TGJ4M
This course examines communications systems and design and production processes in one or more of the areas of electronic, live, and graphic communications. Students will independently create, manage, and distribute complex graphic, electronic, or audiovisual projects. 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.

Communications Technology, Grade 12, Workplace Preparation TGJ4E
This course examines communications systems and design and production processes in one or more of the areas of electronic, live, and graphic communications. Students will develop the specialized knowledge and skills needed to diagnose and solve problems in a range of advanced communications systems, and to maintain and repair such systems. Students will also study industry standards and regulations and health and safety issues, and will explore careers, the importance of lifelong learning, business management and entrepreneurial opportunities, and the impact of communications technology on society and the environment.
Construction Technology

Construction Technology, Grade 11, College Preparation TCJ3C
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.

Construction Technology, Grade 11, Workplace Preparation TCJ3E
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.

Construction Technology, Grade 12, College Preparation TCJ4C
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 and heavy construction industries; structural analysis and design; presentation and working drawings; and mechanical systems. They will also estimate materials and labour costs, study industry standards and building codes, consider health and safety issues, and explore energy conservation, careers, and the impact of construction technology on society and the environment.

Construction Technology, Grade 12, Workplace Preparation TCJ4E
This course focuses on residential and heavy construction, emphasizing 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; mechanical systems; and landscaping. They will also study industry standards and building codes, consider health and safety issues, and explore careers, lifelong learning opportunities, and the impact of construction technology on society and the environment.
Health and Personal Services

Health Care, Grade 11, College Preparation
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 biotechnology; and explore various career opportunities in the health care field.

Hairstyling and Aesthetics, Grade 11, Workplace Preparation
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.

Child Development and Gerontology, Grade 12, College Preparation
This course helps students understand and analyse the stages of development and needs of children and seniors. Students will master the basic skills required to meet these needs; acquire an awareness of legislation governing child and geriatric care; evaluate social and recreational activities for children and the elderly; and assess available facilities. Students will also examine career paths in child or geriatric care, the impact of technological developments on products and services, and health and safety laws.

Medical Technologies, Grade 12, College Preparation
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.

Hairstyling and Aesthetics, Grade 12, Workplace Preparation
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. The course may focus on either hairstyling or aesthetics, or may include a combination of both areas.
Hospitality and Tourism

Hospitality, Grade 11, College Preparation  
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.

Hospitality and Tourism, Grade 11, Workplace Preparation  
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 industry’s social and environmental impacts, and identify possible career paths.

Tourism, Grade 12, College Preparation  
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.

Hospitality and Tourism, Grade 12, Workplace Preparation  
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.

Manufacturing Technology

Manufacturing Engineering Technology, Grade 11, College Preparation  
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.
**Manufacturing Technology, Grade 11, Workplace Preparation**

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.

**Manufacturing Engineering Technology, Grade 12, College Preparation**

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.

**Manufacturing Technology, Grade 12, Workplace Preparation**

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.

**Technological Design**

**Technological Design, Grade 11, University/College Preparation**

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 postsecondary studies in engineering, manufacturing, architecture, and construction.

**Technological Design, Grade 11, Workplace Preparation**

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.
**Technological Design, Grade 12, University/College Preparation**  
TDJ4M  
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.

**Technological Design, Grade 12, Workplace Preparation**  
TDJ4E  
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.

**Transportation Technology**

**Transportation Technology, Grade 11, College Preparation**  
TTJ3C  
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.

**Transportation Technology, Grade 11, Workplace Preparation**  
TTJ3E  
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.

**Transportation Technology, Grade 12, College Preparation**  
TTJ4C  
This course examines the 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.
Transportation Technology, Grade 12, Workplace Preparation

This course examines the commonalities of land, air, and/or marine vehicles and transportation systems. Students will develop safe workplace habits and business management skills and will use diagnostic, hand, and 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.

Course Descriptions for Technological Education, Part B:
Computer Studies

Computer and Information Science

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

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.

Computer and Information Science, Grade 12, University/College Preparation

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 postsecondary education and career paths in computer science.

Computer Engineering

Computer Engineering, Grade 11, University/College Preparation

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.
Computer Engineering, Grade 11, Workplace Preparation  
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.

Computer Engineering, Grade 12, University/College Preparation  
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.

Computer Engineering, Grade 12, Workplace Preparation  
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.