

GRADE 12 PROGRAM

The Element High School is a Montessori High School that meets and exceeds the Ontario curriculum. A few distinguishing features of our program are:

- Awareness and incorporation of the developmental needs of adolescents in our programming.
- Small students to teacher ratio.
- Collaborative working environment.
- Faculty advisors who guide individual goal setting and accountability.
- Independent Work Periods (IWP) that enable students to manage their own time and pursue work that interests them with teacher support.
- Authentic World of Learning (AWOL) that immerses students in the real-world.
- Development of essential skills that help students understand themselves as learners.
- Community service.
- Interaction with the real world and the city as our campus.
- Leadership opportunities through multi-age groupings.
- Learning commons work environment.
- Choice and creativity are incorporated into students' daily work and projects
- Key lessons delivered by experienced faculty.
- Various electives taught by professionals who work in their respective fields.
- Digital and Financial Literacy.
- Meaningful and timely student assessment.
- Preparation for adult life.

The Element Diploma includes the following Grade 12 Elective Courses:

Students can choose 7 out of 13 Electives.

International Business Fundamentals, Grade 12, University/College (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. This course prepares students for postsecondary programs in business, including international business, marketing, and management.

Travel and Tourism: A Geographic Perspective, Grade 11, Open (CGG3O)

This course focuses on issues related to travel and tourism within and between various regions of the world. Students will investigate unique environmental, sociocultural, economic, and political characteristics of selected world regions. They will explore travel patterns and trends as well as tensions related to tourism, and will predict future tourism destinations. Students will apply the concepts of geographic thinking and the geographic inquiry process, including spatial technologies, to investigate the impact of the travel industry on natural environments and human communities.

Canadian and International Law, Grade 12, University (CLN4U)

This course explores a range of contemporary legal issues and how they are addressed in both Canadian and international law. Students will develop an understanding of the principles of Canadian and international law and of issues related to human rights and freedoms, conflict resolution, and criminal, environmental, and workplace law, both in Canada and internationally. Students will apply the concepts of legal thinking and the legal studies inquiry process, and will develop legal reasoning skills, when investigating these and other issues in both Canadian and international contexts.

World Issues: A Geographic Analysis, Grade 12, University (CGW4U)

In this course, students will address the challenge of creating a more sustainable and equitable world. They will explore issues involving a wide range of topics, including economic disparities, threats to the environment, globalization, human rights, and quality of life, and analyse government policies, international agreements, and individual responsibilities relating to them. Students will apply the concepts of geographic thinking and the geographic inquiry process, including the use of spatial technologies, to investigate these complex issues and their impacts on natural and human communities around the world.

Core French, Grade 12, University (FSF4U)

This course provides extensive opportunities for students to speak and interact in French independently. Students will develop their listening, speaking, reading, and writing skills, apply language learning strategies in a wide variety of real-life situations, and develop their creative and critical thinking skills through responding to and interacting with a variety of oral and written texts. They will also enrich their understanding and appreciation of diverse French-speaking communities, and will develop skills necessary for lifelong language learning.

Challenge and Change in Society, Grade 12, University (HSB4U)

This course focuses on the use of social science theories, perspectives, and methodologies to investigate and explain shifts in knowledge, attitudes, beliefs, and behaviour and their impact on society. Students will critically analyse how and why cultural, social, and behavioural patterns change over time. They will explore the ideas of social theorists and use those ideas to analyse causes of and responses to challenges such as technological change, deviance, and global inequalities. Students will explore ways in which social science research methods can be used to study social change.

Calculus and Vectors, Grade 12, University (MCV4U)

This course builds on students' previous experience with functions and their developing understanding of rates of change. Students will solve problems involving geometric and algebraic representations of vectors and representations of lines and planes in three-dimensional space; broaden their understanding of rates of change to include the derivatives of polynomial, sinusoidal, exponential, rational, and radical functions; and apply these concepts and skills to the modelling of real-world relationships. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. This course is intended for students who choose to pursue careers in fields such as science, engineering, economics, and some areas of business, including those students who will be required to take a university-level calculus, linear algebra, or physics course.

Mathematics of Data Management, Grade 12, University (MDM4U)

This course broadens students' understanding of mathematics as it relates to managing data. Students will apply methods for organizing and analysing large amounts of information; solve problems involving probability and statistics; and carry out a culminating investigation that integrates statistical concepts and skills. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. Students planning to enter university 100 programs in business, the social sciences, and the humanities will find this course of particular interest.

Advanced Functions, Grade 12, University (MHF4U)

This course extends students' experience with functions. Students will investigate the properties of polynomial, rational, logarithmic, and trigonometric functions; develop techniques for combining functions; broaden their understanding of rates of change; and develop facility in applying these concepts and skills. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. This course is intended both for students taking the Calculus and Vectors course as a prerequisite for a university program and for those wishing to consolidate their understanding of mathematics before proceeding to any one of a variety of university programs.



Introductory Kinesiology, Grade 12, University (PSK4U)

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 sport, and the physiological, psychological, and social factors that influence an individual's participation in physical activity and sport. The course prepares students for university programs in physical education and health, kinesiology, health sciences, health studies, recreation, and sports administration.

Biology, Grade 12, University (SBI4U)

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

Chemistry, Grade 12, University (SCH4U)

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

Physics, Grade 12, University (SPH4U)

This course enables students to deepen their understanding of physics concepts and theories. Students will continue their exploration of energy transformations and the forces that affect motion, and will investigate electrical, gravitational, and magnetic fields and electromagnetic radiation. Students will also explore the wave nature of light, quantum mechanics, and special relativity. They will further develop their scientific investigation skills, learning, for example, how to analyse, qualitatively and quantitatively, data related to a variety of physics concepts and principles. Students will also consider the impact of technological applications of physics on society and the environment.

The Element Diploma includes one Grade 12 Compulsory Course:

English, Grade 12, University (ENG4U)

This course emphasizes the consolidation of the literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. Students will analyse a range of challenging literary texts from various periods, countries, and cultures; interpret and evaluate informational and graphic texts; and create oral, written, and media texts in a variety of forms. An important focus will be on using academic language coherently and confidently, selecting the reading strategies best suited to particular texts and particular purposes for reading, and developing greater control in writing. The course is intended to prepare students for university, college, or the workplace.



AWOL (Authentic World of Learning)

Praxis Project

The praxis project is an interdisciplinary project that requires students to explore academically an issue of their choosing as it relates to an overarching philosophical question. It calls on students to connect various disciplines and guides them to an understanding of the subject matter beyond the recall of facts and completion of single-subject projects.

The project will incorporate the following skills: critical thinking, collaboration, communication, application, synthesis, creativity, and initiative. Additionally, it will require students to collaborate on a final project presentation and defence, as students will relate their papers to the philosophical question provided.

The project will be completed as part of the student's course work as well as during AWOL time and make up part of The Element Diploma. Praxis essays will be published each year in The Element Praxis Journal.

Winterim Trip

Our students will participate in the international community service trip that they have planned during some of their grade 11 AWOL time.

Personal Financial Literacy

Students will be provided with the knowledge and skills to make effective and informed money management decisions.

Topics covered will include: **Budgeting - Interest - Credit - Saving - Simple investing**

Leave Your Mark

Our senior students will be asked to leave their mark in some positive way of their choosing. The possibilities are open ended and the mark should be personalized in some way.

Online Courses

If students wish to take an elective that we are not offering, they may apply to take an online course. They must demonstrate their ability to handle the independence required, based on the following information from the previous two reporting cycles:

1. Reason for wanting to take the course.
2. Their number of days late.
3. Their number of late assignments.
4. Their learning skills assessments for their previous two report cards.

The Element High School staff are available to support students with questions. Parents will have to cover the cost of the elective course. No Element tuition discount will be given. Students can take no more than 2 online credits as part of their Element Diploma.



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