

Guelph Collegiate Vocational Institute

Grade 12 Course Selection for 2023-2024

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Art

ASM4E - Media Arts, Grade 12, Workplace Preparation

This course focuses on a practical approach to a variety of media arts challenges related to the interests of the student and provides students with opportunities to examine media arts in relation to the world of work. Students will develop works that express their views on contemporary issues and will create portfolios suitable for use in post-secondary work experiences. Students will critically analyse the role of media artists in shaping audience perceptions of identity, culture, and community values, particularly within the context of the workplace.

Prerequisite: ASM3O, Media Arts, Grade 11, Open

ASM4M - Media Arts, Grade 12, University/College Preparation

This course emphasizes the refinement of media arts skills through the creation of a thematic body of work by applying traditional and emerging technologies, tools, and techniques such as multimedia, computer animation, installation art, and performance art. Students will develop works that express their views on contemporary issues and will create portfolios suitable for use in either career or postsecondary education applications. Students will critically analyse the role of media artists in shaping audience perceptions of identity, culture, and community values.

Prerequisite: ASM3M, Media Arts, Grade 11, University/College Preparation

AVI4M - Visual Arts, Grade 12, University/College Preparation

This course focuses on enabling students to refine their use of the creative process when creating and presenting two- and three-dimensional art works using a variety of traditional and emerging media and technologies. Students will use the critical analysis process to deconstruct art works and explore connections between art and society. The studio program enables students to explore a range of materials, processes, and techniques that can be applied in their own art production. Students will also make connections between various works of art in personal, contemporary, historical, and cultural contexts.

Prerequisite: AVI3M, Visual Arts, Grade 11, University/College Preparation

Recommended Preparation: AWM4M, Drawing and Painting, Grade 12, University/College Preparation

AWM4M - Drawing and Painting, Grade 12, University/College Preparation

This course provides students with opportunities to further develop their skills and knowledge in visual arts. It will focus on the refinement of students' skills and knowledge in the visual arts towards the development of a portfolio. Students will produce a body of work demonstrating a personal approach to drawing and painting. Students will analyze various art forms, use theories of art in analyzing and producing art. They will increase their understanding of stylistic changes in modern and contemporary Western art, Canadian art, and art forms from various parts of the world.

Prerequisite: AVI3M, Visual Arts, Grade 11, University/College Preparation

Business Department

Accounting

BAT4M - Financial Accounting Principles, Grade 12, University/College Preparation

This course introduces students to advanced accounting principles that will prepare them for postsecondary studies in business. Students will learn about financial statements for various forms of business ownership and how those statements are interpreted in making business decisions. This course further develops accounting methods for assets and introduces accounting for partnerships, corporations, and sources of financing.

Optional Workbook Fee: \$35.00

Prerequisite: BAF3M, Financial Accounting Fundamentals, Grade 11, University/College Preparation

International Business

BBB4E - International Business Essentials, Grade 12, Workplace Preparation

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

Recommended Preparation: BMI3C, Marketing: Goods, Services, Events, Grade 11, College Preparation.

BBB4M - International Business Fundamentals, Grade 12, University/College Preparation

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.

Recommended Preparation: BMI3C, Marketing: Goods, Services, Events, Grade 11, College Preparation.

Economics

CIA4U - Analyzing Current Economic Issues, Grade 12, University Preparation

This course examines current Canadian and international economic issues, developments, policies, and practices from diverse perspectives. Students will explore the decisions that individuals and institutions, including governments, make in response to economic issues such as globalization, trade agreements, economic inequalities, regulation, and public spending. Students will apply the concepts of economic thinking and the economic inquiry process, as well as economic models and theories, to investigate, and develop informed opinions about, economic trade-offs, growth, and sustainability and related economic issues.

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

CIC4E - Making Personal Economic Choices, Grade 12, Workplace Preparation

This course provides students with a fundamental understanding of a variety of key economic issues and practices, helping them develop their ability to make informed economic choices in their day-to-day lives. Students will examine practical financial matters, such as personal budgeting, taxes, credit and debt, and savings and investment, as well as various economic issues, such as those related to the underground economy, economic inequality, and consumer behaviour. Students will apply the concepts of economic thinking, the economic inquiry process, and economic models to investigate various economic issues and structures and to analyse the impact of economic decisions, including their own decisions, at the individual, community, and national levels.

Prerequisite: CHC2D/P, Canadian History since World War I, Grade 10, Academic or Applied, or the locally developed compulsory course (LDCC) in Canadian history.

Law

CLN4U - Canadian and International Law, Grade 12, University Preparation

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.

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

Computer Studies

ICS4C - Computer Programming, Grade 12, College Preparation

This course further develops students' computer programming skills. Students will learn object-oriented programming concepts, create object-oriented software solutions, and design graphical user interfaces. Student teams will plan and carry out a software development project using industry-standard programming tools and proper project management techniques. Students will also investigate ethical issues in computing, and expand their understanding of environmental issues, emerging technologies, and computer-related careers.

Prerequisite: ICS3C, Computer Programming, Grade 11, College Preparation

ICS4U - Computer Science, Grade 12, University Preparation

This course enables students to build upon the java structures learned in ICS3U. Object oriented programming will be emphasized with introduction to inheritance and polymorphism. Student will develop both interactive and recursive solutions to complex problems. Students will solve problems and write algorithms using various data structures such as stacks, queues, linked lists and multi-dimensional arrays. Problem solving and efficiency are emphasized throughout the course.

Prerequisite: ICS3U, Computer Programming, Grade 11, University Preparation

TER4M - Computer Engineering: Robotics & Control Systems see Technology Courses

Co-op

FTECO2 - 2 Credit Co-Op or FTECO4 - 4 Credit Co-op

Cooperative Education is a unique educational process designed to promote skill development, individual career development and self-awareness by integrating classroom learning with planned and supervised practical experiences in a community placement. The basic principle of Cooperative Education is that personal growth and career development are best achieved by an educational method which combines classroom learning with practical experiences. Learning does not confine itself to academic mastery. A student's attitude, interests, values, needs and motives depend equally upon practical experience and traditional academic learning. Cooperative Education provides realistic and relevant experiences that develop the whole person because it bridges the gap between classroom study and what a student needs to know to become a productive member of society.

Choose this co-op if there is a specific industry or job sector you would like to explore (ex. Business, Health Care, Construction, Visual Arts, etc.). Choose 2-credit (half day) or 4-credit (full day). The Co-op Department will contact you with further information after course selection is complete.

Drama

ADA4M - Dramatic Arts, Grade 12, University/College Preparation

This course requires students to experiment individually and collaboratively with forms and conventions of both drama and theatre from various cultures and time periods. Students will interpret dramatic literature and other text and media sources while learning about various theories of directing and acting. Students will examine the significance of dramatic arts in various cultures and will analyse how the knowledge and skills developed in drama are related to their personal skills, social awareness, and goals beyond secondary school.

Prerequisite: ADA3M, Dramatic Arts, Grade 11, University/College Preparation, or ADF3M, Director's Craft, Grade 11, University/College Preparation

ADC4M - Drama in the Community, Grade 12, University/College Preparation

This course challenges students to research, write and produce original dramatic presentations for public performances. Course objectives include providing a vehicle for the student voice, making a positive contribution to the school community, building bridges with our feeder schools and engaging the broader community. This course runs every other year and it will next be offered in the **2022-2023** school year.

Prerequisites: ADA3M, Dramatic Arts, Grade 11, University or College Preparation, or ADF3M, Director's Craft, Grade 11, University/College Preparation or Stage Crew Experience

ADF4M - Director's Craft, Grade 12, University/College Preparation

In this challenging course, students will work independently and collaboratively to apply research and theory to theatre creation. Building on skills from ADF3M, students will run directorial workshops exploring a selected script and their chosen approach. Students will also develop and perform a collaborative creation with their peers. Research in this course includes world theatre traditions, devised theatre and playwrights.

Prerequisite: ADF3M, Director's Craft, Grade 11, University/College Preparation

AMT4M - Musical Theatre, Grade 11/12, University/College Preparation

This course focuses on the application of knowledge and skills related to the creation, interpretation, and production of Musical Theatre involving drama, music, dance and visual art. Students will study, evaluate, create, produce and promote a pre-selected musical. Students will have an opportunity to engage in supplemental tasks designed to enrich their understanding and enjoyment of Musical Theatre and develop leadership skills within the class.

Performers are expected to commit to 10-12 hours of extra rehearsal per week. These rehearsals are scheduled for after school and on the weekends. Production students are expected to commit to extra rehearsals for the final 4 weeks of show rehearsal.

Note: This course runs every other year and it will be offered again in the **2023-2024** school year.

English

ENG4C - English, Grade 12, College Preparation

This course emphasizes the consolidation of literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. Students will analyze a variety of informational and graphic texts, as well as literary texts from various countries and cultures, and create oral, written, and media texts in a variety of forms for practical and academic purposes. An important focus will be on using language with precision and clarity and developing greater control in writing. The course is intended to prepare students for college or the workplace.

Note: This course fulfils one of the compulsory English requirements.

Prerequisite: ENG3C, English, Grade 11, College Preparation

ENG4E - English, Grade 12, Workplace Preparation

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

Prerequisite: ENG3E, English, Grade 11, Workplace Preparation

ENG4U - English, Grade 12, University Preparation

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 analyze 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 will develop greater control in writing. The course is intended to prepare students for university, college, or the workplace.

Note: This course fulfils one of the compulsory English requirements.

Prerequisite: ENG3U, English, Grade 11, University Preparation

ETS4U - Studies in Literature, Grade 12, University Program

This course is intended for students who have a passion for literature and an interest in the classics. This course examines European literature beginning with the study of Beowulf, and includes authors such as Chaucer, Wilde, Shaw, Austen, and Shelley, ending with ghost stories from the Victorian period. Students will examine these texts both creatively and analytically while also having creative freedom to explore a classic of their choice.

Prerequisite: ENG3U, English, Grade 11, University Preparation and/or EWC4U, The Writer's Craft, Grade 12, University Preparation

EWC4C - 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.

Prerequisite: ENG3U, English, Grade 11, College Preparation

EWC4U - The Writer's Craft, Grade 12, University Preparation

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

Prerequisite: ENG3U, English, Grade 11, University Preparation

IDC4U2 - Interdisciplinary Studies: Peer Tutor, Grade 12, University Preparation

Students who select this university level course will plan and implement lessons to teach reading, writing and study skills, and provide support in content subjects to Grade 9 students. Students will explore theories of child development, teaching strategies for reluctant learners, and the impact of 1:1 instruction on themselves and others. Students interested in pursuing careers in teaching, social work or psychology will find this a worthwhile course.

Recommended Preparation: ENG2D, English, Grade 10, Academic or ENG3U/3C, English, Grade 11, University or College Preparation

Note: Students may only receive one credit in IDP4U, IDC4U1 or IDC4U2. Excellent learning and communication skills, along with a willingness to work with others, are necessary.

OLC40 - Ontario Secondary School Literacy Course, Grade 12, Open

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

Prerequisite: Students who have been eligible to write the Ontario Secondary School Literacy Test (OSSLT) at least twice and have been unsuccessful at least once are eligible to take this course to achieve both a Grade 12 credit and their literacy requirement for graduation.

Note: Application for an exception to this prerequisite may be made to the Principal.

Family Studies

HFA4C - Nutrition and Health, Grade 12, College Preparation

This course focuses on the relationship between nutrition and health at different stages of life and on global issues related to food production. Students will investigate the role of nutrition in health and disease and assess strategies for promoting food security and environmental responsibility. Students will learn about healthy eating, expand their repertoire of food-preparation techniques, and refine their ability to use social science research and inquiry methods to investigate topics related to nutrition and health.

An enhanced programming fee of \$15.00 is recommended.

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

Recommended Preparation: HFN20, Food and Nutrition, Grade 10, Open

HFA4U - Nutrition and Health, Grade 12, University Preparation

This course examines the relationships between food, energy balance, and nutritional status; the nutritional needs of individuals at different stages of life; and the role of nutrition in health and disease. Students will evaluate nutrition-related trends and will determine how food choices can promote food security and environmental responsibility.

Students will learn about healthy eating, expand their repertoire of food-preparation techniques, and develop their social science research skills by investigating issues related to nutrition and health.

An enhanced programming fee of \$15.00 is recommended.

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

Recommended Preparation: HFN20, Food and Nutrition, Grade 10, Open

HHS4C - Families in Canada, Grade 12, College Preparation

This course enables students to develop an understanding of social science theories as they apply to individual development, the development of intimate relationships, and family and parent-child relationships. Students will explore a range of issues relating to the development of individuals and families in contemporary Canadian society as well as in other cultures and historical periods. They will develop the investigative skills required to conduct research on individuals, intimate relationships, and parent-child roles and relationships in Canada.

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

HHS4U - Families in Canada, Grade 12, University Preparation

This course enables students to draw on sociological, psychological, and anthropological theories and research to analyse the development of individuals, intimate relationships, and family and parent-child relationships. Students will focus on issues and challenges facing individuals and families in Canada's diverse society. They will develop analytical tools that enable them to assess various factors affecting families and to consider policies and practices intended to support families in Canada. They will develop the investigative skills required to conduct and communicate the results of research on individuals, intimate relationships, and parent-child relationships.

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

HNB4M - The World of Fashion, Grade 12, University/College Preparation

This course gives students the opportunity to explore the world of fashion. Students will learn how to create a fashion product using various tools, techniques, and technologies while developing their practical skills. Students will learn about various factors that affect the global fashion industry, the needs of specialized markets, and the impact of fibre and fabric production and care. In addition, they will learn about social and historical influences on fashion. Students will apply research skills when investigating aspects of the fashion world.

An enhanced programming fee of \$15.00 is recommended.

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

Recommended Preparation: HNC3M, Understanding Fashion, Grade 11, College Preparation

Geography

CGR4M - The Environment and Resource Management, Grade 12, University/College Preparation

This course investigates interactions between natural and human systems, with a particular emphasis on the impacts of human activity on ecosystems and natural processes. Students will use the geographic inquiry process, apply the concepts of geographic thinking, and employ a variety of spatial skills and technologies to analyse these impacts and propose ways of reducing them. In the course of their investigations, they will assess resource management and sustainability practices, as well as related government policies and international accords. They will also consider questions of individual responsibility and environmental stewardship as they explore ways of developing a more sustainable relationship with the environment.

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

CGW4U - World Issues: A Geographic Analysis, Grade 12, University Preparation

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 will 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.

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

History

CHM4E - Adventures in World History, Grade 12, Workplace Preparation

This course examines significant developments and events in world history from earliest times to the present. Students will explore a variety of social, cultural, economic, and political developments in different regions of the world and during different periods. In addition to investigating how conflict, religion, work, and technology have helped shape people's lives, students will examine the contributions of some significant individuals to our global heritage. Students will apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, when investigating a variety of human experiences in world history.

CHY4U - World History since the Fifteenth Century, Grade 12, University/College Preparation

This course traces major developments and events in world history since approximately 1450. Students will explore social, economic, and political changes, the historical roots of contemporary issues, and the role of conflict and cooperation in global interrelationships. They will extend their ability to apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, as they investigate key issues and ideas and assess societal progress or decline in world history.

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

Interdisciplinary Studies

BEYOND BORDERS

Beyond Borders offers an opportunity for all enthusiastic and community-minded grade 12 students to enjoy a unique semester that will truly prepare them for the future. The program focuses on leadership development, business, math, global development and sustainability, with an emphasis on team-building, skill development, and experiential learning.

The program fee of \$1425 covers many remarkable learning opportunities and enjoyable experiences, including trips to New York City, Toronto, Blue Mountain, and a leadership development trip to the Muskoka's visiting Camp Tawingo.

Students get the chance to prepare themselves for post-secondary education through our program structure, campus tours and interaction with faculty and students. Students will have the opportunity to network with many professionals within a variety of fields, including education, business, local politics and more.

Students are shown the varying factors that contribute to a successful company and leader. Students are shown how to become socially responsible leaders through character driven activities that will develop the traits that will help them be better leaders and members of society.

Host School: John F. Ross

Mandatory Course Credits:

Business Leadership (BOH4M1)

World Issues (CGW 4U1)

Business and Sustainability (IDC4M1)

Students choose one of the following:

Data Management (MDM 4U1)

Advanced Functions (MHF 4U1)

Website for more information and application: www.beyondborders1.ca

BOH4M or GPP30 - Senior Leadership Course

The Senior Leadership Course is a course in applied leadership techniques. Students will study the characteristics of effective leadership and will apply these concepts to leadership opportunities in the school and the community.

Students earning the GPP30 credit will focus on developing interpersonal and intrapersonal skills. They will work on goal setting and communication skills. Students earning the BOH4M credit will focus on critically identifying the principles of effective leadership and how to utilize these principles in a practical way in managing successful businesses/endeavours.

Students will analyse the role of a leader, with a focus on decision-making, management of group dynamics, motivating others and planning. **All students interested in taking this course are expected to complete an interview process.**

Contact: Mr. Gouthro

NOTE: Students may take both streams of this course, but it is strongly recommended that students take GPP30 before taking BOH4M.

MADE: Urban Arts

MADE: Urban Arts (MADE in Guelph) is an innovative program for Grade 10, 11 and 12 students interested in a non-traditional experience of the Arts.

The program provides students with opportunities to interact with local, professional artists and develop individual and group creative skills.

ALL LEVELS OF ABILITY are welcome in this collaborative environment.

Students will explore Music, Art, Drama, and English in an integrated, non-traditional way, away from their home school at the Guelph's community hub for change makers, 10C, in downtown Guelph. In this setting, students will experience authentic learning opportunities and use their new skills to host major Arts events and performances for wider audiences.

- Develop new skills through Artist-led workshops
- Plan, create, promote, and perform in student exhibitions and public performances
- Visit various Guelph and Toronto Arts institutions and theatres
- Learn in a collaborative setting comprised of students from all Guelph-area high schools
- Attend professional theatre productions, studio tours, and workshops
- Participate in workshops like drumming, digital recording, photography, graffiti, yoga, stage combat and dance workshops designed for MADE: Urban Arts.

Credits Earned: All courses will be taught from an interdisciplinary perspective.

AMC 3M or AMC4M: Music for Creating, Grade 11/12 (University/College Preparation)

Students will experience different approaches to musical creation and performance. Participate in music appreciation, creation, and performance non-traditional formats. Learn from professional musicians in a variety of settings connected to the local music culture and scene.

AWT 3M or AWT4M: Non-Traditional Media, Grade 11/12 (University/College Preparation)

Form collaborative traditional and digital based media productions. Participate in visual art appreciation, creation, and performance. Create visual works. Learn from professional artists in a variety of settings that foster artistic success in the local community, the street, and galleries.

ADD3M or ADD4M: Drama Production, Grade 11 (University/College Preparation)

In addition to skill development and small-scale projects, students will form a production company and assume the roles of actors, publicists, and technicians in the development of two large scale events: SPEAK Youth and a dramatic production.

ENG 3U/C or ENG4U/C or ENG2D - Grade 10, 11, or 12 English (students will work toward one of these credits)

Read and demonstrate an understanding of novels, short stories, poetry, and a play with an emphasis on thematic analysis, language. Strong focus on thinking, analysis, and written/spoken communication through the use of a variety of organizational structures and processes.

Prerequisites: Core English and Experience in one Arts area in either grade 9 or 10

How to Apply: Download and submit an application from UrbanArtsGuelph.ca by FEBRUARY 24, 2023

Successful candidates will be notified in March 2023.

Offered in the winter term of 2023-2024.

Course fee: \$400; however, no student will be denied this course due to financial reasons. See your Guidance Office for more information.

Languages

FSF4U - Core French, Grade 12, University Preparation

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.

Prerequisite: FSF3U, Core French, Grade 11, University Preparation

LWGDU - German, Grade 12, University Preparation

This course provides extended opportunities for students to communicate and interact in German in a variety of social and academic contexts. Students will refine and enhance their listening, speaking, reading, and writing skills, as well as their creative and critical thinking skills, as they explore and respond to a variety of oral and written texts, including complex authentic and adapted texts. They will also broaden their understanding and appreciation of communities where German is spoken, and develop skills necessary for lifelong language learning.

Prerequisite: LWGCU, German, Grade 11, University Preparation

LWSDU - Spanish, Grade 12, University Preparation

This course provided extended opportunities for students to communicate and interact in Spanish in a variety of social and academic contexts. Students will refine and enhance their listening, speaking, reading, and writing skills, as well as their creative and critical thinking skills, as they explore and respond to a variety of oral and written texts, including complex authentic and adapted texts. They will also broaden their understanding and appreciation of diverse Spanish speaking communities, and develop skills necessary for lifelong language learning.

Prerequisite: LWSCU, Spanish, Grade 11, University Preparation

Math

MAP4C - Foundations for College Mathematics, Grade 12, College Preparation

This course enables students to broaden their understanding of real-world applications of mathematics. Students will analyse data using statistical methods; solve problems involving applications of geometry and trigonometry; simplify expressions; and solve equations. Students will reason mathematically and communicate their thinking as they solve multi-step problems. This course prepares students for college programs in areas such as business, health sciences, and human services, and for certain skilled trades.

Prerequisite: MBF3C, Foundations for College Mathematics, Grade 11, College Preparation

MCT4C - Mathematics for College Technology, Grade 12, College Preparation

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

Prerequisite: MCR3U, Functions, Grade 11, University Preparation or MCF3M, Functions and Applications, Grade 11, University/College Preparation

MCV4U - Calculus and Vectors, Grade 12, University Preparation

This course builds on students' previous experience with functions and their developing understanding of rates of change. Students will solve problems involving geometric and algebraic representations of vectors, and representations of lines and planes in three-dimensional space; broaden their understanding of rates of change to include the derivatives of polynomial, rational, exponential, and sinusoidal functions; and apply these concepts and skills to the modelling of real-world relationships. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. This course is intended for students who plan to study mathematics in university and who may choose to pursue careers in fields such as physics and engineering.

Prerequisite: MHF4U, Advanced Functions, Grade 12, University Preparation

MDM4U - Mathematics of Data Management, Grade 12, University Preparation

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

Prerequisite: MCR3U, Functions, Grade 11, University Preparation or MCF3M, Functions and Applications, Grade 11, University/College Preparation

MEL4E - Mathematics for Work and Everyday Life, Grade 12, Workplace Preparation

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

Prerequisite: Successful completion of a Grade 9 or 10 math course.

MHF4U - Advanced Functions, Grade 12, University Preparation

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

Prerequisite: MCR3U, Functions, Grade 11, University Preparation OR MCT4C, Mathematics for College Technology, Grade 12, College Preparation

Music

AMG4M - Advanced Guitar, Grade 12, University/College Preparation

This course provides students with the fundamental knowledge and skills needed to succeed in the music workplace. Students will, at a level consistent with previous experience, perform appropriate musical works. Independently and collaboratively, students will use current technology and the creative and critical analysis processes to plan, produce, and market music presentations that reflect a broad spectrum of workplace contexts. In addition, students will explore ethical and safe practices related to music.

Prerequisite: AMG30 Guitar or by audition.

AMI4M - Instrumental Music, Grade 12, University/College Preparation, Advanced

This course enables students to enhance their musical literacy through the creation, appreciation, analysis, and performance of music. Students will perform traditional, commercial, and art music, and will respond with insight to live and recorded performances. Students will enhance their understanding of the function of music in society and the impact of music on themselves and various communities and cultures. Students will analyse how to apply skills developed in music to their life and careers.

Prerequisite: AMI3M, Instrumental Music, Grade 11, University/College Preparation

AMV4M - Vocal Music, Grade 12, University/College Preparation, Advanced

This course enables students to enhance their musical literacy through the creation, appreciation, analysis, and performance of music. Students will perform traditional, commercial, and art music, and will respond with insight to live and recorded performances. Students will enhance their understanding of the function of music in society and the impact of music on themselves and various communities and cultures. Students will analyse how to apply skills developed in music to their life and careers.

Prerequisite: AMV3M, Vocal Music, Grade 11, University/College Preparation

Physical Education

PAD40 - Outdoor Education, Grade 12, Open

Students will plan and lead outdoor field trips as well as research adventure programming and leaders in the Outdoor Wilderness Industry. Topics such as wilderness survival, advanced navigation, environmental issues and wilderness leadership will be covered. This course could include challenges such as a leading a four-day wilderness trip into Algonquin Park or Tobermory, designing and carving your own paddle, a biking unit exploring local trails in/and around Guelph Lake, hiking, winter sports and many other outdoor adventures. These course experiences engage students in exploring a connection with our Canadian outdoor culture.

Recommended Preparation: PAD30, Outdoor Education, Grade 11

Note: Voluntary Enrichment Experience Fee: \$300.00 for various trips and outdoor experiences.

*Please note this course runs every other year, next running in the **2023-24** school year (alternating years to PAD30)

PAF40 - Personal Fitness, Grade 12, Open

This co-educational course is an extension to PAF 30/PAF 30X and emphasizes committed and enthusiastic participation of highly challenging physical activities that promote lifelong healthy active living and personal physical fitness. Students learn movement skills, fitness training methods and principles, varied methods of improving and maintaining personal fitness and physical competence, safety and injury prevention. Students will develop individual fitness plans to improve or to maintain a high level of fitness. Regular work-outs will include an emphasis on weight training, cross training and cardiovascular training and will explore various other training methods (ie. Yoga, pilates, zumba, etc.) Students will set challenging personal fitness goals, develop communication and social skills and focus on achievement based personal fitness outcomes.

Recommended Preparation: PAF30 or PAF30X, Personal Fitness, Grade 11, Open is highly recommended.

Note: A voluntary enrichment experience fee will apply for various fitness experiences (Trips may include - Olympic Lifts/TNT Boxing, Achieve Fitness, U of G strength and conditioning centre, crossfit).

PAF40X - Personal Fitness, Female, Grade 12, Open

This female only course is an extension to PAF30/PAF30X and emphasizes committed and enthusiastic participation of highly challenging physical activities that promote lifelong healthy active living and personal physical fitness. Instruction will focus on female interests and physiology. Students learn movement skills, fitness training methods and principles, varied methods of improving and maintaining personal fitness and physical competence, safety and injury prevention. Students will explore various training methods and apply theoretical principals to females specifically. Students will develop individual fitness plans to improve or to maintain a high level of fitness. Regular work-outs will include an emphasis on weight training, cross training and cardiovascular training and will explore

various other training methods. Students will set challenging personal fitness goals, develop communication and social skills and focus on achievement based personal fitness outcomes. A voluntary enrichment fee may apply.

Recommended Preparation: PAF30 / PAF30X, Personal Fitness, Grade 11, Open

Note: A voluntary enrichment experience fee will apply for various fitness experiences (zumba, downdawg yoga, boom fitness, TNT boxing; special guests - personal trainers, nutritionist)

PAF40Z - Personal Fitness, Blended Learning, Grade 12, Open

The content/theory of this course (2 days/week) will be delivered "online". The practical component will be 3 days in the fitness centre/gym. This combined (PAF30Z/PAF40Z) co-educational course emphasizes committed and enthusiastic participation of highly challenging physical activities that promote lifelong healthy active living and personal physical fitness. Students learn movement skills, fitness training methods and principles, varied methods of improving and maintaining personal fitness and physical competence, safety and injury prevention. Students will develop individual fitness plans to improve or to maintain a high level of fitness. Regular work-outs will include an emphasis on weight training, cross training and cardiovascular training and will explore various other training methods (ie. Yoga, pilates, zumba, etc.) Students will set challenging personal fitness goals, develop communication and social skills and focus on achievement based personal fitness outcomes.

Note: A voluntary enrichment fee may apply.

PAL40 - Healthy Active Living, Large Group Activities, Grade 12, Open

This co-educational course enables students to further develop the knowledge and skills they need to make healthy choices. It places special emphasis on how students can maintain the habits of healthy, active living throughout their lives as they make the transition to adulthood and independent living. Through participation in a wide range of physical activities in a variety of settings, students can enhance their movement competence, personal fitness, and confidence. Students also acquire an understanding of the factors and skills that contribute to healthy development and learn how their own well-being is affected by, and affects, the world around them. Students build their sense of self, learn to interact positively with others, and develop their ability to think critically and creatively.

Note: A voluntary enrichment experience fee may apply for possible outings including golf, curling, billiards, bowling and bubble soccer.

PLF4M - Recreation and Healthy Active Living Leadership, Grade 12, College/University Preparation

This course focuses on preparation for competition and pathways in post-secondary athletics. In collaboration with SHSM, students will engage in high level sport specific training. An opportunity for enriched off site training will be provided to connect students with local trainers and training facilities focused toward their desired sport. Students will learn about the various pathways associated in the field of Athletics such as Personal Training, Physiotherapy, Coaching, Refereeing and Sport Psychology. Students will also be granted an opportunity to complete or further advance their NCCP qualifications, First Aid and Concussion Protocol certifications. Exploration in the application process for US scholarships and S.A.T. writing will be offered.

Note: Application and teacher approval is required for this course

IDC4U1 - Interdisciplinary Studies: The Business of Sport, Grade 12, University Preparation

This course examines the principles and theories of sport management. Students will look in depth at the business of non-profit, community, high school, collegiate and professional sports organizations. The course will give students opportunities for hands-on experiences in the business of sport. Sport marketing, law administration and societal influences of sport business are some examples of theoretical content of this course.

Note: A voluntary enrichment fee may apply.

Suggested Preparation: BMI3C, Marketing, Grade 11, College Preparation

Note: Students may not receive a credit in both IDC4U2 Tutoring/IDC4UZ and IDP4U1.

PSK4U - Introductory Kinesiology, Grade 12, University Preparation

This course focuses on the study of human movement and of systems, factors, and principals 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.

Suggested preparation: Any Grade 11 university or university/college preparation course in science, or any Grade 11 or 12 course in health and physical education.

Note: A voluntary enrichment experience fee may include anatomy lab at University of Guelph; and/or Kinesiology lab at University of Waterloo (Semester 1 only - fee TBD).

Optional workbook fee: \$20

Science

SBI4U - Biology, Grade 12, University Preparation

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

Prerequisite: SBI3U, Biology, Grade 11, University Preparation

Recommended Preparation: SCH3U, Chemistry, Grade 11, University Preparation

SCH4C - Chemistry, Grade 12, College Preparation

This course enables students to develop an understanding of chemistry through the study of matter and qualitative analysis, organic chemistry, electrochemistry, chemical calculations, and chemistry as it relates to the quality of the environment. Students will use a variety of laboratory techniques, develop skills in data collection and scientific analysis, and communicate scientific information using appropriate terminology. Emphasis will be placed on the role of chemistry in daily life and the effects of technological applications and processes on society and the environment.

Prerequisite: SNC2P or SNC2D, Science, Grade 10, Applied or Academic

SCH4U - Chemistry, Grade 12, University Preparation

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.

Prerequisite: SCH3U, Chemistry, Grade 11, University Preparation

Recommended Preparation: MCR3U or MCF3M, Math, Grade 11, University/College Preparation

SNC4E - Science, Grade 12, Workplace Preparation

This course provides students with fundamental science knowledge and workplace skills needed to prepare them for success beyond secondary school. Students will explore hazards in the workplace, chemicals in consumer products, disease and its prevention, electricity at home and at work, and nutritional science. Emphasis is placed on current topics in science and relevant, practical activities that develop students' literacy and mathematical literacy skills and enhance their scientific literacy.

Prerequisite: SNC2L or SNC2P, Science, Grade 10, Essential or Applied

SPH4C - Physics, Grade 12, College Preparation

This course develops students' understandings of the basic concepts of physics. Students will explore these concepts with respect to motion; mechanical, electrical, electromagnetic, energy transformation, hydraulic, and pneumatic systems; and the operation of commonly used tools and machines. They will develop their scientific investigation skills as they test laws of physics and solve both assigned problems and those emerging from their investigations. Students will also consider the impact of technological applications of physics on society and the environment.

Prerequisite: SNC2P or SNC2D, Science, Grade 10, Applied or Academic

Note: This course runs every other year and it will be offered again in the **2025-26** school year.

SPH4U - Physics, Grade 12, University Preparation

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 analyze, qualitatively and quantitatively, data relating to a variety of physics concepts and principles. Students will also consider the impact of technological applications of physics on society and the environment.

Prerequisite: SPH3U, Physics, Grade 11, University Preparation

Recommended Preparation: MCR3U or MCF3M, Math, Grade 11, University or University/College Preparation

Social Science

HSB4U - Challenge and Change in Society, Grade 12, University 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 behavioural 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.

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

HSC4M - World Cultures, Grade 12, University/College Preparation

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

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

HIP40 - Personal Life Management, Grade 12, Open

This course focuses on preparing students for living independently and working successfully with others. Students will learn to manage their personal resources to meet their basic needs for food, clothing, and housing. They will also learn about their personal, legal, and financial responsibilities and develop and apply interpersonal skills in order to make wise and responsible personal and occupational choices. Students will apply research and inquiry skills while investigating topics related to personal life management. The course emphasizes the achievement of expectations through practical experiences.

Technology

TCJ4C - 1 credit; TCJ4C and TCJ4C2 - 2 credits / 2 semesters - Construction Technology, (Carpentry), Grade 12, College Preparation

This course enables students to further develop knowledge and skills related to residential construction and to explore light commercial construction. Students will gain hands on experience using a variety of materials, processes, tools, and equipment and will learn more about building design and project planning. They will continue to create and interpret construction drawings and will extend their knowledge of construction terminology and of relevant building codes and regulations, as well as health and safety standards and practices. Students will also focus on environmental and societal issues related to construction engineering technology, and explore career opportunities in the field.

Note: This course is available to be taken for ONE or TWO credits. If you are taking the two credits, be sure to select TCJ4C and TCJ4C2.

Prerequisite: TCJ3C, Construction Technology (Carpentry), Grade 11, College Preparation

TDJ4M - 1 credit; TDJ4M and TDJ4M2 - 2 credits / 2 semesters - Technological Design (Architectural/Engineering Design), Grade 12, University/College Preparation

This course introduces students to the fundamentals of design advocacy and marketing, while building on their design skills and their knowledge of professional design practices. Students will apply a systematic design process to research, design, build, and assess solutions that meet specific human needs, using illustrations, presentation drawings, and other communication methods to present their designs. Students will enhance their problem-solving and communication skills, and explore career opportunities and the postsecondary education and training requirements for them.

Note: This course is available to be taken for ONE or TWO credits. If you are taking the two credits, be sure to select TDJ4M and TDJ4M2.

Students will improve their knowledge and skills in the use of AutoCAD and other computer aided design tools.

Prerequisite: TDJ3M, Technological Design, Grade 11, University/College Preparation

TDJ40 - Technological Design in the Twenty-first Century, Grade 12, Open

This course focuses on the relationship between society and technological development. Students will use appropriate tools, techniques, and strategies to research, design, build, and assess prototypes for products and/or processes that respond to society's changing needs. Students will describe how social factors, including culture, media, politics, religion, and environmental concerns, influence technological design. Students will also learn about professional practices in the field, and will research postsecondary pathways leading to careers related to technological design.

TEJ4E - 1 credit; TEJ4E and TEJ4E2 - 2 credits / 2 semesters - Computer Technology, Grade 12, College/Workplace Preparation

This course enables students to further develop their practical understanding of computer hardware, software, networks, and operating systems. Students will use utility and application software, and will follow proper procedures for installing, maintaining, and troubleshooting computer systems and networks. In addition to demonstrating an understanding of the ethical use and environmental effects of computers, students will develop marketable skills and assess career opportunities in the field. Note: this course is available to be taken as a ONE or TWO credit option. If you are taking the two credits, be sure to select both TEJ4E and TEJ4E2.

Prerequisite: TEJ3E, Computer Technology, Grade 11, Workplace Preparation

TEJ4M - 1 credit; TEJ4M and TEJ4M2 - 2 credits / 2 semesters - Computer Engineering Technology, Grade 12, University/ College Preparation

This course extends students' understanding of computer systems and computer interfacing with external devices. Students will assemble computer systems by installing and configuring appropriate hardware and software, and will learn more about fundamental concepts of electronics, robotics, programming, and networks. Students will examine environmental and societal issues related to the use of computers, and explore postsecondary pathways leading to careers in computer engineering and related fields. Note: this course is available to be taken as a ONE or TWO credit option. If you are taking the two credits, be sure to select both TEJ4M and TEJ4M2.

Prerequisite: TEJ3M, Computer Engineering Technology, Grade 11, University/College Preparation

TER4M - 1 credit; TER4M and TER4M2 - 2 credits/2 semesters Computer Engineering: Robotics & Control Systems, Grade 12, University/College Preparation

This course extends students' understanding of control systems and automation, from the grade 11 course, with a focus on robotics. Students will learn more about the fundamental concepts of electrical theory and control theory as applied to automation, embedded computing, robotics, programming, and interfacing. Emphasis is placed on effective techniques for designing, modifying, building, testing, maintaining, repairing and troubleshooting automated equipment and robotic systems. Students will examine related environmental and societal issues, and will explore postsecondary pathways leading to careers in robotics and automation.

Prerequisite: TEJ3M, Computer Engineering Technology, Grade 11, University/College Preparation

TFJ4C/4E - Hospitality and Tourism, Grade 12, College/Workplace Preparation

This course enables students to further develop knowledge and skills related to the various sectors of the tourism industry. Students will demonstrate advanced food preparation and presentation skills; increase health and wellness knowledge; develop tourism administration and management skills; design and implement a variety of events or activities; and investigate principles and procedures that contribute to high-quality customer service. Students will expand their awareness of health and safety issues, environmental and society issues, and career opportunities in the tourism industry.

Prerequisite: TFJ3E/TFJ3C, Hospitality and Tourism, Grade 11, Workplace/College Preparation

TGG4M - Journalism: Design and Marketing, Grade 12, University/College Preparation

Students, who successfully complete TGG3M, work with the journalism staff to mentor, teach, guide and help lead them through the process. Students also take over all social media accounts and learn how to advertise a published product and brand to a small market audience.

How to Apply: Students are selected from TGG3M class.

TGJ4M - 1 credit; TGJ4M and TGJ4M2 - 2 credits / 2 semesters - Communications Technology, Grade 12, University/College Preparation

This course enables students to further develop media knowledge and skills while designing and producing projects in the areas of live, recorded, and graphic communications. Students may work in the areas of TV, video, and movie production; radio and audio production; print and graphic communications; photography; digital imaging; broadcast journalism; and interactive new media. Students will also expand their awareness of environmental and societal issues related to communications technology and will investigate career opportunities and challenges in a rapidly changing technological environment.

Note: This course is available to be taken for ONE or TWO credits. If you are taking the two credits, be sure to select TGJ4M and TGJ4M2 code.

A voluntary enhanced programming fee of \$10.00 is recommended.

Prerequisite: TGJ3M, Communications Technology, Grade 11, University/College Preparation

TGP4M - Digital Photography, Grade 12, University/College Preparation

This course examines communications technology from a media perspective. Students will develop knowledge and skills as they design and produce media projects in the areas of live, recorded, and video communications. These areas may include TV, video, and movie production; and or audio production; graphic communications; photography; digital imaging; broadcast journalism; and interactive new media. Students will also develop an awareness of related environmental and societal issues and explore college and university programs and career opportunities in the various communications technology fields. Students will focus on digital photography, graphic illustration and journalism techniques culminating with the production of a school promotional video and digital archive.

Recommended Preparation: TGP3M, Photography, Grade 11, University/College Preparation or TGJ3M, Communications Technology, Grade 11, University/College Preparation.

TGV4M - 1 credit; TGV4M and TGV4M2 - 2 credits/2 semesters - Communications Technology: T.V., Video & Movie Production, Grade 12, University/College Preparation

This course expands on the foundations from Grade 11 Communications Technology and focuses specifically on production for TV, video, movies and animation. Students will explore the world of advanced film production techniques, DSLR production and lenses, motion graphics animation and graphic design for video in our state-of-the-art Mac lab. Students will also develop skills in cinematography, location audio, advanced video editing techniques and directing. Project work includes short film assignments, dialogue sequences, action sequences, audio engineering for film and script writing. (IB students could also study film history and film theory as part of their project work.)

Prerequisite: TGJ3M, Communications Technology, Grade 11, University/College Preparation.

THJ4E - Green Industries, Grade 12, Workplace Preparation

This course enables students to gain further experience with a variety of industry procedures and operations and to acquire additional industry-specific skills. Students will study more complex processes, develop more advanced design and maintenance skills, and explore ways of enhancing environmental sustainability. They will also examine social and economic issues related to the green industries, learn about safe and healthy working practices, study industry standards and codes, and explore career opportunities in the various industries. The knowledge and skills acquired in this course will prepare students for the workplace and apprenticeship training.

Note: Students must be able to work independently.

Location: GCVI and surrounding community as required

THJ4M - Green Industries, Grade 12, University/College Preparation

This course focuses on more complex concepts and skills related to the green industries. Students will focus on developing process skills, design and management techniques, and ways of enhancing environmental sustainability. They will also examine social and economic issues related to the green industries, learn about safe and healthy working practices, study industry standards and codes, and explore career opportunities. The knowledge and skills acquired in this course will prepare students for more specialized studies at the college and university level.

Recommended Preparation: THJ3M, Green Industries, Grade 11, University/College Preparation

Note: Students must be able to work independently.

Location: GCVI and surrounding community as required

TMJ4C - 1 credit; TMJ4C and TMJ4C2 - 2 credits / 2 semesters - Manufacturing Engineering Technology (Metal Working), Grade 12, College Preparation

This course enables students to further develop knowledge and skills related to machining, welding, print reading, computer numerical control (CNC), programming, and design. Students will develop proficiency in using mechanical, pneumatic, electronic, and computer control systems in a project-based learning environment and may have opportunities to obtain industry-standard training and certification. Students will expand their awareness of environmental and societal issues and career opportunities in the manufacturing industry.

Note: This course is available to be taken for ONE or TWO credits. If you are taking the two credits, be sure to select TMJ4C and TMJ4C2.

Prerequisite: TMJ3C, Manufacturing Engineering Technology, Grade 11, College Preparation

TMJ4M - Manufacturing Engineering Technology, Grade 12, University/College Preparation

This course enables students to further develop knowledge and skills related to design, process planning, control systems, project management, quality assurance, and business operations. Students will use a broad range of tools and equipment, enhance their skills in computer-aided design, and collaborate in managing a project. Students will critically analyse and solve complex problems involved in manufacturing products. Students will expand their awareness of environmental and societal issues and of career opportunities in the manufacturing industry.

Prerequisite: TMJ3M, Manufacturing Engineering Technology, Grade 11, University/College Preparation

TTJ4C - 1 credit; TTJ4C and TTJ4C2 - 2 credits / 2 semesters - TTJ4CX (Females only) - 1 credit - Transportation Technology (Automotive), Grade 12, College Preparation

This course enables students to further develop technical knowledge and skills as they study, test, service, and repair engine management systems; power trains; steering/control, suspension, brake, and body systems on vehicles, aircraft, and/or watercraft; and/or small-engine products. Students will refine communication and teamwork skills through practical tasks, using a variety of tools and equipment. Students will expand their awareness of environmental and societal issues related to transportation and their knowledge of apprenticeship and college programs leading to careers in the transportation industry.

Note: This course is available to be taken for ONE or TWO credits. If you are taking the two credits, be sure to select TTJ4C and TTJ4C2. Select TTJ4CX for females only version.

Prerequisite: TTJ3C, Transportation Technology, Grade 11, College Preparation

TWJ4E - 1 credit; TWJ4E and TWJ4E2 - 2 credits / 2 semesters - Custom Woodworking (Furniture), Grade 12, Workplace Preparation

This course enables students to further develop knowledge and skills related to the planning, design, and construction of cabinets and furniture for residential and/or commercial projects. Students will gain further experience in the safe use of common woodworking materials, tools, equipment, finishes, and hardware, and will learn about the entrepreneurial skills needed to establish and operate a custom woodworking business. Students will also expand their awareness of health and safety issues and environmental and societal issues related to woodworking, and will explore career opportunities that may be pursued directly after graduation.

Note: This course is available to be taken for ONE or TWO credits. If you are taking the two credits, be sure to select TWJ4E and TWJ4E2.

Prerequisite: TWJ3E, Custom Woodworking, Grade 11, Workplace Preparation.