

Grade 12 Courses

Select one of compulsory English courses:

- ✓ English

and 7 electives*

*Ensure that you will meet all 3 compulsory group requirements:

- ✓ Group 1: additional credit in English, or French as a second language, or a Native language, or a classical or international language, or social sciences and the humanities, or Canadian and World Studies, or guidance and career education, or cooperative education (i.e., course codes beginning with the following letters: E, F, L, H, C, G, or coop)
- ✓ Group 2: additional credit in health and physical education, or the arts, or business studies, or French as a second language, or cooperative education (i.e., course codes beginning with P, A, B, F, or coop)
- ✓ Group 3: additional credit in science (gr. 11 or 12), or technological education, or French as a second language, or computer studies, or cooperative education (i.e., courses beginning with S, T, F, or I, or coop)

Arts

Dance

ATC4M1 Dance

This course emphasizes the development of students' technical proficiency, fluency in the language of movement in dance genres from around the world, and understanding of dance science. Students will explain the social, cultural, and historical contexts of dance; apply the creative process through the art of dance in a variety of ways; and exhibit an understanding of the purpose and possibilities of continuing engagement in the arts as a lifelong learner. This course will be thought of as a choreography course fusing learned technique (ballet, jazz; contemporary and improv), production skills, and leadership, which will be presented in a performance setting.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: ATC3O1 - Dance;

Drama

ADA4M1 Dramatic Arts

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 texts 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. Students will also examine the significance of dramatic arts in various cultures. Students will produce the "Lunchbox Theatre Short Play Festival".

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

Music

AMU4M1 Music

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.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: AMU3M1 or AMT3M1 - Music Theatre - Pit Band;

AMV4M1 Music/Vocal Choral

This course emphasizes the appreciation, analysis, and performance of music from the romantic period and from the twentieth century, including art music, jazz, popular 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.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: AMU3M1 - Music; AMV3O1 - Music, Vocal/Choral;

Visual Arts

AVI4M1 Visual Arts

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.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

Business

BAN4E1 Accounting for a Small Business

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

CREDIT: 1 **TYPE:** Workplace **GRADE:** 12

BAT4M1 Principles of Financial Accounting

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

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: BAF3M1 - Introduction to Financial Accounting;

BBB4M1 Introduction to International Business

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.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: Any university, university/college, or college preparation course in Business Studies, English, or Canadian and World Studies.

BOH4M1 Business Leadership: Management Fundamentals

This course focuses on the development of leadership skills used in managing a successful business. Students will analyse the role of a leader in business, with a focus on decision making, management of group dynamics, workplace stress and conflict, motivation of employees, and planning. Effective business communication skills, ethics, and social responsibility are also emphasized. Pending Ministry approval, a team-taught dual credit will be offered in this course with Durham or Fleming College for 2012-2013. Students will earn both a secondary school credit and a college credit when they are successful in this program.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: Any university, university/college, or college preparation course in Business Studies or Canadian and World Studies

Canadian and World Studies

Civics, Politics, Economics

CPW4U1 Canadian and World Politics

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

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: Any university or university/college preparation course in Canadian and World Studies, English, or Social Sciences and Humanities.

VCIA4U Analysing Current Economic Issues - ELearning Opportunity ONLY

This course investigates the nature of the competitive global economy and explores how individuals and societies can gain the information they need to make appropriate economic decisions. Students will learn about the principles of microeconomics and macroeconomics, apply economic models and concepts to interpret economic information, assess the validity of statistics, and investigate marketplace dynamics. Students will use economic inquiry and communication skills to analyse current economic issues, make informed judgements, and present their findings.

COURSE NOTE: E-learning -- you must complete an online e-learning registration form. See the e-learning page of the school website.

CREDIT: 1 **TYPE:** University **GRADE:** 12

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

Geography

CGR4E1 The Environment and Resource Management

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

CREDIT: 1 **TYPE:** Workplace **GRADE:** 12

PREREQUISITE: CGC1D1 - Geography of Canada; CGC1P1 - Geography of Canada;

CGW4U1 Canadian and World Issues: A Geographic Analysis

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

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: Any university or university/college preparation course in Canadian and World Studies, English, or Social Sciences and Humanities.

History

CHY4C1 World History: The West and the World

This course explores the history of the world since the sixteenth century, emphasizing the interaction between the emerging West and other regions of the world. Students will learn about a variety of economic, social, and political systems and the changes they have undergone over time. Students will apply their developing skills of historical inquiry to understand and communicate ideas about the forces that have formed our modern world.

CREDIT: 1 **TYPE:** College **GRADE:** 12

CHY4U1 World History: The West and the World

This course investigates the major trends in Western civilization and world history from the sixteenth century to the present. Students will learn about the interaction between the emerging West and other regions of the world and about the development of modern social, political, and economic systems. They will use critical-thinking and communication skills to investigate the historical roots of contemporary issues and present their conclusions.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: Any university or university/college preparation course in Canadian and World Studies, English, or Social Sciences and Humanities.

CHY4UA World History: The West and the World

This course investigates the major trends in Western civilization and world history from the sixteenth century to the present. Students will learn about the interaction between the emerging West and other regions of the world and about the development of modern social, political, and economic systems. They will use critical-thinking and communication skills to investigate the historical roots of contemporary issues and present their conclusions. This course offers high achieving, motivated students the opportunity to deepen their understanding beyond the Ontario curriculum. It also affords them the opportunity to prepare to write the Advanced Placement Exam in the spring if they so choose.

CREDIT: 1 **TYPE:** University Pre AP **GRADE:** 12

PREREQUISITE: University/Enriched English

Law

CLN4U1 Canadian and International Law

This course examines elements of Canadian and international law in social, political, and global contexts. Students will study the historical and philosophical sources of law and the principles and practices of international law and will learn to relate them to issues in Canadian society and the wider world. Students will use critical-thinking and communication skills to analyse legal issues, conduct independent research, and present the results of their inquiries in a variety of ways.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: Any university or university/college preparation course in Canadian and World Studies, English, or Social Sciences and Humanities.

Computer Studies – E-learning ONLY

VICS4C Computer Programming - ELearning Opportunity

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.

CREDIT: 1 **TYPE:** College **GRADE:** 12

PREREQUISITE: VICS3C - Introduction to Computer Programming E-Learning opportunity;

VICS4U Computer Science - ELearning Opportunity

This course enables students to further develop knowledge and skills in computer science. Students will use modular design principles to create complex and fully documented programs, according to industry standards. Student teams will manage a large software development project, from planning through to project review. Students will also analyse algorithms for effectiveness. They will investigate ethical issues in computing and further explore environmental issues, emerging technologies, areas of research in computer science, and careers in the field.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: VICS3U - Introduction to Computer Science E-Learning opportunity;

English

ENG4C1 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 analyse a variety of informational and graphic texts, as well as literary texts from various countries and cultures, and create oral, written, and media texts in a variety of forms for practical and academic purposes. An important focus will be on using language with precision and clarity and developing greater control in writing. The course is intended to prepare students for college or the workplace.

CREDIT: 1 **TYPE:** College **GRADE:** 12

PREREQUISITE: ENG3C1 - English - Grade 11 College Preparation; ENG3U1 - English - Grade 11 University Preparation;

ENG4E1 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.

CREDIT: 1 **TYPE:** Workplace **GRADE:** 12

PREREQUISITE: ENG3E1 - English - Grade 11 Workplace Preparation;

ENG4U1 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 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.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: ENG3U1 - English - Grade 11 University Preparation; ENG3UA - English - Grade 11 Enriched;

ENG4UA English - Grade 12 Enriched

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.

COURSE NOTE: Recommended: 80% in ENG3U1/A

CREDIT: 1 **TYPE:** University Pre AP **GRADE:** 12

PREREQUISITE: ENG3U1 - English - Grade 11 University Preparation; ENG3UA - English - Grade 11 Enriched;

ETS4U1 Studies in Literature

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. A special emphasis will be placed on the study of children's literature and culture. Students will be involved in exploring all of the fun and imagination children delight in and will produce a body of work that emphasizes the relationships of, and personal approaches to, visual and literary information. Students who are interested in working with children and teens may find this course especially interesting and helpful.

COURSE NOTE: Students who wish to take this course without the prerequisite should meet with Ms. Cummings or Ms. MacNeill.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: ENG3U1 - English - Grade 11 University Preparation;

EWC4C1 The Writer's Craft

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.

COURSE NOTE: Prerequisite ENG3E1 requires dept. approval.

CREDIT: 1 **TYPE:** College **GRADE:** 12

PREREQUISITE: ENG3C1 - English - Grade 11 College Preparation; ENG3E1 - English - Grade 11 Workplace Preparation;

EWC4U1 The Writer's Craft

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.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: ENG3U1 - English - Grade 11 University Preparation; ENG3UA - English - Grade 11 Enriched;

OLC40L Ontario Literacy Course

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

CREDIT: 1 **TYPE:** Open **GRADE:** 12

Guidance and Career Studies

Co-operative Education

WRK502 Coop 2 Period Placement

Cooperative education programs, provide opportunities for learning in apprenticeship and workplace settings in combination with classroom studies, are designed to suit students' particular strengths, interests, and needs and further enhance their preparation for the future. A 2 period coop is a half day -- either periods 1 and 2 or periods 3 and 4. The student will work with a coop teacher to obtain a suitable placement.

COURSE NOTE: You must complete and submit the Coop Application Form available on your Portfolio Homepage, and submit it to the Coop Office, rm 204.

CREDIT: 2 **TYPE:** Open **GRADE:** 11

PREREQUISITE: GLC205 - Career Studies;

WRK504 Coop 4 Period Placement

Cooperative education programs, provide opportunities for learning in apprenticeship and workplace settings in combination with classroom studies, are designed to suit students' particular strengths, interests, and needs and further enhance their preparation for the future. The four period coop is completed in a setting selected by the student in consultation with the coop teacher and can be in an apprenticeship, professional, non-profit, or other workplace.

COURSE NOTE: You must complete and submit the Coop Application Form available on your Portfolio Homepage, and submit it to the Coop Office, rm 204.

CREDIT: 4 **TYPE:** Open **GRADE:** 11
PREREQUISITE: GLC205 - Career Studies;

WRK50D Coop Gold Collar Program 4 Period

Cooperative education programs, provide opportunities for learning in apprenticeship and workplace settings in combination with classroom studies, are designed to suit students' particular strengths, interests, and needs and further enhance their preparation for the future. This 4 period program is offered in conjunction with Bowmanville High School. Students experience a wide variety of skilled trades on a construction site at the Port of Newcastle. Transportation is provided.

COURSE NOTE: You must complete and submit the Coop Application Form available on your Portfolio Homepage, and submit it to the Coop Office, rm 204.

CREDIT: 4 **TYPE:** Open **GRADE:** 11
PREREQUISITE: GLC205 - Career Studies;

WRK50P Coop Peer Tutoring 1 Period

Cooperative education programs, provide opportunities for learning in apprenticeship and workplace settings in combination with classroom studies, are designed to suit students' particular strengths, interests, and needs and further enhance their preparation for the future. The peer tutoring option allows students to work with a teacher mentor to tutor students in a subject area of their choosing. This option is particularly of interest to students who wish to explore teaching, social work and related fields.

COURSE NOTE: You must complete and submit the Coop Application Form available on your Portfolio Homepage, and submit it to the Coop Office, rm 204.

CREDIT: 1 **TYPE:** Open **GRADE:** 11
PREREQUISITE: GLC205 - Career Studies;

WRK50M Coop Military 4 Period

Cooperative education programs, provide opportunities for learning in apprenticeship and workplace settings in combination with classroom studies, are designed to suit students' particular strengths, interests, and needs and further enhance their preparation for the future. This coop option places students with the Canadian Armed Forces for an all day, 4 credit experience.

COURSE NOTE: You must complete and submit the Coop Application Form available on your Portfolio Homepage, and submit it to the Coop Office, rm 204. Program pending Ministry Funding.

CREDIT: 4 **TYPE:** Open **GRADE:** 12
PREREQUISITE: GLC205 - Career Studies;

WRK50Y Coop OYAP 4 Period

Cooperative education programs provide opportunities for learning in apprenticeship and workplace settings in combination with classroom studies, are designed to suit students' particular strengths, interests, and needs and further enhance their preparation for the future. The OYAP or Ontario Youth Apprenticeship Program option allows students to complete a 4 credit coop in a skilled trade while receiving the first semester of college apprenticeship training. For this reason this coop should be undertaken in semester 2 of the student's final year at school.

COURSE NOTE: You must complete and submit the Coop Application Form available on your Portfolio Homepage, and submit it to the Coop Office, rm 204.

CREDIT: 4 **TYPE:** Open **GRADE:** 12
PREREQUISITE: GLC205 - Career Studies;

Health and Physical Education

PLF4C1 Recreation and Fitness Leadership

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.

CREDIT: 1 **TYPE:** College **GRADE:** 12

PREREQUISITE: Any Grade 11 or 12 open course in Health and Physical Education.

PPL4O1 Healthy Active Living Education Grade 12 Co-ed

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.

CREDIT: 1 **TYPE:** Open **GRADE:** 12

PSE4U1 Exercise Science

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.

COURSE NOTE: Course includes Red Cross Standard First Aid and CPR certification.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: Any Grade 11 university or university/college preparation course in science, or any Grade 11 or 12 open course in Health and Physical Education.

Humanities and Social Studies

HHS4M1 Individuals and Families in a Diverse Society

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.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: Any university, university/college, or college preparation course in Social Sciences and Humanities, English, or Canadian and World Studies.

HSB4M1 Challenge and Change in Society

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.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: Any university, university/college, or college preparation course in Social Sciences and Humanities, English, or Canadian and World Studies.

HZT4U1 Philosophy: Questions and Theories

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.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: Any university or university/college preparation course in Social Sciences and Humanities, English, or Canadian and World Studies.

Languages - Moderns

French

FSF4U1 Core French Grade 12

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.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: FSF3U1 - Core French Grade 11;

Spanish

LWSDU1 Spanish

This course draws on a variety of themes to promote extensive development of Spanish-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 Spanish will be emphasized throughout the course.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: LWSCU1 - Spanish;

Mathematics

MAP4C1 College and Apprenticeship Mathematics Grade 12

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

Students will reason mathematically and communicate their thinking as they solve multi-step problems. This course prepares students for college programs in areas such as business, health sciences, and human services, and for certain skilled trades. Note: This course is recommended to students for whom math is not a requirement for their college program of choice.

CREDIT: 1 **TYPE:** College **GRADE:** 12

PREREQUISITE: MBF3C1 - Mathematics of Personal Finance - Grade 11 College Preparation; MCF3M1 - Functions - Grade 11 College/University; MCR3U1 - Functions - Grade 11 University Preparation;

MCT4C1 Mathematics for College Technology Grade 12

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. **COURSE NOTE:** Students planning to pursue math intensive programs e.g. nursing, business, technology, engineering, etc. in college are encouraged to take MCF3M1 and MCT4C1. "Pending Ministry approval, a team-taught dual credit will be offered in this course with Durham or Fleming College for 2012-2013. Students will earn both a secondary school credit and a college credit when they are successful in this program."

CREDIT: 1 **TYPE:** College **GRADE:** 12

PREREQUISITE: MCR3U1 - Functions - Grade 11 University Preparation; MCF3M1 - Functions - Grade 11 College/University;

MCV4U1 Calculus and Vectors

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.

COURSE NOTE: MHF4U1, Grade 12, Advanced Functions, must be taken prior to or concurrently with MCV4U1, Calculus and Vectors.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: MHF4U1 - Advanced Functions; MHF4UA - Advanced Functions - Enriched;

MDM4U1 Mathematics of Data Management

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

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: MCR3U1 - Functions - Grade 11 University Preparation; MCF3M1 - Functions - Grade 11 College/University;

MEL4E1 Mathematics for Work and Everyday Life Grade 12

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, create household budgets, and prepare a personal income tax return; 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.

CREDIT: 1 **TYPE:** Workplace **GRADE:** 12

PREREQUISITE: MEL3E1 - Mathematics for Everyday Life Grade 11;

MHF4U1 Advanced Functions

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.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: MCR3U1 - Functions - Grade 11 University Preparation; MCT4C1 - Mathematics for College Technology Grade 12; MCR3UA - Functions - Grade 11 Enriched;

MHF4UA Advanced Functions - Enriched

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. Students in this Enriched section will be given opportunities to extend their knowledge and understanding of concepts and problem solving by completing some work independently as well as preparing for and participating in two Waterloo Mathematics Contests (November and April).

COURSE NOTE: The approval of the mathematics department, which includes participation in the Waterloo mathematics contests is required.

CREDIT: 1 **TYPE:** Enriched Courses **GRADE:** 12

PREREQUISITE: MCR3U1 - Functions - Grade 11 University Preparation; MCR3UA - Functions - Grade 11 Enriched;

Science

IDC4U1 Forensic Science

This course examines methods of forensic science as it pertains to the relation and application of scientific data to legal issues. The students will study the use of diverse scientific principles and technology to gather data to aid police investigations towards the solving of crimes. An emphasis will be placed on the gathering of crime scene information and analysis of this information, using an interdisciplinary approach, to be used in criminal court cases. A wide range of topics such as fingerprinting, forensic anthropology, forensic entomology, and DNA analysis will be studied as well as the use of a variety of presentation technologies and strategies.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: Any university or university/college course.

SBI4U1 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.

COURSE NOTE: Recommended previous course: Chemistry, Grade 11, University Preparation.

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: SBI3U1 - Biology - Grade 11 University Preparation; SBI3UA - Biology - Grade 11 Enriched;

SBI4UA Biology - Grade 12 Enriched

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.

COURSE NOTE: Recommended previous course: Chemistry, Grade 11, University Preparation

CREDIT: 1 **TYPE:** University Pre AP **GRADE:** 12

PREREQUISITE: SBI3U1 - Biology - Grade 11 University Preparation; SBI3UA - Biology - Grade 11 Enriched;

SCH4C1 Chemistry - 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.

COURSE NOTE: Recommended previous course: Math, Grade 10 Academic or MFM2P1, Applied

CREDIT: 1 **TYPE:** College **GRADE:** 12

PREREQUISITE: SNC2D1 - Science - Grade 10 Academic; SNC2P1 - Science - Grade 10 Applied;

SCH4U1 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.

COURSE NOTE: Recommended previous course: Math, Grade 11, University Preparation

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: SCH3U1 - Chemistry - Grade 11 University Preparation; SCH3UA - Chemistry - Grade 11 Enriched;

SCH4UA Chemistry - Grade 12 Enriched

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.

COURSE NOTE: Recommended previous course: Math, Grade 11, University Preparation

CREDIT: 1 **TYPE:** University Pre AP **GRADE:** 12

PREREQUISITE: SCH3U1 - Chemistry - Grade 11 University Preparation; SCH3UA - Chemistry - Grade 11 Enriched;

SNC4E1 Science - 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.

CREDIT: 1 **TYPE:** Workplace **GRADE:** 12

PREREQUISITE: SNC2P1 - Science - Grade 10 Applied;

SNC4M1 Science - College/University Preparation (Health Focus)

This course enables students, including those pursuing postsecondary programs outside the sciences, to increase their understanding of science and contemporary social and environmental issues in health-related fields. Students will explore a variety of medical technologies, pathogens and disease, nutritional science, public health issues, and biotechnology. The course focuses on the theoretical aspects of the topics under study and helps refine students' scientific investigation skills.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: Science, Grade 10, Academic, or any Grade 11 university, university/college, or college preparation course in science.

SPH4C1 Physics - College Preparation

This course develops students' understanding 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.

COURSE NOTE: Recommended previous course: MBF3C1, Math, Grade 11, College

CREDIT: 1 **TYPE:** College **GRADE:** 12

PREREQUISITE: SNC2D1 - Science - Grade 10 Academic; SNC2P1 - Science - Grade 10 Applied;

SPH4U1 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 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.

COURSE NOTE: Recommended previous course: Math, Grade 11, University Preparation

CREDIT: 1 **TYPE:** University **GRADE:** 12

PREREQUISITE: SPH3U1 - Physics - Grade 11 University Preparation; SPH3UA - Physics - Grade 11 Enriched;

SPH4UA Physics - Grade 12 Enriched

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.

COURSE NOTE: Recommended previous course: Math, Grade 11, University Preparation

CREDIT: 1 **TYPE:** University Pre AP **GRADE:** 12

PREREQUISITE: SPH3U1 - Physics - Grade 11 University Preparation; SPH3UA - Physics - Grade 11 Enriched;

TPJ4M1 Health Care

This course focuses on the development of a range of skills needed to analyse and interpret clinical findings. Students will learn about accepted health care practices and demonstrate an understanding of basic procedures and the use of appropriate instruments and equipment. They will acquire an understanding of basic concepts related to the function of the human immune system and explore the relationship between pathology and disease prevention and treatment. Students will expand their awareness of workers' health and safety issues, analyse environmental and societal issues related to health care, and further explore professional practice standards and postsecondary destinations in the field. Pending Ministry approval, a team-taught dual credit will be offered in this course for 2012-2013. Students will earn both a secondary school credit and a college credit when they are successful in this program.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

Technology

Communications Technology

TGG4M1 Communications Technology: Print and Graphic Communications

No description available 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.

COURSE NOTE: Students will continue with yearbook production, support the grade 11 students and face other school related design challenges.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: Prerequisite: TGG3M Communications Technology: Print and Graphic Communications, Double Credit Yearbook.

TGJ4M1 Communications Technology - Multi-Media

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.

COURSE NOTE: Must have taken a grade 11 M level comm. tech. as prerequisite.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: TGJ3M1 or TGI3M1

TGP4M1 Communications Technology: Photography and Digital Imaging

This course enables students to further develop media knowledge and skills while designing and producing projects in the areas of photography and digital communications. Students will work in the areas of print and graphic communications; photography; and digital imaging. 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.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

Hair & Aesthetics

TXJ4E2 Hairstyling and Aesthetics

This course enables students to develop increased proficiency in a wide range of hairstyling and aesthetics services. Working in a salon/spa team environment, students will strengthen their fundamental cosmetology skills and develop an understanding of common business practices and strategies in the salon/spa industry. Students will also expand their understanding of environmental and societal issues and their knowledge of postsecondary destinations in the hairstyling and aesthetics industry.

CREDIT: 2 **TYPE:** Workplace **GRADE:** 12

PREREQUISITE: TXJ3E1 - Hairstyling and Aesthetics;

Hospitality (Cooking)

TFJ4C2 Hospitality and Tourism

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 societal issues, and career opportunities in the tourism industry. **COURSE NOTE:** "Pending Ministry approval, a team-taught dual credit will be offered in this course with Durham or Fleming College for 2012-2013. Students will earn both a secondary school credit and a college credit when they are successful in this program."

CREDIT: 2 **TYPE:** College **GRADE:** 12

PREREQUISITE: TFJ3C1 - Hospitality and Tourism;

TFJ4E2 Hospitality and Tourism

This course enables students to further develop knowledge and skills related to the food and beverage services sector of the tourism industry. Students will demonstrate proficiency in using food preparation and presentation tools and equipment; plan nutritious menus, create recipes, and prepare and present finished food products; develop customer service skills; and explore event and activity planning. Students will expand their awareness of health and safety practices, environmental and societal issues, and career opportunities in the food and beverage services sector.

CREDIT: 2 **TYPE:** Workplace **GRADE:** 12

PREREQUISITE: TFJ3E1 - Hospitality and Tourism;

Technological Design

TDJ4M1 Technological Design

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 will explore career opportunities and the postsecondary education and training requirements for them.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: TDJ3M1 - Technological Design;

TDP4M1 Technological Design: Apparel and Textile Design

This course introduces students to the scope of the Fashion industry. Students will build on their acquired fashion design and sewing fabrication skills from grade 11 and use a variety of materials, tools, equipment, and processes to construct products that adhere to fabric design specifications and meet quality control industry standards. Emphasis will focus on developing a personal collection of drawings and patterns which will be used to create the student's own Fashion Design Portfolio.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

TDV4M1 Technological Design: Interior Design

No description available This course introduces students to the fundamentals of design advocacy and marketing, while building on their design skills and 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. The focus of this course is Interior Design and students will expand their knowledge on the basics of floor plan, design, furniture design, colour theory and colour coordination for interiors with emphasis on the development and implementation of residential interior design for specific human needs in a whole home concept.

COURSE NOTE: The focus of this course is Interior Design and students will expand their knowledge on the basics of floor plan, design, furniture design, colour theory and colour coordination for interiors with emphasis on the development and implementation of residential interior design for specific human needs in a whole home concept.

CREDIT: 1 **TYPE:** University/College **GRADE:** 12

PREREQUISITE: Prerequisite: TDV3M1 Interior Design, Grade 11, University/College Preparation