

Credit Course Descriptions (Sem. 2 ONLY)

Canadian and World Studies

CGW4U1 – Canadian and World Issues, Grade 12, University Preparation (1.0 credit)

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.

Co-operative Education

NEW DCO308 – Cooperative Education (*paid employment or unpaid placement*) – Grade 11, Open (1.0 credit)

This course consists of a learning experience connected to a community and a cooperative education curriculum focused on developing skills, knowledge, and habits of mind that will support students in their learning, including their education and career/life planning, at school and beyond, today and in the future. Within the context of their experience connected to a community, students will apply skills, knowledge, and habits of mind that will protect and promote their health, safety, and well-being and that will strengthen their inquiry, decision-making, and leadership skills. Students will create and implement a learning plan that meets their particular interests and needs, reflect on their learning, and make connections between their experience in the community and other aspects of their lives.

Eligibility Requirements: Students must be 16 years of age or older and have completed 16 credits. Students must secure own employment/placement within Durham Region by Feb. 3, 2021. Unpaid placements must occur on Monday and Wednesday evenings from 5:30 PM - 9:30 PM. Paid placements must have at least one shift scheduled on either a Monday or Wednesday evening between 5:30 PM and 9:30 PM. Durham Continuing Education reserves the right to deny placements should they be deemed unsuitable or unsafe for students. Students are responsible for own transportation to employment/placement and in-class sessions.

English

ENG3U1 – English, Grade 11, University Preparation (1.0 credit)

This course emphasizes the development of literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. Students will analyse challenging literary texts from various periods, countries, and cultures, as well as a range of informational and graphic texts, and create oral, written, and media texts in a variety of forms. An important focus will be on using language with precision and clarity and incorporating stylistic devices appropriately and effectively.

ENG4C1 – English, Grade 12, College Preparation (1.0 credit)

This course emphasizes consolidation of literacy, critical thinking, and communication skills. Students will analyse informational texts and literary works from various time periods, countries, and cultures; write research reports, summaries, and short analytical essays; complete an independent study project; and analyse the interactions among media forms, audiences, and media industry practices. An important focus will be on establishing appropriate style and using business and technical language effectively.

ENG4U1 – English, Grade 12, University Preparation (1.0 credit)

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.

OLC401– Ontario Secondary School Literacy Course, Grade 12, Open (1.0 credit)

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.

Eligibility requirement: Students who have been eligible to write the OSSLT at least twice and who have been unsuccessful at least once are eligible to take the course. A student may be allowed to enrol in the OSSLC before he or she has had a second chance to write the OSSLT, if the principal determines that it is in the best educational interests of the student.

Mathematics

MAP4C1 – Foundations for College Mathematics, Grade 12, College Preparation (1.0 credit)

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.

MCT4C1 – Mathematics for College Technology, Grade 12, College Preparation (1.0 credit)

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.

MCV4U1 – Calculus and Vectors, Grade 12, University Preparation (1.0 credit)

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.

MHF4U1 – Advanced Functions, Grade 12, University Preparation (1.0 credit)

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.

Science

SBI3U1 – Biology, Grade 11, University Preparation (1.0 credit)

This course furthers students' understanding of the processes that occur in biological systems. Students will study theory and conduct investigations in the areas of biodiversity; evolution; genetic processes; the structure and function of animals; and the anatomy, growth, and function of plants. The course focuses on the theoretical aspects of the topics under study, and helps students refine skills related to scientific investigation.

SBI3C1 – Biology, Grade 11, College Preparation (1.0 credit)

This course focuses on the processes that occur in biological systems. Students will learn concepts and theories as they conduct investigations in the areas of cellular biology, microbiology, genetics, the anatomy of mammals, and the structure of plants and their role in the natural environment. Emphasis will be placed on the practical application of concepts, and on the skills needed for further study in various branches of the life sciences and related fields.

SCH3U1 – Chemistry, Grade 11, University Preparation (1.0 credit)

This course enables students to deepen their understanding of chemistry through the study of the properties of chemicals and chemical bonds; chemical reactions and quantitative relationships in those reactions; solutions and solubility; and

atmospheric chemistry and the behaviour of gases. Students will further develop their analytical skills and investigate the qualitative and quantitative properties of matter, as well as the impact of some common chemical reactions on society and the environment.

SPH3U1 – Physics, Grade 11, University Preparation (1.0 credit)

This course develops students' understanding of the basic concepts of physics. Students will explore kinematics, with an emphasis on linear motion; different kinds of forces; energy transformations; the properties of mechanical waves and sound; and electricity and magnetism. They will enhance their scientific investigation skills as they test laws of physics. In addition, they will analyse the interrelationships between physics and technology, and consider the impact of technological applications of physics on society and the environment.

SBI4U1 – Biology, Grade 12, University Preparation (1.0 credit)

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.

SCH4C1 – Chemistry, Grade 12, College Preparation (1.0 credit)

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.

SCH4U1 – Chemistry, Grade 12, University Preparation (1.0 credit)

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.

SPH4C1 – Physics, Grade 12, College Preparation (1.0 credit)

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.

SPH4U1 – Physics, Grade 12, University Preparation (1.0 credit)

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.

Social Sciences & Humanities

HFA4C1 – Food and Nutrition, Grade 12, University Preparation (1.0 credit)

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.

HFA4U1 – Food and Nutrition, Grade 12, University Preparation (1.0 credit)

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.