

Area of Interest: Environmental and Applied Sciences

Environmental Technician (Co-op and Non Co-op Version)

Ontario College Diploma
42 Weeks
Pembroke Campus

Program Code: 1212X10FPM

Our Program

Preserve the present for the future - explore a career in the environmental sciences.

The two-year Environmental Technician program, delivered in a compressed format over 42 weeks, offers theoretical and extensive practical education in all areas of environmental sciences.

You explore the disciplines of biology, chemistry, physical science and engineering as you learn to collect, measure and analyze variables commonly considered in environmental studies. Gain field and laboratory experience in soil, water and air testing as you develop a basic knowledge of:

- freshwater environment systems
- soils and land forms
- the chemistry of pollutants
- ecological processes

Use the appropriate tools and equipment needed in biology, hydrology, ecological field sampling and analytical chemistry.

This program includes applied research projects that allow you to apply skills and theory to real environmental issues, all while supporting important community initiatives, such as:

- water quality monitoring and implementation of agricultural best management practices in the Muskrat Lake watershed
- soil testing, weather/climate monitoring and pest/disease surveying for a local vineyard

Benefit from the opportunity to gain more than 20 certifications in various preferred specialties including provincial certification in water and wastewater operation, electrofishing, and geospatial analysis.

Students also have the option to gain real-world experience through a paid co-operative education (co-op) work term (see Additional Information for more details). Please note that places in the co-op work term are subject to availability and academic eligibility. Please note admission to the co-op program does not guarantee a co-op placement.

Upon graduation, you are ready to help meet the current and growing need for skilled entry-level practitioners within the environmental sciences sector. Graduates may find entry-level employment in roles such as:

- remediation technician
- field sampling technician
- geographical information systems (GIS) technician
- contaminated site assessor

- environmental assessor
- water and wastewater facility operator
- environmental consultant

SUCCESS FACTORS

This program is well-suited for students who:

- Seek an active, outdoor, hands-on learning environment.
- Are eager to measure, monitor, protect and improve the environment.
- Want to become familiar with both field and laboratory methods used broadly in the environmental sector.

Employment

Graduates may find entry-level employment in the compliance and promotion sectors, as remediation technicians, in the areas of water and wastewater treatment operations, as contaminated site assessment technicians or working within the consulting industry as environmental practitioners.

Learning Outcomes

The graduate has reliably demonstrated the ability to:

- Collect representative environmental samples and perform routine tests, using current and relevant tools.
- Use scientific concepts and models when contributing to the prevention, control and elimination of environmental hazards and remediation of contaminated sites.
- Assist with analysis of water/soil/air samples and with the resolution of environmental problems through the application of scientific and engineering principles.
- Follow standard procedures for conducting environmental sampling projects including the use of appropriate equipment and materials.
- Promote and maintain sustainable practices by applying the elements of ecosystem-based management.
- Carry out work responsibilities adhering to standards of professional conduct and principles of professional ethics.
- Complete assigned tasks in adherence to occupational health and safety standards and applicable legislative requirements.
- Follow established protocols in support of environmental management systems.
- Provide ongoing support for project management.
- Communicate technical information accurately and effectively in oral, written, visual and electronic forms.
- Develop and present strategies for ongoing personal and professional development to enhance performance as an environmental technician.
- Identify and apply discipline-specific practices that contribute to the local and global community through social responsibility, economic commitment and environmental stewardship.

Program of Study

Level: 01	Courses	Hours
BIO7612	Environmental Biology	42.0
CHE7611	Environmental Chemistry	42.0
DAT7670	Computer Applications	28.0
ENL7777	Communications I	42.0
ENV7401	Freshwater Environments	42.0
ENV7402	Field Botany	28.0
FOR7314	Soils and Landforms	42.0
GEP1001	Cooperative Education and Job Readiness	18.0
MAT7205	Mathematics	42.0
SCI7614	Physical, Chemical and Biological Sampling	56.0
Level: 02	Courses	Hours
ADN7104	Ecology	42.0
ENL7669	Communications for Environmental Technicians	42.0
ENV7413	Hydrology and Hydrogeology	42.0
ENV7418	Wildlife Identification	28.0
ENV7419	Project Management for Environmental Technicians	42.0
ENV7420	Contaminants in the Environment	42.0
ENV7421	Water and Wastewater Treatment Technologies	56.0
GIS7315	Geographical Information Systems	56.0
Choose one from equivalencies:	Courses	Hours
GED1212	General Education Elective	42.0
Co-op: 01	Courses	Hours
WKT7102	Cooperative Education Work Term	
Level: 03	Courses	Hours
ENV7415	Field Certifications	42.0
ENV7437	Environmental Issues and Solutions	56.0
ENV7438	Environmental Assessments	56.0
ENV7439	Contaminated Site Assessment	56.0
ENV7440	Land and Water Stewardship	56.0
ENV7441	Remediation Strategies	42.0
MAT7221	Environmental Data Analysis	42.0

Gen Ed On-line Elective: choose 2 Courses		Hours
AST2000	Introduction to Astronomy	42.0
ENL1726	Symbols, Text and Meaning	42.0
ENV5004	Waste-Free Ontario	42.0
FIN2300	Introduction to Personal Finance	42.0
GED0021	Disability in Arts: Portrayals and Identity	42.0
GED0022	Positive Psychology: the Science of Happiness and Well-Being	42.0
GED2200	Free Speech and the Challenge of Social Media	42.0
GED5002	Victimology	42.0
GED5005	Greek Mythology	42.0
GED5006	World Religions	42.0
GED5007	Transatlantic Slavery and Its Abolition	42.0
GED5010	The Fungus Among Us	42.0
GED5200	Learning Disabilities, the Invisible Disability	42.0
GED5301	On Death, Dying and Medical Assistance in Dying (MAID)	42.0
GED6022	A Sense of Humour	42.0
GED7019	Becoming an Entrepreneur: Is It for Me?	42.0
GEN1001	Ethics: What Is the Big Deal?	42.0
GEN1957	Science Fiction	42.0
GEN2003	Healthy Lifestyle	42.0
GEN2007	Community Service	42.0
GEO0012	Foreign Landscapes and Their Inhabitants	42.0
HIS0001	Saints and Heroes: Shining a Spotlight on the 'Dark Ages', Europe A.D. 410-1096	42.0
HOS2228	Wine, Food and Culture	42.0
LIB1982	Reading for Recreation	42.0
MGT7330	Trends in Today's Workplace	42.0
MVM8800	The Impact of the Car on North American Culture	42.0
PSI0003	Globalization and Sustainability	42.0
RAD2001	Popular Culture	42.0
SCI2200	Dynamic DNA: You Are Not Alone	42.0
SOC2003	Understanding Human Sexuality	42.0
Choose two from equivalencies: Courses		Hours

GED1212

General Education Elective

42.0

Fees for the 2023/2024 Academic Year

Tuition and related ancillary fees for this program can be viewed by using the Tuition and Fees Estimator tool at <https://www.algonquincollege.com/fee-estimator>.

Further information on fees can be found by visiting the Registrar's Office website at <https://www.algonquincollege.com/ro>.

Fees are subject to change.

Additional program related expenses include:

- Textbooks and supplies cost approximately \$300 - \$400 during the program and can be purchased at the campus store.
- Additionally, required Personal Protective Equipment (PPE) costs approximately \$300 - \$400, and additional certifications and licenses are required, which cost approximately \$350 throughout the program.
- Expenses are subject to change.
- Students should arrive with a CSA-approved hard hat, CSA approved work boots, a Fox 40 whistle, a high visibility vest and chest waders.

Admission Requirements for the 2024/2025 Academic Year

College Eligibility

- Ontario Secondary School Diploma (OSSD) or equivalent. Applicants with an OSSD showing senior English and/or Mathematics courses at the Basic Level, or with Workplace or Open courses, will be tested to determine their eligibility for admission; OR
- Academic and Career Entrance (ACE) certificate; OR
- General Educational Development (GED) certificate; OR
- Mature Student status (19 years of age or older and without a high school diploma at the start of the program). Eligibility may be determined by academic achievement testing for which a fee of \$50 (subject to change) will be charged.

Program Eligibility

- English, Grade 12 (ENG4C or equivalent).
- Mathematics, Grade 12 (MCT4C or MAP4C or equivalent).
- Biology Grade 11 (SBI3C or equivalent) is strongly recommended.
- Chemistry Grade 12 (SCH4C or equivalent) is strongly recommended.
- Applicants with international transcripts must provide proof of the subject-specific requirements noted above and may be required to provide proof of language proficiency. Domestic applicants with international transcripts must be evaluated through the International Credential Assessment Service of Canada (ICAS) or World Education Services (WES).
- IELTS-International English Language Testing Service-Overall band of 6.0 with a minimum of 5.5 in each band; OR TOEFL-Internet-based (iBT)-overall 80, with the minimum of 20 in each component: Reading: 20; Listening: 20 Speaking: 20, Writing: 20; OR Duolingo English Test (DET) Overall 120, minimum of 120 in Literacy and no score below 105.

Should the number of qualified applicants exceed the number of available places, applicants will be selected on the basis of their proficiency in English and mathematics.

A current Standard First Aid and CPR certificate is preferred prior to registration. Otherwise, the student must obtain the certificate within the first two months of the first level. Students must also obtain WHMIS certification within the first two months of the first level.

Admission Requirements for 2023/2024 Academic Year

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Application Information

ENVIRONMENTAL TECHNICIAN (CO-OP AND NON CO-OP VERSION) Program Code 1212X10FPM

Applications to full-time day programs must be submitted with official transcripts showing completion of the academic admission requirements through:

ontariocolleges.ca
60 Corporate Court
Guelph, Ontario N1G 5J3
1-888-892-2228

Students currently enrolled in an Ontario secondary school should notify their Guidance Office prior to their online application at <http://www.ontariocolleges.ca/>.

Applications for Fall Term and Winter Term received by February 1 will be given equal consideration. Applications received after February 1 will be processed on a first-come, first-served basis as long as places are available.

International applicants applying from out-of-country can obtain the International Student Application Form at <https://algonquincollege.force.com/myACint/> or by contacting the Registrar's

Office.

For further information on the admissions process, contact:

Registrar`s Office
Algonquin College in the Ottawa Valley
1 College Way
Pembroke, ON K8A0C8
Local: 613-735-4700
Toll-free 1-800-565-4723
TTY: 1-866-620-3845
Fax: 613-735-4739
<https://algonquincollege.com/pembroke>

Additional Information

CO-OP INFORMATION:

All applicants apply directly to the co-op version of this program through <http://www.ontariocolleges.ca/> or our International Application Portal. Applicants not wishing to pursue the co-op version will have the opportunity to opt-out after being admitted to the program but prior to the first co-op work term.

Co-operative education (Co-op) allows students to integrate their classroom learning with a real-world experience through paid work terms. Two academic terms prior to the cooperative education work term, students are required to actively participate in and successfully complete the self-directed co-op course, readiness activities and workshops.

Students must actively conduct a guided, self-directed job search and are responsible for securing approved program-related paid co-op employment. Students compete for co-op positions alongside students from Algonquin College and other Canadian and international colleges and universities. Algonquin College`s Co-op Department provides assistance in developing co-op job opportunities and guides the overall process, but does not guarantee that a student will obtain employment in a co-op work term. Co-op students may be required to relocate to take part in the co-op employment opportunities available in their industry and must cover all associated expenses; e.g., travel, work permits, visa applications, accommodation and all other incurred expenses.

Co-op work terms are typically 14 weeks in duration and are completed during a term when students are not taking courses. For more information on your program`s co-op level(s), visit the courses tab on your program`s webpage.

International students enrolled in a co-op program are required by Immigration, Refugees and Citizenship Canada (IRCC) to have a valid Co-op/Internship Work Permit prior to commencing their work term. Without this document international students are not legally eligible to engage in work in Canada that is part of an academic program. The Co-op/Internship Work Permit does not authorize international students to work outside the requirements of their academic program.

For more information on co-op programs, the co-op work/study schedule, as well as general and program-specific co-op eligibility criteria, please visit <https://www.algonquincollege.com/coop>.

Contact Information

Program Coordinator(s)

- Kristi Beatty, <mailto:beattyk@algonquincollege.com>, 613-735-4700, ext. 2721

Course Descriptions

ADN7104 Ecology

A sound ecological foundation that includes a broad overview of ecological concepts and terms provides guides and naturalists with the fundamentals to interpret the natural environment. Students explore ecological principles such as energy flow, ecosystems, evolution, and biodiversity all while contemplating humans as agents of change and the impacts of development on a variety of ecosystems. Ecological principles are considered and discussed in the context of current ecological issues, as they relate to local, regional and global sustainability.

Prerequisite(s): none

Corerequisite(s):none

AST2000 Introduction to Astronomy

What can the sky tell us about our place in the universe, and how life began? This introductory course to astronomy will teach students indigenous and Western constellations in the sky, as well as introduce them to the major planets. Students will act as beginning astronomers and engineers by performing sketches, doing research on astronomy topics, and learning about missions to Mars that are on the hunt for signs of life.

Prerequisite(s): none

Corerequisite(s):none

BIO7612 Environmental Biology

Students are introduced to the fundamental principles of biology and microbiology, particularly as they relate to the environment. Students gain significant experience in the use of analytical laboratory equipment. The structure, function and biological processes of organisms are major areas of concentration. Further study demonstrating the abilities of organisms to react and cope with changes in their surrounding environment is delivered through field and lab activities.

Prerequisite(s): none

Corerequisite(s):none

CHE7611 Environmental Chemistry

Students are exposed to the fundamental principles of chemistry that build the foundation for understanding chemistry applications in the environmental fields. Students explore various states of matter, understand how matter is described and its characteristics. Chemical bonding and the properties of solutions are areas of concentration. Laboratory exercises emphasize phase changes, solution concentrations, chemical reactions relevant to the environmental sciences and the safe handling of chemicals and laboratory equipment.

Prerequisite(s): none

Corerequisite(s):none

DAT7670 Computer Applications

The ability to communicate effectively using technology is essential in the education and employment fields. Students develop and apply college and workplace specific computer skills, and become familiar with e-learning resources. Email, word processing, internet searches and interaction with web-based tools relevant to the industry are practised. The effective use of presentation software and the visualization of data using both spreadsheets and graphics are key areas of focus.

Prerequisite(s): none

Corerequisite(s):none

ENL1726 Symbols, Text and Meaning

Symbols and text are used to express, evoke, and manipulate an entire range of human emotions and reactions. In this interactive, discussion-based course, students will explore historical and contemporary approaches to using symbols, text, and language in conceptual and contemporary art, graphic design and advertising, poetry and lyrics, and in online technology. Through discussion, analysis, informal debate, and critical thinking, students will explore how symbols and text influence individuals, society and culture.

Prerequisite(s): none

Corerequisite(s):none

ENL7669 Communications for Environmental Technicians

Students develop workplace communication skills. Topics include technical writing style; critical reading; written and oral reports; employment correspondence; locating, evaluating and documenting technical information; interpreting and using visuals; and other communication skills that environmental technicians require in the workplace.

Prerequisite(s): ENL7777

Corerequisite(s):none

ENL7777 Communications I

Communication remains an essential skill sought by employers, regardless of discipline or field of study. Using a practical, vocation-oriented approach, students focus on meeting the requirements of effective communication. Through a combination of lectures, exercises, and independent learning, students practise writing, speaking, reading, listening, locating and documenting information and using technology to communicate professionally. Students develop and strengthen communication skills that contribute to success in both educational and workplace environments.

Prerequisite(s): none

Corerequisite(s):none

ENV5004 Waste-Free Ontario

Ontario continues to generate more and more waste; historically, three quarters of this waste has been discarded. In this course, learners are introduced to the tremendous environmental and economic opportunities that exist to embrace resource conservation ideology and a circular economy - a system in which products are never discarded, but reused, recycled and reintroduced into new products. With interactive activities, videos, and gaming; learners identify concepts and technologies to make informed decisions regarding waste management. Learners reflect on material learned, connect it to their own personalized industry or interest, and locate innovation and entrepreneurship opportunities.

Prerequisite(s): none

Corerequisite(s):none

ENV7401 Freshwater Environments

Physical, chemical and biological characteristics of freshwater environments are introduced. Students specifically gain an understanding of the ecological importance of lakes, rivers, streams and wetlands. The relationships between landscapes and aquatic environments are explored. Field trips are used to familiarize students with freshwater systems and to provide practical training in an array of aquatic observational, measuring and sampling techniques. Protocols for collecting, identifying, analyzing, storing and transporting aquatic samples are practised.

Prerequisite(s): none

Corerequisite(s):none

ENV7402 Field Botany

Students gain hands-on field experience in the identification of Ontario's trees, shrubs and groundcover herbaceous plants. Leaf, stem and fruit characteristics are explored. Students are introduced to the structure and classification of several representative species and become proficient in the use of common dichotomous keys and field guides.

Prerequisite(s): none

Corerequisite(s):none

ENV7413 Hydrology and Hydrogeology

The hydrological cycle, the movement of water through the atmosphere and on the earth's surface and subsurface is introduced. The physical principles that govern the movement of water and associated contaminants are discussed. Students learn to perform calculations and apply models that describe these flows. The effect of human activities on hydrology is covered.

Prerequisite(s): none
Corerequisite(s):none

ENV7415 Field Certifications

Students have the opportunity to gain certifications in various preferred specialties. Possible certifications include: Electrofishing, Pleasure Craft Operator, Transportation of Dangerous Goods, Float Plane Safety, Aquatic Biomonitoring, Erosion and Sediment Control, Orienteering, GPS and Black Bear Awareness.

Prerequisite(s): none
Corerequisite(s):none

ENV7418 Wildlife Identification

Students learn to identify and classify various Ontario species of fish, amphibians, reptiles and mammals by their common names. The unique characteristics and habitat requirements of these species, especially those considered to be "at risk", are explored.

Prerequisite(s): none
Corerequisite(s):none

ENV7419 Project Management for Environmental Technicians

Environmental Technicians should be able to write, communicate and interpret a project scope of work. Students identify and apply skills and tools to manage environmental projects. Through case studies, micro scale projects and local research team projects, students create management techniques to plan, organize, budget and communicate tasks.

Prerequisite(s): none
Corerequisite(s):none

ENV7420 Contaminants in the Environment

Students gain a broad understanding of existing natural and man-made contaminants in the environment, and understand their potential impacts on terrestrial and aquatic organisms, populations and ecosystems. Principles of natural background concentrations, bioaccumulation, biomagnification, degradation and the chemical fates of contaminants are explored. Legislation and regulations that apply to contaminants are reviewed.

Prerequisite(s): none
Corerequisite(s):none

ENV7421 Water and Wastewater Treatment Technologies

Students gain a comprehensive overview of key aspects of water and wastewater treatment technologies including site visits at local facilities. Water and wastewater characteristics and sources, disinfection, treatment, sampling, regulations, plant infrastructure and standard laboratory operating procedures are covered. Students use a diverse array of monitoring and diagnostic equipment common in the industry. Students are prepared to challenge both the Operator in Training (OIT) Water Treatment and Wastewater Treatment Exams offered by the Ministry of Environment.

Prerequisite(s): none
Corerequisite(s):none

ENV7437 Environmental Issues and Solutions

Students learn about key global, regional and local environmental issues, proposed solutions and their inter-dependencies. Students are required to explore environmental issues using field and lab analysis both individually and in teams. Students develop the ability to critically evaluate information related to environmental issues, and problem solve to come up with potential solutions.

Opportunities to analyze issues and share solutions using a variety of communication strategies are provided.

Prerequisite(s): none
Corerequisite(s):none

ENV7438 Environmental Assessments

Environmental Assessments (EAs) are legislated requirements for many environmentally related projects. Students have the opportunity to conduct an Environmental Assessment in collaboration with local industry partners. The various phases of an EA and the requirements of a technician at each phase are introduced. Students are responsible for conducting preliminary site assessments, initiating a monitoring plan, collecting and compiling relevant data and making recommendations to an industry partner.

Prerequisite(s): none
Corerequisite(s):none

ENV7439 Contaminated Site Assessment

Environmental Site Assessments are legislated requirements for many private and government owned properties. ESAs identify the presence and extent of contamination on a site of interest. The various phases of an ESA and the roles and responsibilities of an environmental technician are discussed. Students compete site inspections, compile observations in field books and present findings in formal reports. Students demonstrate site characterization skills by verifying the presence, absence or extent of contamination at a site through preparation of a sampling plan, collection of samples and compilation of relevant data.

Prerequisite(s): none
Corerequisite(s):none

ENV7440 Land and Water Stewardship

The responsible management of land and water resources is an integral component in understanding management practices that support sustainable development. Through the examination of best practices for stewardship, students discuss and design land and water centric research projects, utilizing basic statistics analysis and applying field sampling techniques/data collection/project management principles. Students consult with industry, stakeholders and indigenous knowledge holders, and collaborate with peers to create sample projects related to land and water management.

Prerequisite(s): none
Corerequisite(s):none

ENV7441 Remediation Strategies

Successful environmental site remediation requires an understanding of the site characteristics and application of available tools to evaluate the preferred remediation strategies. Students learn about new and emerging technologies along with industry standard practices for contaminated site cleanup. Students develop a conceptual site model for a contaminated site, and use industry tools to evaluate variables and select a remediation strategy. Bench testing of remediation systems are completed in both field and lab scenarios to assess the effectiveness of the chosen remediation strategy.

Prerequisite(s): none
Corerequisite(s):none

FIN2300 Introduction to Personal Finance

Establishing and maintaining healthy personal financial affairs are important steps towards overall success in life. Through self-study of text material, review questions, self-test quizzes, assignments and a final examination, students acquire knowledge and skills concerning credit and debt, home ownership and mortgages, the savings challenge, government programs to encourage saving,

fixed-income and equity investments, mutual funds, budgeting and financial planning, retirement strategies, public and private pensions, business ownership and insurance.

Prerequisite(s): none
Corerequisite(s):none

FOR7314 Soils and Landforms

The characteristics of common soils with emphasis on the physical, chemical and biological features are explored. Students spend a portion of their time conducting field and lab exercises to examine soil textures and profiles, and the correlation between landforms, soil types and species. Soil fertility, conservation and management are examined.

Prerequisite(s): none
Corerequisite(s):none

GED0021 Disability in Arts: Portrayals and Identity

All forms of art have a powerful influence on our perceptions. Students describe and explore through case studies a range of disabilities and their unique features. Using arts, enquiry and discussion, students critique historical and modern-day portrayals of individuals with disabilities. Students consider the attitudes and social barriers that individuals with disabilities face, and focus on the link between the formation of cultural identity and the arts.

Prerequisite(s): none
Corerequisite(s):none

GED0022 Positive Psychology: the Science of Happiness and Well-Being

While fulfillment and well-being mark some people's lives, many others remain dissatisfied with life. Positive Psychology is concerned with explaining how individuals and communities flourish through the scientific exploration of happiness, optimal human functioning, and civic engagement. The field of Positive Psychology has the objective of making life more satisfying and meaningful through interventions that promote and develop qualities such as self-knowledge, learned optimism, gratitude, mindfulness, resilience, and community connection. Students participate in both interactive lectures and on-line discussions, maintain weekly journals, and develop personal strengths through direct engagement with well-being initiatives.

Prerequisite(s): none
Corerequisite(s):none

GED1212 General Education Elective

Students choose one course, from a group of general education electives, which meets one of the following five theme requirements: Arts in Society, Civic Life, Social and Cultural Understanding, Personal Understanding, and Science and Technology.

Prerequisite(s): none
Corerequisite(s):none

GED1212 General Education Elective

Students choose one course, from a group of general education electives, which meets one of the following five theme requirements: Arts in Society, Civic Life, Social and Cultural Understanding, Personal Understanding, and Science and Technology.

Prerequisite(s): none
Corerequisite(s):none

GED2200 Free Speech and the Challenge of Social Media

This course will allow students to explore social media and its effects on free speech and public

discourse in contemporary society. It will cover the philosophical foundations of free speech, the legal and institutional expressions of free speech in modern democracies, the characteristics of social media infrastructure, how our society's free speech is being influenced if not transformed by this infrastructure, and perspectives on the need, or not, for "regulatory fixes" advanced from different viewpoints.

Prerequisite(s): none
Corerequisite(s):none

GED5002 Victimology

An increased awareness of the ripple effect of crime has given rise to victimology as a significant field of study. Students investigate victims of crime and the impact that crime has on their lives, their families and society. Students raise personal awareness through the study of history of victimology and the victims' movement, the nature and extent of victimization, its emerging theories and resulting legislation. In addition, victims' services, accessibility to services, rights of the victim and the victim in the criminal justice system are examined. Students also explore crime in the workplace, schools, and campuses and the importance of recognizing those at risk.

Prerequisite(s): none
Corerequisite(s):none

GED5005 Greek Mythology

Students explore intriguing characters, important places and famous myths of Classical Greece. By examining a variety of popular myths, students discover how the Ancient Greeks crafted narratives of gods, goddesses, monsters, and heroic figures to make sense of their lives and the world around them. Using examples from art, science, and industry, students examine how these epic stories from oral tradition have endured and continue to influence contemporary society.

Prerequisite(s): none
Corerequisite(s):none

GED5006 World Religions

In Canada, society embraces people from many cultures of the world. By exploring different religious beliefs about the world, the individual, the meaning of life and death, and how individuals are encouraged to conduct themselves, students begin to appreciate the underlying forces that shape followers' lives. Students explore the history and basic teachings of six of the major religions of the world: Hinduism, Buddhism, Judaism, Christianity, Islam, and the Baha'i Faith. Each religion's distinctive features are highlighted, while their similarities and shared values are examined. Students have the opportunity to broaden their worldview through an exposure to divergent religious traditions.

Prerequisite(s): none
Corerequisite(s):none

GED5007 Transatlantic Slavery and Its Abolition

The effects of transatlantic slavery, which began in the 15th century and was not abolished until the 19th, are still present in contemporary social, political and economic systems. In this course, students are provided with a chronological understanding of the transatlantic slave trade that charts: 1) its creation and its economic underpinnings in European and American power and wealth; 2) the resistance to slavery and its eventual abolition; and 3) the afterlife of slavery in the present day. Through class discussion, examination of academic and non-academic literature, and analysis of images and videos, students will be introduced to the history and continuing legacy of the transatlantic slave trade.

Prerequisite(s): none
Corerequisite(s):none

GED5010 The Fungus Among Us

Understanding fungi is critical for a more complete picture of both natural history, as well as historical and current human affairs. Students learn the major groups of fungi most of which are beneficial to humans. Students learn the influence of fungi on historical and cultural activities including art and food. Students also examine the direct involvement of fungi on industrial processes and current medical and biotechnological processes. Students explore the role of fungi as it relates to soil fertility and best practices in agriculture and environmental sustainability. Students will connect fungi to the world around them.

Prerequisite(s): none
Corerequisite(s):none

GED5200 Learning Disabilities, the Invisible Disability

Students increase their awareness of, and sensitivity to, persons with learning disabilities in social, educational and work settings. The field of learning disabilities is introduced through an historical overview, definitions, characteristics, and various models of the causes of learning disabilities. Students learn about the impact learning disabilities have on people's day-to-day lives and the strategies that may be used to compensate for them. Activities include group work, independent research, reflection and case studies. Students are encouraged to share personal experience and knowledge.

Prerequisite(s): none
Corerequisite(s):none

GED5301 On Death, Dying and Medical Assistance in Dying (MAID)

Though death is an immutable consequence of life, society's attitudes and reactions to it have been ever-changing. The viewpoint that life is sacrosanct, to be protected at all costs, is now being challenged by individuals demanding greater control of their quality of life, including the right to die. An historical overview of attitudes towards death will be examined, with a focus on the growing acceptability of medical assistance in dying (MAID), and the reasons behind this movement (demographics, economics, medicine). This course, through discussion of differing social perspectives, government legislation, case studies, research, images and videos will provide students a greater understanding of society's past and present approaches to death.

Prerequisite(s): none
Corerequisite(s):none

GED6022 A Sense of Humour

Humour is a universal tool of communication and social influence. Students survey the development, use, and value of humour in Canadian visual and creative arts. Varieties of humour, such as irony, satire and farce are positioned in the context of Canadian culture to enhance the student's appreciation of humour and self-awareness.

Prerequisite(s): none
Corerequisite(s):none

GED7019 Becoming an Entrepreneur: Is It for Me?

Do you have what it takes to be an entrepreneur? From government incentive and mentoring programs, to courses, training programs and reality television, it is clear that there is a growing need for people who can transform innovative ideas into viable products. Through self-evaluation, a variety of decision-making models and exposure to the experiences of local entrepreneurs, students acquire the necessary knowledge and tools to determine if entrepreneurship is a direction they would like to explore.

Prerequisite(s): none
Corerequisite(s):none

GEN1001 Ethics: What Is the Big Deal?

In today's society there is increasingly more attention focused on questions of right or wrong,

good or evil. Ethical issues relating to a wide variety of concerns are examined. Students clarify their own moral values and explore how these values impact the course of their lives. Students practise using tools and decision-making models to deal with personal and professional dilemmas.

Prerequisite(s): none
Corerequisite(s):none

GEN1957 Science Fiction

Science fiction is both a major genre of popular entertainment and an effective mode of social commentary. Students explore the formal conventions and the history of the genre, analyze a representative range of science fiction, and develop their critical appreciation of the role and place of science fiction in society. In addition to writing reflective and analytical assignments, students have an opportunity to create their own piece of science fiction.

Prerequisite(s): none
Corerequisite(s):none

GEN2003 Healthy Lifestyle

Are you eating healthy foods? Do you exercise regularly? Do you know how to prevent injuries and disease? These are some of the skills necessary to live a healthy lifestyle. Through self-evaluation, weekly journals, and hands-on exercises students assess their personal lifestyles and learn how to improve them.

Prerequisite(s): none
Corerequisite(s):none

GEN2007 Community Service

Volunteerism not only benefits a community; it can broaden the worldview of the volunteer. Students who give their time and energy to an approved community partner gain an opportunity to reflect on the value of the volunteer in contemporary society. Through research and discussion, students consider different types of volunteer settings, trace the history of volunteer organizations, examine the various roles volunteers play within society and reflect on ethical issues.

Prerequisite(s): none
Corerequisite(s):none

GEO0012 Foreign Landscapes and Their Inhabitants

Understanding the natural environment and the geological features and landscapes that shape our world is vital for students to have a greater understanding and respect for others by being more globally and culturally aware. The transformation of Earth as we know it has been a 4.5 billion year marvel in the making. The ever-changing continents, oceans, seas, and geographic landforms continue to reshape our world. Through the exploration of the unique landscapes of Earth and the examination of the geographic distribution of populations, countries, and regions of the world, students will use virtual field trips, case studies, and web quests to enhance their sense of global community.

Prerequisite(s): none
Corerequisite(s):none

GEP1001 Cooperative Education and Job Readiness

Students are guided through a series of activities that prepare them to conduct a professional job search and succeed in the workplace. Through a detailed orientation students learn the cooperative education program policies and procedures related to searching and securing a work term opportunity. Students identify their strengths and transferable skills and participate in workshop-style sessions that focus on cover letter and resume development, interview techniques and job search strategies. Students learn how to navigate a web-based resource centre, which is used to post employment and cooperative education job opportunities. Students reflect on workplace success, ethics and responsibilities.

Prerequisite(s): none
Corerequisite(s):none

GIS7315 Geographical Information Systems

Analysis of spatial data is introduced. Students learn to efficiently use ESRI's ArcMAP software as the primary geographical information system software. Students practise basic skills in manipulating and presenting spatial information with a particular focus on the integration and appropriate delivery of technical data. Students gain further exposure to a wide variety of emerging online spatial resources and tools. ArcPAD hand-held field technologies are also introduced.

Prerequisite(s): none
Corerequisite(s):none

HIS0001 Saints and Heroes: Shining a Spotlight on the 'Dark Ages', Europe A.D. 410-1096

When the mighty Roman Empire began to collapse, it was attacked from all directions by Barbarian armies. The resulting turmoil caused Europe to sink into a period of social and political upheaval known as The Dark Ages. However, during these troubled times, extraordinary warriors and missionaries emerged whose profound influence has played a vital role in shaping what has become our modern world. Students examine the social, political, intellectual, and economic history of this era and explore its enduring impact on modern Western society.

Prerequisite(s): none
Corerequisite(s):none

HOS2228 Wine, Food and Culture

An understanding of culture can be discovered by exploring eating and drinking customs. Students experience a virtual global tour, exploring culture, history and traditions through the lens of wine and food. Students acquire a sense of the customs of their culture and those of others. Through comparison, observation, discussion, and reflection, students discover something found in all cultures: the importance of food and drink.

Prerequisite(s): none
Corerequisite(s):none

LIB1982 Reading for Recreation

Reading gives us knowledge and new ideas to draw from in the future. It tones the mind in ways similar to the way exercise tones the body. As a result, time spent in reading for recreation has benefits beyond the immediate appreciation of the text. Students examine appeal factors of various genres of fiction and non-fiction by reviewing the history and classics of each genre, considering the therapeutic values of reading, and examining recent trends in online reading and publishing.

Prerequisite(s): none
Corerequisite(s):none

MAT7205 Mathematics

Mathematical principles that are required to solve numerical problems in the environmental sciences are introduced. Emphasis is placed on the study of fractions, decimals, scientific notation, geometry and scales. Students express word problems in mathematical terms and interpret results.

Prerequisite(s): none
Corerequisite(s):none

MAT7221 Environmental Data Analysis

Interpreting results is a critical aspect of environmental studies. Students are introduced to the following topics in statistics: the collection, organization and presentation of statistical data; measures of tendencies and variation; basic probability concepts; errors in data and construction of indices. Students enhance their knowledge of statistical theory by applying it to environmental case studies and data generated from concurrent courses using common industry spreadsheet and statistical software tools.

Prerequisite(s): none
Corerequisite(s):none

MGT7330 Trends in Today's Workplace

In today's culture of work, every employee needs to be knowledgeable about current trends and issues in the workplace. Students explore emerging issues facing employees in today's technology-driven workplace and investigate the realities of social networking, diversity in the workplace, and work mobility.

Prerequisite(s): none
Corerequisite(s):none

MVM8800 The Impact of the Car on North American Culture

Students explore the social, economic, political, and environmental impact of the automobile on North American lives. Through a combination of assignments, discussion boards, and quiz work, students study the history of the automobile, from its introduction to the present day. Doing so allows students to track the changes the car has introduced to manufacturing, lifestyles, design principles, transportation systems, the environment, labour-management negotiation, and economic organization.

Prerequisite(s): none
Corerequisite(s):none

PSI0003 Globalization and Sustainability

The rapid growth of the global economy raises fundamental questions: How do trade and politics affect development and the environment? What are the effects of free trade and the rise of multi-national corporations on local cultures? What are the effects of the "clash of cultures" produced by international travel, migration, and new social, collaborative technologies that send film, books, television, music and other "proprietary" content spinning around the world instantly? Is globalization environmentally sustainable? Students examine these and other questions and analyze the day-to-day choices raised by globalization in an increasingly interconnected world.

Prerequisite(s): none
Corerequisite(s):none

RAD2001 Popular Culture

One dictionary definition of popular culture is the "totality of socially transmitted behaviour patterns, arts, beliefs, institutions, and all other products of human work and thought." This definition allows us great freedom and scope. Students examine recent North American popular culture including trends, fads, styles, theories and the cult of the new. By exploring our perceptions of culture and the trivialization of society, students begin to appreciate how the media has relentlessly helped to shape today's values. Through online research, assigned readings, and participation in self-directed learning, students critique popular culture's place in North American society, concentrating on their decade of choice.

Prerequisite(s): none
Corerequisite(s):none

SCI2200 Dynamic DNA: You Are Not Alone

DNA is the recipe book for all living things. This small molecule can tell us about our past, present, and future. It is what makes us all unique and what ties us together. DNA can answer some of life's

biggest questions: Where do we come from? How are we made? Can we cure disease? Can we predict the future or change the outcome? In this course, we will examine the spectacular DNA molecule and how it works. Through contemporary articles, research, images, and videos, we will investigate ways in which DNA can be used to predict traits, detect disease, discover ancestry and engineer babies. We will look at DNA's involvement in our evolution, and how we can harness its powers to create superfoods, change a wolf into a pug or clone extinct species. Through a combination of discussion boards, quizzes and assignments, students will discuss DNA history, technology and social attitudes, providing them with a greater understanding of their genetic make-up, both on a personal and global level.

Prerequisite(s): none
Corerequisite(s):none

SCI7614 Physical, Chemical and Biological Sampling

Students practise the appropriate field methods and protocols required to collect a wide range of air, water, soil and biological samples. Students learn safe handling procedures, preservation techniques, protocols for legal samples and best practices for sample shipping. Various types of equipment are used by students to collect, analyze and preserve samples.

Prerequisite(s): none
Corerequisite(s):none

SOC2003 Understanding Human Sexuality

Students study human sexuality through an interdisciplinary approach. Students gain a basic understanding of human sexuality through an investigation of history, culture, physiology, sexual development, sexual behaviours, sexually transmitted diseases, attitudes, sex, deviance and sexual relationships.

Prerequisite(s): none
Corerequisite(s):none

WKT7102 Cooperative Education Work Term

For students who qualify academically and who choose to participate, there is the opportunity to enhance their diploma with an officially recognized co-op designation. This designation is achieved by successfully completing a paid co-op educational employment experience where students have the chance to gain valuable work experience, network and make contacts in the industry and assess their skills and weaknesses in a real-world work environment.

Prerequisite(s): none
Corerequisite(s):none