



**Lakehead Adult Education Centre
Student Handbook
2023-2024**

GENERAL INFORMATION

CODE OF CONDUCT

Lakehead District School Board (LDSB) schools are safe, nurturing, respectful and positive learning environments that enable all students to succeed to their full potential. They are violence-free environments that promote a sense of responsibility, civility, and academic excellence. As part of this, all students and staff are expected to develop and acquire the knowledge and skills that demonstrate respect for human rights and social justice and promote the values they need to become responsible members of society.

The Code of Conduct is founded on principles of fairness and non-violence and has a focus on assisting students to develop appropriate social/personal skills and non-violent problem-solving techniques that will be used when incidents occur. Students are encouraged to assist each other through programs like peer mediation, problem-solving discussions, and dispute resolution.

The LDSB does not tolerate the following activities on its property, on school buses, or at Board-sponsored events:

- Physical aggression of any kind.
- The possession or presence of weapons or replicas.
- Verbal abuse in any form.
- The presence of any intruder or any activity which places the safety of students, staff, or visitors at risk.
- The possession, use or trafficking of alcohol, illegal drugs, or unauthorized prescription drugs.
- Bullying and cyber-bullying.

RULES AND REGULATIONS

- Smoking or vaping is not permitted anywhere on the school grounds; anyone found smoking or vaping on the school grounds may be fined.
- Visitors to the school must check-in and sign-in at the office.
- Students are responsible for being academically honest in all aspects of their schoolwork. Please refer to [Board Policy #4021](#) and [Appendix A of #4021](#) for more information.

SCHOOL CLOSURE INFORMATION

For information about school closures due to heavy snowfall or other weather-related issues, please listen to the local radio stations, or check the board website at www.lakeheadschoools.ca

THREATS TO SCHOOL SAFETY

- The primary responsibility of Lakehead Public Schools is to ensure the safety of students and staff while on Board property.
- All members of the school community must not:
 - engage in bullying behaviours, including cyberbullying.
 - commit sexual assault.
 - traffic in weapons or illegal drugs.
 - give alcohol or cannabis to a minor.
 - commit robbery.
 - be in possession of any weapon, including firearms.
 - use any object to threaten or intimidate another person.

- cause injury to any person with an object.
- be in possession of, or be under the influence of alcohol, cannabis (unless the individual has been authorized to use cannabis for medical purposes), and/or illegal drugs.
- provide others with alcohol, illegal drugs, or cannabis (unless the recipient is an individual who has been authorized to use cannabis for medical purposes).
- inflict or encourage others to inflict bodily harm on another person.
- engage in hate propaganda and other forms of behaviour motivated by hate or bias; and
- commit an act of vandalism that causes extensive damage to school property or to property located on the premises of the school.
- For more information refer to [Board Policy #8092](#).

TECHNOLOGY USE STANDARDS FOR STUDENTS

- Please refer to [LDSB policy #3096](#) Information/Communication Technology Use for more information.

GUIDANCE SERVICES

The primary focus of Guidance Services is to work closely with students in all aspects of development during their time at LAEC. Specific services include educational counselling, academic counselling, and career information.

GUIDANCE COUNSELLOR

Thomas Crittall
 807-625-5142
thomas_crittall@lakeheadschoools.ca

GRADUATION INFORMATION

Please be aware that it may take up to 5 days to process your transcript, and diplomas are processed at specific times throughout the school year. If you have questions, please check in with the Guidance Counsellor.

Convocation takes place in June each school year. Information about the ceremony will be available from the office in April and May.

Graduation pictures can be booked through the office at no cost to the student. Dates for graduation photo bookings will be available at the office in May each school year.

MATURITY EVALUATIONS

Maturity Credits

Maturity credits can be awarded to students who entered a high school before 1999. Students who entered school after 1999 are not eligible for maturity credits. Students who qualify are eligible for 2 credits per year from the day they turn 19 years of age. A maximum of 12 maturity credits can be awarded to a student. A student's total credits (after maturity credits) cannot exceed 23 or 26 credits depending on the diploma they are on. Students who are awarded maturity credits must complete a minimum of 4 senior (11/12) credits as a mature student. For more information about Maturity credits, please see the Guidance Counsellor.

Prior Learning Assessment and Recognition (PLAR)

PLAR allows students to earn credits through subject-specific assessments and through an evaluation of their life experience.

PLAR Requirements:

- Students must be at least 18 years of age or older within the current school year.
- Students are required to meet the Ontario Secondary School Diploma requirements which are as follows:
- 30 credits to graduate;
- Earn a minimum of four grade 11 and 12 credits while registered as a mature student by taking the necessary courses;
- Must complete each of the four grade 11 and 12 compulsory credit requirements: Grade 11 and 12 English, Grade 11 or 12 Mathematics, Grade 11 or 12 Science or Grade 9, 10, 11 or 12 Technological Education (substitutions may be allowed);
- Ontario Secondary School Literacy Course;
- Community Involvement Activities – 40 hours;
- Students, who enroll from outside Ontario, must participate through the PLAR process to earn an Ontario Secondary School Diploma.

For more information about PLAR, please see the Guidance Counsellor.

POST-SECONDARY INFORMATION

College Applications

Transcript Requests for Current Students

- For colleges within Ontario, transcripts and/or letters of registration are sent **electronically** to **OCAS** at **specific times** throughout the school year;
- Please be aware that we do not send transcripts and/or letters of registration directly to any Ontario college.

IMPORTANT: when you complete your application through OCAS, you must list LAEC as a school you are currently attending in the Education section of your application. When you have completed an application through OCAS (www.ontariocolleges.ca), you are required to inform the guidance counsellor via email of your application (include your OCAS application #). For transcript requests for colleges outside of Ontario, please contact the guidance counsellor directly after you have completed the application.

Application Deadlines

- Different colleges may have different deadlines, please contact the college of your choice for this information.
- It is recommended that a student apply as early as possible.
- Please be aware that you do not have to have your credits completed to be able to do the application.

Final Mark Deadlines

- Different colleges may have different deadlines, please contact the college of your choice for this

information.

- Please be aware that LAEC has deadlines for credit completion which may be different than the college deadlines.

University Applications

Transcript Requests for all University Applications

Applications are made through Ontario University Application Centre (OUAC). OUAC allows students to request their official high school transcript electronically (completed courses only) through OCAS. You can access it from the 105 applications in the Transcripts section under “Transcripts from Ontario High Schools” and “Find out if you are eligible”, select Lakehead Adult Education Centre.

Application Deadlines

- Different universities may have different deadlines, please contact the university of your choice for this information.
- It is recommended that a student apply as early as possible.
- Please be aware that you do not have to have your credits completed to be able to do an application.

Final Mark Deadlines

- Different universities may have different deadlines, please contact the university of your choice for this information. Please be aware that LAEC has deadlines for credit completion which may be different than the university deadlines.

PROGRAMMING

CALENDAR

All LAEC programming operates within five semesters in the school year. Registration for all programming is on-going throughout the school year, and different credits have different start and end dates.

Semester 1: September 6, 2023 to October 27, 2023

Semester 2: October 30, 2023 to December 22, 2023

Semester 3: January 9, 2024 to March 1, 2024

Semester 4: March 4, 2024 to May 3, 2024

Semester 5: May 6, 2024 to June 27, 2024

CREDIT PROGRAMMING

LAEC offers in-person, virtual, e-learning, and co-operative education programming to students who are working towards their OSSD, and to those looking to take credits for post-secondary purposes. Different credits have different delivery methods and different start and end dates. All programming is subject to enrollment.

IN-PERSON

Our in-person classes are teacher-directed and offer students the opportunity to attend classes daily. Our in-person classes are available each semester of the school year in a variety of subjects – computer basics, workplace and college level English and math, English as a Second Language, and employability skills.

VIRTUAL

Our virtual classes take place online via Teams. They are teacher-directed and offer students outside of Thunder Bay the opportunity to attend daily classes online. Our virtual classes are available each semester of the school year. Subjects offered include workplace and college English and math, and English as a Second Language.

ENGLISH AS A SECOND LANGUAGE (ESL)

ESL classes (in-person and virtual) are attendance-based, and all credits are taught with direct instruction from a teacher. ESL credits are designed to provide English language learners with the knowledge and skills they need to achieve success in both their social and academic lives.

English language learners are people whose first language is not English or is a variety of English that is significantly different from the variety used in Ontario's schools and who may require focused educational support to attain proficiency in English.

Please note: Fees may apply dependent on a student's status in Canada. For more information, please speak to our Guidance Counsellor.

E-LEARNING

Our e-learning classes offer students the opportunity to self-direct their learning with teacher supports and weekly check-ins. Our e-learning classes are available each semester of the school year in a variety of different subjects and levels, with different start and end dates, depending on the specific course. Each e-learning class contains 20 activities, and each activity must be completed to the satisfaction of the subject teacher before grades and/or credits will be issued. The expectation is that students will check-in with their teacher weekly and complete all 20 activities with a mark of 50% or above to achieve the credit.

CO-OPERATIVE EDUCATION

Our co-operative education programming offers students the opportunity to expand their employability skills and participate in a work placement as a way of earning credits toward their OSSD. Co-operative Education programming offers students real work experience, exploration of career choices, and a chance to further develop valuable workplace skills through a combination of theory and hands-on experience.

COURSE DESCRIPTIONS AND PRE-REQUISITES

BUSINESS STUDIES

Entrepreneurship: The Venture, Grade 11, College preparation (BDI 3C)

Prerequisite – None

This course focuses on ways in which entrepreneurs recognize opportunities, generate ideas, and organize resources to plan successful ventures that enable them to achieve their goals. Students will create a venture plan for a school-based or student-run business. Through hands-on experiences, students will have opportunities to develop the values, traits, and skills most often associated with successful entrepreneurs.

Retail and Service Marketing, Grade 11, Workplace (BMX 3E)

Prerequisite – None

This course focuses on marketing activities in the retail and service sectors. Students will examine trends and global influences on marketing decisions and will learn about the importance of customer service in developing a customer base and maintaining customer loyalty. Through hands-on learning, students will develop personal selling and information technology skills that will prepare them for a variety of marketing-related positions in the workplace.

Information and Communication Technology in the Workplace, Grade 12, Workplace Preparation (BTX4E)

Prerequisite: Information and Communication Technology: The Digital Environment, Grade 11, Open

This course provides students with the opportunity to further develop essential workplace skills in information and communication technology while working in a team environment. Using a project-based approach, students will focus on integrating software applications and applying multimedia software features. Students will expand their understanding of electronic business and e-commerce environments and workplace ethics. This course will prepare students for a successful transition from secondary school to the workplace.

ENGLISH

English, Grade 11, Workplace (ENG 3E)

Prerequisite: English, Grade 10, Applied

This course emphasizes the development of literacy, communication, and critical and creative thinking skills necessary for success in the workplace and in daily life. Students will study the content, form, and style of a variety of contemporary informational, graphic, and literary texts; and create oral, written, and media texts in a variety of forms for practical purposes. An important focus will be on using language clearly and accurately in a variety of formal and informal contexts. The course is intended to prepare students for the compulsory Grade 12 workplace preparation course.

English, Grade 11, College (ENG 3C)

Prerequisite – English, Grade 10, Applied

This course emphasizes the development of literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. Students will study the content, form, and style of a variety of informational and graphic texts, as well as literary texts from Canada and other countries, 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. The course is intended to prepare students for the compulsory Grade 12 college preparation course.

English, Grade 11, University (ENG 3U)

Prerequisite – English, Grade 10, Academic

This course emphasizes the development of literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. Students will analyze 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. The course is intended to prepare students for the compulsory Grade 12 university or college preparation course.

English, Grade 12, Workplace (ENG 4E)

Prerequisite – English, Grade 11, Workplace

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 analyze 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.

The Ontario Literacy Course, Grade 12, Open (OLC 40)***Prerequisite – None***

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.

English, Grade 12, College (ENG 4C)***Prerequisite – English, Grade 11, College***

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

English, Grade 12, University (ENG 4U)***Prerequisite – English, Grade 11, University***

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 texts and purposes for reading, and developing greater control in writing. The course is intended to prepare students for university, college, or the workplace.

Writer's Craft, Grade 12, University (EWC 4U)***Prerequisite – English, Grade 11, University***

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

ENGLISH AS A SECOND LANGUAGE**English as a Second Language ESL Level 1 (ESL AO)**

Prerequisite – none

This course builds on students' previous education and language knowledge to introduce them to the English language and help them adjust to the diversity in their new environment. Students will use beginning English language skills in listening, speaking, reading, and writing for everyday and essential academic purposes. They will engage in short conversations using basic English language structures and simple sentence patterns; read short, adapted texts; and write phrases and short sentences. The course also provides students with the knowledge and skills they need to begin to adapt to their new lives in Canada.

English as a Second Language ESL Level 2 (ESL BO)

Prerequisite – ESL AO

This course extends students' listening, speaking, reading, and writing skills in English for everyday and academic purposes. Students will participate in conversations in structured situations on a variety of familiar and new topics; read a variety of texts designed or adapted for English language learners; expand their knowledge of English grammatical structures and sentence patterns; and link English sentences to compose paragraphs. The course also supports students' continuing adaptation to the Ontario school system by expanding their knowledge of diversity in their new province and country.

English as a Second Language ESL Level 3 (ESL CO)

Prerequisite – ESL BO

This course further extends students' skills in listening, speaking, reading, and writing in English for a variety of everyday and academic purposes. Students will make short classroom oral presentations; read a variety of adapted and original texts in English; and write using a variety of text forms. As well, students will expand their academic vocabulary and their study skills to facilitate their transition to the mainstream school program. This course also introduces students to the rights and responsibilities inherent in Canadian citizenship, and to a variety of current Canadian issues.

English as a Second Language ESL Level 4 (ESL DO)

Prerequisite – ESL CO

This course prepares students to use English with increasing fluency and accuracy in classroom and social situations and to participate in Canadian society as informed citizens. Students will develop the oral presentation, reading, and writing skills required for success in all school subjects. They will extend listening and speaking skills through participation in discussions and seminars; study and interpret a variety of grade-level texts; write narratives, articles, and summaries in English; and respond critically to a variety of print and media texts.

English as a Second Language ESL Level 5 (ESL EO)

Prerequisite – ESL DO

This course provides students with the skills and strategies they need to make the transition to college and university preparation courses in English and other secondary school disciplines. Students will be encouraged to develop independence in a range of academic tasks. They will participate in debates and lead classroom workshops; read and interpret literary works and academic texts; write essays, narratives, and reports; and apply a range of learning strategies and research skills effectively. Students will further develop their ability to respond critically to print and media texts.

FIRST NATIONS, METIS, AND INUIT STUDIES

English: Understanding Contemporary First Nations, Métis, and Inuit Voices, Grade 11, University (NBE 3U)

Prerequisite – English, Grade 10, Academic

This course explores the themes, forms, and stylistic elements of a variety of literary, informational, graphic, oral, cultural, and media text forms emerging from First Nations, Métis, and Inuit cultures in Canada, and also examines the perspectives and influence of texts that relate to those cultures. In order to fully understand contemporary text forms and their themes of identity, relationship, and self-determination, sovereignty, or self-governance, students will analyse the changing use of text forms by Indigenous authors/creators from various periods and cultures in expressing ideas related to these themes. Students will also create oral, written, and media texts to explore their own ideas and understanding, focusing on the development of literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. The course is intended to prepare students for the compulsory Grade 12 English university or college preparation course.

English: Understanding Contemporary First Nations, Métis, and Inuit Voices, Grade 11, Workplace (NBE 3E)

Prerequisite – English, Grade 10, Academic, Applied, or Locally developed

This course explores themes, forms, and stylistic elements of literary, informational, graphic, oral, cultural, and media texts emerging from First Nations, Métis, and Inuit cultures in Canada, as well as some texts that relate to those cultures. In order to better understand contemporary texts, students will explore connections between traditional and contemporary text forms and cultural and community aspects of identity, relationships, and self-determination, sovereignty, or self-governance. Students will also create oral, written, and media texts focusing on the development of literacy, communication, and critical thinking skills necessary for success in the workplace and daily life. The course is intended to prepare students for the compulsory Grade 12 English workplace preparation course.

World Views and Aspirations of First Nations, Métis, and Inuit Communities in Canada, Grade 11, Workplace (NBV3E)

Prerequisite – First Nation, Metis, and Inuit in Canada, Grade 10 Open, History, Grade 10 Academic, Applied, or Locally developed

This course explores diverse knowledge, world views, and aspirations that shape the actions of First Nations, Métis, and Inuit individuals and communities in Canada. Students will examine issues of identity facing First Nations, Métis, and Inuit individuals and communities with respect to changing relationships with the land, nature, one another, and Canada. Students will explore their own and others' world views, and the factors that shape world views over time, to develop an understanding of how traditional and contemporary beliefs and values influence the aspirations and practices of First Nations, Métis, and Inuit communities. Students are given the opportunity to develop further understanding about the impacts of colonization and how reconciling diverse knowledge, world views, and aspirations contributes to a call for societal understanding.

GUIDANCE AND CAREER EDUCATION

Advanced Learning Strategies, Grade 11/12, Open (GLE 30/GLS 40)

Prerequisite – None

This course improves students' learning and personal-management skills, preparing them to make successful transitions to work, training, and/or postsecondary education destinations. Students will assess their learning abilities and use literacy, numeracy, and research skills and personal-management

techniques to maximize their learning. Students will investigate trends and resources to support their postsecondary employment, training, and/or education choices and develop a plan to help them meet their learning and career goals.

Leadership and Peer Support, Grade 11, Open (GPP 3O)

Prerequisite – None

This course prepares students to act in leadership and peer support roles. They will design and implement a plan for contributing to their school and/or community; develop skills in communication, interpersonal relations, teamwork, and conflict management; and apply those skills in leadership and/or peer support roles – for example, as a student council member or a peer tutor. Students will examine group dynamics and learn the value of diversity within groups and communities.

HEALTH AND PHYSICAL EDUCATION

Health for Life, Grade 11, College (PPZ 3C)

Prerequisite – None

This course enables students to examine the factors that influence their own health practices and behaviours as well as those factors that contribute to the development of healthy communities. It emphasizes the concept of wellness, which addresses all aspects of well-being – physical, cognitive, emotional, spiritual, and social – and promotes healthy eating, physical activity, and building and maintaining a positive sense of self. Students will develop the skills necessary to make healthy choices and create a personal wellness plan. They will also design initiatives that encourage others to lead healthy, active lives. The course prepares students for college programs in health sciences, fitness, wellness, and health promotion.

MATH

Math for Work and Everyday Life, Grade 11, Workplace (MEL 3E)

Prerequisite – Math, Grade 10, Workplace

This course enables students to broaden their understanding of mathematics as it is applied in the workplace and daily life. Students will solve problems associated with earning money, paying taxes, and making purchases; apply calculations of simple and compound interest in saving, investing, and borrowing; and calculate the costs of transportation and travel in a variety of situations. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Foundations for College Math, Grade 11, College (MBF 3C)

Prerequisite – Math, Grade 10, Applied

This course enables students to broaden their understanding of mathematics as a problem-solving tool in the real world. Students will extend their understanding of quadratic relations; investigate situations involving exponential growth; solve problems involving compound interest; solve financial problems connected with vehicle ownership; develop their ability to reason by collecting, analyzing, and evaluating data involving one variable; connect probability and statistics; and solve problems in geometry and trigonometry. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

Functions, Grade 11, University (MCR 3U)

Prerequisite – Math, Grade 10, Academic

This course introduces the mathematical concept of the function by extending students' experiences with linear and quadratic relations. Students will investigate properties of discrete and continuous functions, including trigonometric and exponential functions; represent functions numerically, algebraically, and graphically; solve problems involving applications of functions; investigate inverse functions; and develop facility in determining equivalent algebraic expressions. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

Math for Work and Everyday Life, Grade 12, Workplace (MEL 4E)

Prerequisite – Math, Grade 11, Workplace

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.

Foundations for College Math, Grade 12, College (MAP 4C)

Prerequisite – Math, Grade 11, College

This course enables students to broaden their understanding of real-world applications of mathematics. Students will analyze 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.

Mathematics for College Technology, Grade 12, College (MCT 4C)

Prerequisite – Math, Grade 11, Functions (MCR 3U) or Functions and Applications (MCF 3M)

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.

Mathematics of Data Management, Grade 12, University (MDM 4U)

Prerequisite – Math, Grade 11, Functions (MCR 3U) or Functions and Applications (MCF 3M)

This course broadens students' understanding of mathematics as it relates to managing data. Students will apply methods for organizing and analyzing 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 interest.

Advanced Functions, Grade 12, University (MHF 4U)

Prerequisite – Math, Grade 11, Functions (MCR 3U) or Grade 12, College Technology (MCT 4C)

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.

Calculus and Vectors, Grade 12, University (MCV 4U)

Prerequisite – Math, Grade 12, Advanced Functions (MHF 4U) must be taken prior to or concurrently with 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.

SCIENCE

Biology, Grade 11, College (SBI 3C)

Prerequisite – Science, Grade 10, Applied

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.

Biology, Grade 11, University (SBI 3U)

Prerequisite – Science, Grade 10, Academic

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.

Biology, Grade 12, University (SBI 4U)

Prerequisite – Biology, Grade 11, University

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

Chemistry, Grade 11, University (SCH 3U)

Prerequisite – Science, Grade 10, Academic

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.

Chemistry, Grade 12, College (SCH 4C)

Prerequisite – Science, Grade 10, Applied

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.

Chemistry, Grade 12, University (SCH 4U)

Prerequisite – Chemistry, Grade 11, University

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

Physics, Grade 11, University (SPH 3U)

Prerequisite – Science, Grade 10, Academic

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 analyze the interrelationships between physics and technology, and consider the impact of technological applications of physics on society and the environment.

Physics, Grade 12, College (SPH 4C)

Prerequisite – Science, Grade 10, Applied

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.

Physics, Grade 12, University (SPH 4U)

Prerequisite – Physics, Grade 11, University

This course enables students to deepen their understanding of physics concepts and theories. Students will continue their exploration of energy transformations and the forces that affect motion, and will investigate electrical, gravitational, and magnetic fields and electromagnetic radiation. Students will also explore the

wave nature of light, quantum mechanics, and special relativity. They will further develop their scientific investigation skills, learning, for example, how to analyze, qualitatively and quantitatively, data 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 AND HUMANITIES

Housing & Home Design, Grade 11, Open (HLS 30)

Prerequisites – None

This course introduces students to a range of issues related to housing and home design. Students will learn about the needs that housing fulfils; housing options; home maintenance and safety; and environmental, economic, legal, and social considerations related to housing. They will use the elements and principles of design to analyse design and decorating decisions. Students will develop research skills as they investigate issues related to housing and home design.

Raising Healthy Children (Parenting), Grade 11, Open (HPC 30)

Prerequisites – None

This course focuses on the skills and knowledge parents, guardians, and caregivers need, with emphasis on maternal health, pregnancy, birth, and the early years of human development (birth to six years old). Through study and practical experience, students will learn how to meet the developmental needs of young children, communicate with them, and effectively guide their early behaviour. Students will develop their research skills through investigations related to caregiving and child rearing.

Personal Life Management, Grade 12, Open (HIP 40)

Prerequisites – None

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