## TABLE OF CONTENTS

## PAGE

INTRODUCTION	1
GRADUATION REQUIREMENTS	2
TYPES OF PATHWAYS (Grades 9 – 10)	4
TYPES OF PATHWAYS (Grades 11-12)	5
ASSESSMENT AND EVALUATION OF STUDENT ACHIEVEMENT	6
SCHOOL RECORDS	7
REPORTING OF STUDENT PROGRESS	7
SUPPORT FOR STUDENTS	8
SPECIAL PROGRAMS	9
CO-OP EDUCATION & ONTARIO YOUTH APPRENTICESHIP PROGRAM (OYAP)	11
FEES	
PROPOSED DUAL CREDIT OFFERINGS	
SPECIALIST HIGH SKILLS HEALTH & WELLNESS CERTIFICATE REQUIREMENTS	17
SPECIALIST HIGH SKILLS HEALTH & WELLNESS REGISTRATION FORM	
SPECIALIST HIGH SKILLS MAJOR MINING CERTIFICATE REQUIREMENTS	
SPECIALIST HIGH SKILLS MAJOR MINING REGISTRATION FORM	
SCIENCE AND TECHNOLOGY EDUCATION PROGRAM (STEP)	21
ADVANCED PLACEMENT CAPSTONE PROGRAM (AP CAPSTONE)	

## **COURSE DESCRIPTIONS**

ARTS	
BUSINESS STUDIES / COMPUTER STUDIES	
CANADIAN AND WORLD STUDIES	
ENGLISH	
FRENCH	
FRENCH IMMERSION	
GUIDANCE & CAREER EDUCATION	
HEALTH & PHYSICAL EDUCATION	
HUMANITIES	
MATHEMATICS	41
SCIENCE	
STEP/STEP LAPTOP	
TECHNOLOGICAL EDUCATION	
LOCALLY DEVELOPED CREDIT COURSES	51

## **INTRODUCTION**

#### Lockerby Composite School – MISSION STATEMENT

At Lockerby Composite School we are committed to developing life-long learning to ensure continuous success in the global community. In a safe and caring environment, we promote affirmative collaboration, effective communication, and leadership opportunities for all.

#### **Our Guiding Principles:**

- To meet the needs of every student
- To foster a community of learners
- To keep our school safe
- To ensure that school-based decisions are in the context of continuous school improvement
- To foster academic success for every student
- To enhance collegiality and professional growth
- To encourage innovation, initiative, and creativity
- To celebrate success and promote a sense of pride
- To nurture strong partnerships between the school, the home, and the community
- To maintain honest and open communication

#### **Course Selection Process**

Starting in Grade 9, students make choices about both the subjects and the types of courses that they take. Teachers, counsellors, and parents all work with students to help them make the best possible choices. These choices are based on students' interests, learning styles, preferences, past successes, future goals, and diploma requirements.

Responsibility for planning the student's program is shared by the student, his or her parents, the guidance counsellor, the teacher-advisor, and school administrators. The Principal and staff of a school may make recommendations to students and their parents regarding the selection of courses. These recommendations are based on the best information available about the individual student's abilities, achievements, interests, and educational goals. Such advice should be considered carefully because they may have a significant influence on students' selections. Students and their parents have the right to make alternative course selections, but they should be aware of the requirements of the O.S.S.D. Students need not choose all courses at the same level of difficulty. In addition, students should note that some subjects support national objectives such as personal fitness and health, and understanding of English and French as official languages, the benefits of multiculturalism, and an awareness of Canada's cultural heritage.

The process of choosing one's courses should be done wisely. Course selections made in February for the following year are the basis on which classes are structured and staff are assigned. After staffing and the school's master timetable have been established, subsequent changes in a student's program are possible but very much restricted, and will be considered if the timetable and class sizes permit.

## **GRADUATION REQUIREMENTS FOR SECONDARY SCHOOL**

### **Ontario Secondary School Diploma (OSSD)**

The graduation requirements emphasize a challenging, high-quality curriculum and the achievement by students of measurable results. In keeping with the emphasis on high standards, students are required to complete **30 courses**, each scheduled for 110 hours. **18** of these courses are "**compulsory**"; that is, all students must take specific courses in mandatory subject areas. The remaining **12** courses are "**electives**" which may be selected from many areas of interest.

#### Compulsory credits include

- 4 English/Français one credit per grade \*
- 1 French as a Second Language / English/Anglais
- 3 Mathematics at least one in Grade 11 or 12
- 2 Science
- 1 of Grade 11 or 12 Science or Grade 9 12 Technology
- 1 Canadian History
- 1 Canadian Geography
- 1 Arts (Music or Visual Arts)
- 1 Physical Education and Health
- 0.5 Civics
- 0.5 Career Studies
- 1 of Group 1 an additional English credit
  - or French as a second language, \*\*
  - or a Native language,
  - or a classical or an international language,
  - or a social science and the humanities,
  - or Canadian and World Studies
  - or guidance and career education, or cooperative education \*\*\*
  - **1 of Group 2** an additional credit in health and physical education
    - or the arts,
    - or business studies,
    - or French as a second language ,\*\*
    - or cooperative education \*\*\*
- 1 of Group 3
  - an additional credit in science (Grades 11 or 12)
    - or technical education,
    - or French as a second language, \*\*
    - or computer studies,
    - or cooperative education \*\*\*

In addition to the compulsory credits, students must complete:

12 optional credits + 40 hours of community service the provincial literacy requirement

- \* A maximum of 3 credits in English as a second language (ESL) may be counted towards the 4 compulsory credits in English, but the fourth must be a credit earned for a Grade 12 compulsory English course.
- \*\* In Groups 1, 2 and 3, a maximum of 2 credits in French as a second language can count as compulsory credits, one from Group 1 and one from either Group 2 or Group 3.
- \*\*\* A maximum of 2 credits in cooperative education can count as compulsory credits.
- + The 12 optional credits may include up to 4 credits earned through the approved dual credit courses.

Additional details regarding compulsory credit requirements can be found in Ontario Schools, Kindergarten to 12 Policy & Program Requirements 2011. http://www.edu.gov.on.ca/eng/document/policy/os/onschools.pdf. The curriculum is designed to allow students to create a personalized pathway based on their interests and needs within graduation requirements.

#### Elective credits

The remaining 12 credits are optional, allowing students to pursue individual interests and meet university, college or work requirements. These credits are selected from available courses.

#### Credits

A credit is granted when a course that has been scheduled for 110 hours is successfully completed. "Scheduled time" is defined as the time during which students participate in planned learning activities designed to lead to the achievement of curriculum expectations. Planned learning activities include the interaction between the teacher and the student as well as assigned individual and/or group work, excluding homework.

#### Substitutions for Compulsory Courses

In rare cases (with the principal's permission), there is a need to be flexible and support students so they can obtain their secondary school diploma. To do this, up to three (3) compulsory substitutions may be made for a limited number of compulsory credit courses. These substitutions come from the remaining courses offered by the school that meet the requirements for compulsory courses. Credits earned through cooperative education, and English as second language courses may not be used through substitution to meet compulsory credit requirements.

#### Ministry Approved Credits Taken Outside of School

Students who complete approved Ministry Courses outside of school can have their results added to their high school transcript. This is a common practice for students who complete their Grade 8, Music Conservatory program.

http://www.edu.gov.on.ca/eng/parents/speced.html

#### **Additional Diploma Requirements**

In addition to achieving 30 credits, students are also required to:

- Complete 40 hours of documented community involvement
- Successfully complete the Provincial Grade 10, Reading and Writing Literacy Test OSSLT

#### **Community Involvement**

Students must complete 40 hours of community service in order to achieve their graduate diploma. These hours can begin the summer prior to starting high school. Local charities promote their upcoming activities and this information can be found on the school website and also in the Volunteer binder in Guidance. Parents and students are encouraged to visit http://www.rainbowschools.ca/students/communityhours.php for detailed information about volunteering in our community.

#### The Ontario Secondary School Literacy Test - OSSLT

Since 1999-2000, all students must successfully complete the OSSLT in order to earn their secondary school diploma. Most students take this test in Grade 10. The test is based on Ontario Grade 9 curriculum expectations for language and communication, particularly reading and writing. Students who struggle with literacy or who are unsuccessful on the test will have an opportunity to complete remedial assistance to better prepare them for this test. If upon repeated attempts, a student continues to be unsuccessful on the Literacy Test, opportunities will be made available for the student to take the Ontario Secondary Literacy Course OSSLC. A successful completion of this course will meet the Ministry standard for additional diploma requirements.

Accommodations will be made to ensure that students who are receiving special education programs/ services and who have an Individual Education Plan (IEP) have a fair and equal opportunity to successfully complete the OSSLT. Accommodations may come in alternative forms of print or extra time but the actual content of the secondary literacy test is never altered. Some students may benefit from a **deferral** of the test. Deferred students may include students registered in English as a second language course or students who have not yet acquired the level of proficiency in English required for successful completion of the test. Lastly, **exemptions** will be made for students whose IEP indicates that the student is not working towards the attainment of a secondary school diploma. Before an exemption can take place, parental consent and approval from the principal must be obtained.

#### Adjudication

To prepare for the OSSLT all Grade 10 students participate in a school based review process to ensure they are prepared for the demands of the test. Strict guidelines are followed for the adjudication of the OSSLT.

#### **Ontario Secondary School Certificate (OSSC)**

The OSSC will be granted on request to students who leave school before earning the OSSD, provided they have earned a **minimum of 14** credits, as follows:

- 2 English
- 1 Canadian geography or Canadian history
- 1 mathematics
- 1 science
- 1 health and physical education
- 1 arts or technological education
- 7 optional credits selected from any available courses in the school

The provision for substitution for compulsory credits applies to the OSSC

#### The Certificate of Accomplishment

Students who leave school before fulfilling the requirements for the OSSD or the OSSC may be granted a Certificate of Accomplishment. This Certificate is a useful means of recognizing a student's participation in the secondary school program, especially for those students who plan to take certain types of vocational programs or further training for employment after leaving school. A student may return to school or take additional credit courses after having received the Certificate. The student's transcript (OST) will be updated, but a new Certificate will not be awarded when the student leaves again. A student who receives the Certificate and chooses to return to study at the secondary level may earn the OSSC and /or the OSSD after fulfilling the appropriate credit requirements for each.

## PATHWAYS

All courses offered at Lockerby Composite School have been developed according to the requirements set by the Ontario Ministry of Education and Training. Lockerby is committed to equal educational opportunities. The courses of study for all subjects are available at the school for parental perusal.

#### Types of pathways at Grades 9 and 10

Grades 9 and 10 pathways are organized into four types of programs: Academic, Applied, Open, and Locally Developed Credit Courses. All programs build on the Grade 8 curriculum and have rigorous standards. All courses prepare students for study in the senior grades.

Academic and Applied courses differ in the balance between essential concepts and additional requirements, and in the balance between theory and application. They differ primarily, not in the level of skill required, but in the kinds of problems presented and application of the content and concepts.

#### Academic Courses

The course content focuses on the essential concepts of the discipline, and explores related concepts. Course delivery develops students' knowledge and skills by emphasizing theoretical, abstract applications of the essential concepts. The emphasis is on theory and abstract thinking as a basis for future learning and problem solving.

#### **Applied Courses**

The course content focuses on the essential concepts of the discipline. Course delivery develops students' knowledge and skills by relating to familiar real-life situations and provides students with the opportunity for hands-on applications of the concepts they study with theory to support learning.

#### Locally Developed Courses

These courses have been developed to meet educational needs not met by the existing provincial curriculum. The Ministry of Education has expanded its course offerings for Locally Developed and Work Place courses. At Lockerby these courses are available in Math and English. Each of these courses may be counted as a compulsory credit in that discipline. These courses provide additional support for students who experience considerable difficulties in the study of one or more of these subjects. There are very strict guidelines for the development of such courses, and all local courses require Ministry approval.

#### **Open Courses**

These courses have one set of expectations for the subject, appropriate for all students in a given grade. These courses are designed to provide students with a broad educational base that will prepare them for their studies in Grades 11 and 12, and for productive participation in society.

## CHOOSING AN EDUCATIONAL PATHWAY





Students who are successful in an Academic or Applied course in Grade 9 will have the opportunity to enter either the Academic or Applied course in the same subject in Grade 10. The only exception to this rule is mathematics. A student cannot move from the applied stream to the academic stream in this area of study. A student would have to enrol in a Grade 9 Academic math before he or she could move to the Grade 10 Academic math program. However, students planning to change from one designated stream in Grade 9 to the other in Grade 10 may do so only after consultation with school staff and parent/guardian (guidance counsellor, teacher, or administration). Grade 10 Academic and Applied courses will prepare students for specific Grade 11 courses, in accordance with the stated prerequisites. Lastly, students may choose to have a combination of both applied and academic classes in their schedule. This rebalancing of one's schedule should only be done in consultation with one's guidance counsellor to ensure a student can achieve the necessary prerequisites required for their post secondary destination. In some cases these changes may not be possible due to timetabling constraints.

## Types of Pathways in Grades 11 and 12

After Grades 9 and 10, courses are no longer referred to as Academic or Applied. Courses in Grades 11 and 12 are now organized into five types, based on students' future destination. Students may choose from

- Workplace Preparation Courses (E)
- College Preparation Courses (C))
- University/College Preparation Courses (M)
- University Preparation Courses (U)
- Open Courses (O)

#### **Course Codes**

Each secondary school course is identified by a six-character code, as illustrated in the chart below

- The first three characters refer to the subject and specific area of study
- In most cases the fourth character refers to the grade: 1 = Grade 9; 2 = Grade 10
- The **fifth** character refers to the type of course as outlined below:
- D = Academic; P = Applied; O= Open; L=Locally Developed Credit Course
- The sixth character is used by individual schools to identify special programs or credits: E = Enriched, I = French Immersion, T = STEP, L = a STEP course taught in Laptop format, F = Female, M = Male

EXAMPLES OF COURSE CODES					
Course	Curriculum Policy Document	Subject	Grade or Level	Course Types	School Use
AVI 200	A = Arts	VI = Visual Arts	2 = Grade 10	O = Open	0 = standard
MPM 2DE	$\mathbf{M} = \mathbf{M}\mathbf{a}\mathbf{t}\mathbf{h}$	PM = Principles of Mathematics	2 = Grade 10	D = Academic	E= Enriched
SBI 3UT	S = Science	BI-Biology	3 = Grade 11	U = University	T = STEP
SBI 3UL	S = Science	BI-Biology	3 = Grade 11	U = University	L = Laptop
MPM 2L0	M = Math	PM = Principles of Mathematics	2 = Grade 10	L = Locally Developed Credit Course	0 = standard

http://www.edu.gov.on.ca/eng/general/list/commoncc/ccc.html

#### **Course Changes**

Course changes can occur in consultation with a counsellor in the Guidance Department. The timelines for these changes are outlined in the school agenda. Before a change can be made in an area of study (moving from Academic to Applied), a parent's signature is required. A parent's signature is also required if a course is dropped, such as a Business class. The replacement of a course (moving from Art to Music) does not require a parent's signature and can only be done if there is room in the class. School policy states that all students in Grade 9, 10 and 11 must carry a full course load unless permission has been received by the principal for an adjustment to one's schedule.

#### ASSESSMENT AND EVALUATION OF STUDENT ACHIEVEMENT

At the start of each semester, students will receive a course profile and/or a course overview for each class they take. In this overview the assessment and evaluation procedures will be explained and students will learn whether they must complete a culminating activity or write a final exam.

The main purpose of assessment and evaluation is to improve student learning. The new document, **Growing Success: Assessment, Evaluation & Reporting in Ontario Schools, Grades 1-12** outlines the new methods of assessment and evaluation to be used in the classroom.

http://www.edu.gov.on.ca/eng/policyfunding/success.html

Assessment is the process of gathering information from a variety of sources, including assignments, demonstrations, projects, performances, and tests. This information should demonstrate how well students are achieving the curriculum expectations. Assessment is ongoing and supportive.

Evaluation is the process of judging the quality of a student's work on the basis of established achievement criteria and assigning a value to represent that quality. It reflects a student's level of achievement using the provincial curriculum expectations at a given time.

#### **Achievement Levels**

Levels or degrees of achievement of the curriculum expectations are presented in achievement charts in each of the curriculum policy documents. The charts are organized into four broad categories of knowledge and skills:

- knowledge / understanding
- thinking
- communication
- application / making connections

The charts contain descriptions of each level of achievement in each category; these categories are broad in scope and general in nature, but they provide a framework for all assessment and evaluation practices. They enable teachers to make consistent judgements about the quality of student work and to give clear and specific information about student achievement to parents.

The achievement levels are associated with percentage grades and are defined as follows:

- 80 to 100 % Level 4: a very high to outstanding level, above provincial standards
- 70 to 79 % Level 3: a high level of achievement, at provincial standards
- 60 to 69 % Level 2: a moderate level of achievement, below but approaching the provincial standards
- 50 to 59 % Level 1: a passable level of achievement, below the provincial standard
- below 50 % insufficient achievement of the curriculum expectations, no credit granted

#### PLAR – Prior Learning Assessment and Recognition

Prior learning includes the knowledge and skills that students have acquired in both formal and informal ways, outside Ontario secondary classrooms.

#### **PLAR Processes**

The challenge process is the process whereby students' prior learning is assessed for the purpose of granting a credit for a course developed from a provincial policy document. The equivalency process involves the assessment of credentials from other jurisdictions.

PPM No.129, "Prior Learning Assessment and Recognition (PLAR): Implementation in Ontario Secondary Schools" (July 6, 2001) www.edu.gov.on.ca/extra/eng/ppm/129.html

#### **Provincial Report Card**

The Standard Provincial Report Card includes the following information:

- each subject that the student is studying
- student's mark expressed as a percentage grade, along with the course median
- number of classes missed and times late for class
- student's achievement in six learning skills and Work Habits: Responsibility, Organization, Independent Work, Collaboration, Initiative and Self-Regulation
- comments by each subject teacher including student strengths, areas for improvement, and suggested next steps, as appropriate
- an indication of the credit(s) granted for each course in which the student's mark is 50% or higher

The report card includes information with respect to a student's Individual Education Plan (IEP), where appropriate. Sections where the student and the parent or guardian can comment on the student's progress so far are included at the end of the mid-term or mid-semester report card.

A summary of credits earned to date, including a breakdown of compulsory and optional elective credits, is provided at the end of the final report card of the semester or year.

#### http://www.edu.gov.on.ca/eng/document/forms/report/card/reportcard.html

#### Attendance

Regular attendance at school is critical for student learning and achievement of course expectations. *Ministry of Education* regulations allow credits to be granted upon the completion of 110 hours of classroom instruction per subject. It is the students' responsibility to communicate reasons for absences. Students who have **more** than **10** unexcused absences may jeopardize their ability to successfully attain a credit.

#### Full Disclosure - Course Withdrawals and Repeated Courses

- Withdrawals and failed courses in Grade 9 and 10 are not recorded on the student's Ontario Student Transcript (OST). Only successfully completed courses are recorded.
- If a student withdraws from a Grade 11 or 12 courses within five instructional days following the issuance of each semester's mid-term provincial report card, the withdrawal is not recorded on the OST.
- If a student withdraws from a Grade 11 or 12 courses after five instructional days following the issuance of the mid-term provincial report card, the withdrawal is recorded on the OST. The student's percentage grade at the time of the withdrawal is also recorded.
- Students who repeat a Grade 11 or 12 courses they have previously completed successfully, earn only one credit for the course. The only exception to this rule is in the area of technology.

### SCHOOL RECORDS

#### **Ontario Student Record**

The Ontario Student Record folder (OSR) is the official record for a student. The OSR is created when a student enters the Ontario school system and moves with the student from school to school. Every Ontario school keeps an OSR for each student enrolled.

The OSR folder contains achievement results, credits earned, and other information important to the education of the student. The OSR is created under the authority of the *Education Act*, and the contents of the OSR are protected under the *Freedom of Information and Protection of Privacy Act*. Parents and the students may examine the contents of the OSR upon request, with the assistance of the principal or designated administrator.

#### **Ontario Student Transcript**

The Ontario Student Transcript (OST) provides a comprehensive record of a student's overall achievement in high school. The transcript, which is part of the OSR, includes the following information:

- all Grade 9 and 10 courses successfully completed by the student, with percentage grades obtained and credits earned;
- all Grade 11 and 12 courses completed or attempted by the students, with percentage grade obtained and credits earned;
- identification of compulsory credits, including credits that are substitutions for compulsory credits identified by the Ministry as diploma requirements;
- confirmation that the student has completed the forty hours of community involvement; and,
- confirmation that the student has successfully completed the provincial secondary reading and writing test. (OSSLT- Ontario Secondary School Literacy Test)

#### **REPORTING STUDENT PROGRESS**

#### **Evaluation Policies**

Students will receive a detailed evaluation procedure from each teacher. Three reports of students' progress will be sent home each semester:

- Interim October/March
- Mid-term November/April
- Final January/June

A Parent-Teacher consultation evening will be held in October and March of each semester after the interim reports have been sent home.

#### **Subject Promotion**

During the academic year, students are evaluated on the basis of tests, projects, essays, or presentations and examinations. When a course is passed (50%), the student receives the credit value as stated in the handbook. Failed courses (below 50%) are given no credit value. Students may repeat a failed option or they may change to another option in the following semester. Compulsory ministry subjects must be passed.

#### Viking Scholars

Students who achieve an average of 80% or more on the year's work are designated as Viking Scholars. These students are given special recognition for their achievement at an assembly in October to which parents and families are invited. A full year's work is defined as:

- Grade 9 8 credits
- Grade 10 8 credits
- Grade 11 8 credits

Averages of 79.5% - 79.9% will be rounded to 80%. Eligibility for Viking Scholar recognition will be calculated once per year in June.

#### **Roles and Responsibilities**

The school's student agenda can be found at www.lockerby.rainbowschools.ca. In it are the school's expectations regarding student's responsibilities as well as the school's Code of Conduct. One may access the Rainbow School Board's Policies at http://www.rainbowschools.ca.

### SUPPORT FOR STUDENTS

#### **Guidance and Career Education**

The Guidance and Career Education program is a vital and integral part of the secondary school program. Through the program, students acquire the knowledge and skills they need in order to learn effectively, to live and work co-operatively and productively with a wide range of people, to set and pursue educational and career goals, and to carry out their social responsibilities. This program will be delivered in various ways, including classroom instruction, orientation and exit programs, career exploration activities, and individual assistance and counselling. Students are also required to complete a Grade 10 half-credit course in career studies. Each secondary school has a Guidance or Student Services Department, staffed by specially trained teachers, who are equipped with resources and information related to careers and education opportunities. A Student Success teacher, along with the counsellors, will develop a Grade 8 to 9 transition program and provide struggling students with intervention strategies.

Introduced in September 2013, all students in the secondary panel must produce a web based Individual Pathway Plan (IPP). Using the software myBlueprint, students will be responsible for discovering their strengths, interests and plan their courses related to learning and work. The student's IPP will be reviewed a minimum of twice a year with a teacher and/or guidance counsellor. This IPP planning process will help students develop a fuller understanding of the career/life inquiry process needed for post-secondary planning.

#### **Special Education**

Lockerby Composite School recognizes the needs of exceptional students and responds by providing a variety of program options for students who have been identified with special needs. After an IPRC (Identification, Placement, and Review Committee) identifies a student as exceptional, an IEP (Individual Education Plan) is developed and maintained for that student. An IEP may also be prepared for students who are receiving Special Education programs and services but who have not been identified as exceptional by an IPRC. To learn more about the Rainbow School Board's Special Education Advisory Committee (SEAC) parents may refer to the Special Education Parent's Guide pamphlet available in Guidance and may contact the Special Education Department in the school.

http://www.edu.gov.on.ca/eng/parents/speced.html

#### **Credit Intervention Strategies**

Today an important focus in education is to improve student achievement by giving specific attention to the individual learner. At Lockerby Composite School, Student Success Teams work closely with the classroom teachers to help provide supports for struggling students. Examples of interventions used to support students are peer tutoring programs, after school remediation, intervention with the home, differentiated instruction and intervention, customized timetables, tracking and monitoring system, assigning of a caring adult, homework contracts as well as other specialized programs provided by the school board.

#### myBlueprint Education Planner 2.0 (www.myBlueprint.ca/Rainbow)

#### Plan your steps. Track your progress. Unlock your future.

Did you know?	You can interactively plan your courses, track your progress towards a high school diploma and instantly discover the opportunities available to you entirely online using a resource called myBlueprint!
	<ul> <li>Ensure you are making the best decisions by following these easy steps:</li> <li>1) Visit <u>www.myBlueprint.ca/Rainbow</u></li> <li>2) Select our school from the dropdown menu under "New User" and click "Create Account"</li> <li>3) Select your grade to start planning your future</li> </ul>

#### SPECIAL PROGRAMS

Lockerby Composite School offers thirteen special programs for students.

#### **Co-operative Education**

Co-operative education is a unique educational process designed to promote skill development, individual career development and self awareness by means of integrating classroom theory with planned and supervised practical experience in a business, industry or community service organization. This program is available to students in Grades 11 and 12 only. Details regarding this program can be found **on page 11**.

#### **Credit Recovery**

A credit recovery program is available at Lockerby Composite to improve a student's overall credit accumulation. The credit recovery program is developed to address a student's individual academic concerns and promote student success.

#### **Dual Credit Program**

Students can earn up to four dual credits toward the 12 optional credits required for an OSSD in Grade 11 or 12. This is done by participating in apprenticeship training and postsecondary courses offered at Cambrian College. These courses count towards both their secondary school diploma and their postsecondary diploma or apprenticeship certification. This program is available to senior students. The Guidance Department can provide students with a list of courses available next year. See **pages 13 to 16** for course offerings in this program.

#### e-Learning Program (including Summer e-Learning)

The Rainbow District School Board e-Learning program is available to all RDSB secondary students including those in the Laptop Learning offered through Lockerby's STEP Program. Rainbow District School Board teachers deliver online courses using a learning management system that students can access at school and at home. Students can supplement their timetable with an online course, giving them greater flexibility and choice in completing their secondary school diploma. Students can take courses that are not available at their home school or not accessible due to scheduling conflicts. The online courses provide a new learning option for students – one that maximizes the use of technology. e-Learning courses are very interactive. A wide variety of technology is used to support online learning, including electronic whiteboards, chat rooms, e-mail, and discussion groups. Students also have access to this program in the summer (5 weeks). Contact your Guidance Department for the current list of e-Learning courses offered by Rainbow District School Board.

#### Enrichment

Enriched classes are offered within STEP. These courses are designed to challenge the students with special topics, independent study, and research projects. Students will be invited to enter these programs based on academic success. Students are encouraged to check the Lockerby Web Page under the heading of Student Services for a list of enrichment activities offered outside of a regular school day.

#### **French Immersion Program**

This program is intended for those students who have been in a Grade 8 French Immersion or French Language program. In order to receive a Rainbow District School Board of Education French Immersion Certificate, a student must complete ten (10) credits in French Immersion from Grades 9-12. Four of these credits must be a *français* taught in each grade level.

#### **Ontario Youth Apprenticeship Program (OYAP)**

Students must be 16 years of age to participate. This program is ideal for a student who wants to participate in a work experience placement in a skilled trade; develop trade related skills; begin training in a skilled occupation as a registered apprentice.

#### **Continuous Intake Co-Op**

This Program is for students who have left secondary school short a few credits and did not complete their Ontario Secondary School Diploma. A key factor to the success of this program is that students do a full day co-op/ OYAP experience and earn four secondary school credits. Students will be able to do their pre-placement activities outside of a regular classroom setting.

#### Special Status / Elite Athlete Program

This program is designed to suit the needs of exceptional students who are participating in out of school programs such as athletics or other special programs at the provincial, national, or international level. Students may see the Guidance Department for details.

#### Science & Technology Education Program (STEP)

STEP is a specialty program focussing on Science, Technology, Mathematics, and English. It is an excellent learning opportunity for talented students in preparation for careers and leadership in the areas of Science, Engineering, Mathematics, Medicine, Design, Business, and Computer Technology. STEP relies on integration of a student's courses for its success, particularly in Grade 9. A detailed description of the programme is outlined on page 21.

#### Specialist High Skills Major - Mining and Health & Wellness

These two provincially recognized programs enable students to customize their high school experience to suit their interests and talents. It prepares them for successful transitions to apprenticeship training, college, university or employment while meeting the requirements of the Ontario Secondary School Diploma. These majors provide an engaging learning environment where students make informed career decisions and gain sector-identified credits, skills, and knowledge. See **pages 17 & 19** which will explain the requirements one must complete to achieve a SHSM Mining Certificate and SHSM Health & Wellness Certificate.

#### SPECIAL PROGRAMS - Continued

#### Pre-Advanced Placement Program (Pre-AP)

This program prepares students for high intellectual engagement by starting the development of skills and acquisition of knowledge during the intermediate grades. The curriculum provides an engaging and challenging learning environment that utilizes inquiry-based and problem-solving learning strategies.

The specialized curriculum begins with unique opportunities within the STEP program in Grade 9 and continues to include a specialized interdisciplinary course in Grade 10. Students who have met with personal and academic success can then apply for the *AP Capstone Program*, which beings in Grade 11.

#### Advanced Placement Capstone Program (AP)

This Advanced Placement Program (AP) is a well-established, internationally recognized program developed by the College Board that offers rigorous university level curricula and assessments to students in Grades 11 and 12. AP provides a wonderful opportunity to facilitate a smoother transition to the more rigorous demands of the university setting and equips students with independent research, collaborative teamwork, and communication skills. AP cultivates curious, independent, and collaborative scholars and prepares them to make logical, evidence-based decisions. AP Capstone is comprised of two AP courses – AP Seminar and AP Research.

#### Summer School Co-operative Education

This year, students in grade 11 or 12 can apply to take part in a summer Co-operative Education experience. Students in the Rainbow District School Board will be allowed to earn 1 or 2 credits toward their OSSD. Written assignments will be involved in this program. Preemployment and integration activities will have to be completed before July and integrated activities throughout the placement. Preference will be given to students who are part of the Specialist High Skills Major Mining program and to students who only need 1 or 2 credits to graduate. Enrollment will be limited for this summer experience.

To learn more about Lockerby Composite School and its unique programs check the school website at www.lockerby.rainbowschools.ca

## Co-operative Education and the Ontario Youth Apprenticeship Program (OYAP)

Students enrolled in the Co-operative Education can earn additional credits (including compulsory credits) *linked to any subject area they have taken at school*. They do this by participating in practical work experiences outside of the classroom supported by experts in our community. Students registered in the OYAP Program can gain credits in a variety of skilled trades and those students who demonstrate potential, may be registered with the Ministry of Training, Colleges and Universities as apprentices. The two credit cooperative education experience is also a requirement of the Specialist High Skills Major Program.

Students enrolled in Co-op or OYAP have unique responsibilities in and outside a regular classroom. Students must participate in the following:

#### Pre-Placement

There are two (2) weeks of Pre-Placement classes which is equivalent to one month of regular classes where students complete:

- Employability Skills Assignment
- Complete tasks linked to the on-line career planning program- MyBlueprint
- NORCAT Safety Training full WHMIS and Young Employee Safety Certification
- Resume and Cover Letters (YMCA Employment Services Template)
- Union test, pre placement test, along with numerous assignments to be completed in the classroom.

Students will also establish contact and visit their future employer to have their Work Education Agreements signed and explain the employer package provided.

#### **Integration Days**

There are six days during the semester students' return to school to integrate their workplace experiences with classroom theory. A variety of assignments include:

- Journal Writing students will be assigned questions in-class, in which they will reflect and write about their workplace experiences
- Workplace Harassment video and worksheet for marks
- Self Image in the Workplace video and worksheet for marks
- Communication Skills in the Workplace video and worksheet for marks
- Various Computer Assignments in-class including 'Stress in the Workplace', Ontario Human Rights Code', Ontario Employment Standards Act all have accompanying assignments which must be completed in class.

Participation is expected in various activities that are held throughout the classes.

#### **Culminating Activity**

Students will complete a final activity where they detail their workplace experience, explain how they fulfilled their curriculum expectations, show what they learned from their placement, outline what career options exist, and explain how they interacted with the staff at their workplace. Students have the option of one of the following:

- A final take-home exam
- A presentation of 10-15 minutes (Power Point, Bristol Board, Video)
- Personal Portfolio where students chronicle all of their report cards, reference letters, certifications and reflections in a portfolio that helps make them 'employment ready.'

#### Workplace Experience

Students are expected to exhibit stellar attendance at work. Two (2) credit students must accumulate 186 hours while four (4) credit students will compile 392 hours. More than three (3) days unjustified absence will result in a meeting with the Co-op teacher and possible removal from the program. Remember this is a job! Assessment will focus on a variety of factors such as, attitude, initiative, consistency, and proficiency at their job placement.

### FEES

#### **Student Activity Fees**

Student activity fees are voluntary amounts that are used to supplement a student's school experience through materials and activities. Lockerby's activity fee is \$20. This fee supplements the costs of:

- Locks
- Locker maintenance
- Co-curricular field trips
- Students' Council spirit activities
- Student recognition activities
- Guest speakers
- Access to the Fitness Gym

#### **Student Athletic Fees**

Student athletic fees are amounts that are used to supplement a student's co-curricular SDSSAA experiences. Lockerby's fee is \$45. This fee does not include the costs of tournaments, specialized equipment and facility rental charges that can be associated with each individual sport.

#### **Enhanced Programming and Materials**

Enhanced programming and materials are voluntary enrichments or upgrades to the curriculum or co-curricular activities beyond what is necessary to meet the learning expectations for a particular grade or course. For example, in some performance and production courses (for example: music, woodworking), students may wish to use a superior product or consumable than that provided by the school, in which case they may be asked to pay the additional cost of the upgrade. Where students choose not to access these enhanced programs or materials, alternatives must be available as essential course materials required to meet the learning expectations of the course or grade and are to be provided at no cost. Students/parents/guardians requiring financial assistance are encouraged to contact the school's Guidance Department or school administration. Examples of courses at Lockerby where enhanced programming will apply:

- Food and Nutrition
- Outdoor Education
- Visual Arts

#### **School Materials**

A fee shall not be collected for the use of textbooks, workbooks and/or course materials. However, students/parents/guardians are required to pay for failing to return school materials entrusted to their care.

#### **Field Trips**

All field trips for which there is a cost to the student are optional to the course. Students choosing not to participate will have alternate assignments provided in order for the student to meet the course expectations.

FALL 2018 DELIVERIES	WINTER 2019 DELIVERIES
<ul> <li>[FNDC] Personal Finance [MBA4T]</li> <li>13 students</li> <li>Secondary Course Code: MBA4T</li> <li>College Course Code: BUS1008</li> <li>1 secondary credit</li> <li>Congregated class</li> <li>Mondays and Wednesdays – 12:30-2:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: September 24, 2018</li> <li>End date: January 23, 2019</li> </ul>	<ul> <li>[DPDC] Digital Photography [AFI4T]</li> <li>15 students</li> <li>Secondary Course Code: AFI4T</li> <li>College Course Code: AFP1135</li> <li>1 credit</li> <li>Congregated class</li> <li>Mondays and Wednesdays - 12:30-2:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: February 11, 2019</li> <li>End date: June 12, 2019</li> </ul>
<ul> <li>[LTDC] Lighting [TAA4T]</li> <li>5 students</li> <li>Secondary Course Code: TAA4T</li> <li>College Course Code: TAP1000</li> <li>1 secondary credit</li> <li>Top-up class</li> <li>Tuesdays 12:30-3:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: September 11, 2018</li> <li>End date: Week of December 3 or December 10, 2018 (pending exam schedule-consult teacher)</li> </ul>	<ul> <li>[BUDC] Introduction to Business Concepts [BBA4T]</li> <li>15 students</li> <li>Secondary Course Code: BBA4T</li> <li>College Course Code: BUS1104</li> <li>1 secondary credit</li> <li>Congregated class</li> <li>Tuesdays and Thursdays – 12:30-2:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: February 12, 2019</li> <li>End date: June 13, 2019</li> </ul>
<ul> <li>[VIDC] Videography [TGV3M/4M] – RAINBOW BOARD ONLY</li> <li>26 students</li> <li>Secondary Course Code: TGV3M or TGV4M</li> <li>College Course Code: JRN1005</li> <li>1 credit</li> <li>Congregated class Team-Taught</li> <li>1 period x 2 days/week Delivered at Confederation Secondary School</li> <li>Start date: Week of September 24, 2018</li> <li>End date: Week of January 21, 2019</li> </ul>	[ETAC] Entrepreneurship [TAA4T]- 12 students- Secondary Course Code: BDA4T- College Course Code: BUS3585- 1 secondary credit- Congregated Class- Tuesdays and Thursdays - 5:30-7:30 p.m Delivered at Cambrian College- Start date: February 12, 2019- End date: June 13, 2019
	[RMLC] Rock Music and Culture – Manitoulin-RAINBOWBOARD ONLY [AHL4T]- 12 students- Secondary Course Code: AHL4T- College Course Code: MUS1009- 1 credit- Congregated class- 1 period/day x 2 x/week- Delivered at Manitoulin Secondary School- Start date: Week of February 11, 2019- End date: June 13, 2019

FALL 2018 DELIVERIES	WINTER 2019 DELIVERIES
[CCDC] College Connection   [GLH4T]	[CCDC] College Connection   [GLH4T]
- 16 students	- 16 students
<ul> <li>Secondary Course Code: GLH4T</li> </ul>	<ul> <li>Secondary Course Code: GLH4T</li> </ul>
- College Course Code: SSC1015	<ul> <li>College Course Code: SSC1015</li> </ul>
<ul> <li>1 secondary credit</li> </ul>	<ul> <li>1 secondary credit</li> </ul>
- Congregated class	- Congregated class
<ul> <li>Tuesdays and Thursdays – 12:30-2:30 p.m.</li> </ul>	<ul> <li>Tuesdays and Thursdays – 12:30-2:30 p.m.</li> </ul>
<ul> <li>Delivered at Cambrian College</li> </ul>	- Delivered at Cambrian College
- Start date: September 25, 2018	- Start date: February 12, 2019
- End date: January 24, 2019	- End date: June 13, 2019
[ECDC] Early Childhood Education [TOQ4T]	[MCDC] Media and Current Events [TQK4T]
- 15 students	- 15 students
- Secondary Course Code: 10Q41	- Secondary Course Code: TQK41
- College Course Code: ECE1140	- College Course Code: SSC1000
- 1 secondary credit	- 1 secondary credit
- Congregated class	- Congregated class
<ul> <li>Mondays and Wednesdays – 12:30 – 2:30 p.m.</li> </ul>	<ul> <li>Mondays and Wednesdays – 12:30-2:30 p.m.</li> </ul>
- Delivered at Cambrian College	- Delivered at Cambrian College
- Start date: September 24, 2018	- Start date: February 11, 2019
- End date: January 23, 2019	- End date: June 12, 2019
[CODC] Corrections [HCR4T]	[CUDC] Cross Cultural Understanding [HHCAT]
5 students	15 students
- Secondary Course Code: HCBAT	- Secondary Course Code: HHCAT
- College Course Code: CWP2310	- College Course Code: SOC1010
- 1 secondary credit	- 1 secondary credit
- Top-up class	- Congregated class
- Tuesdays 12:30-2:30 and Thursdays 12:30-1:30 n m	- Mondays and Wednesdays - 12:30-2:30 n m
- Delivered at Cambrian College	- Delivered at Cambrian College
- Start date: Sentember 12, 2018	- Start date: Eebruary 11, 2010
- End date: Week of December 2 or December 10, 201	8 = End date: lune 12, 2019
(pending even schedule - consult teacher)	

FALL 2018 DELIVERIES	WINTER 2019 DELIVERIES	
<ul> <li>[MHDC] Concurrent Disorders, Mental Health Addictions</li> <li>20 students</li> <li>Secondary Course Code: PHA4T</li> <li>College Course Code: PSY1003</li> <li>1 secondary credit</li> <li>Congregated class</li> <li>Mondays and Wednesdays – 12:30-2:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: September 24, 2018</li> <li>End date: January 23, 2019</li> </ul>	<ul> <li>[YYY4X] Psychology of Evil</li> <li>18 students</li> <li>Secondary Course Code: YYY4X</li> <li>College Course Code: PSY1001</li> <li>1 secondary credit</li> <li>Congregated Class</li> <li>Tuesdays and Thursdays – 12:30-2:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: February 12, 2019</li> <li>End date: June 13, 2019</li> </ul>	
[EDDC] Ethics Diversity Issues [HEC4T]- 15 students- Secondary Course Code: HEC4T- College Course Code: LAW1105- 1 secondary credit- Congregated Class- Tuesdays and Thursdays – 12:30-2:30 p.m Delivered at Cambrian College- Start date: September 25, 2018- End date: January 24, 2019[PSDC] Personal Support Worker [HIC4T]- 4 students- Secondary Course Code: HIC4T	[IHDC] Introduction to Health Sciences [PHJ4T]- 18 students- Secondary Course Code: PHJ4T- College Course Code: HSC1105- 1 secondary credit- Congregated class- Mondays and Wednesdays – 12:30-2:30 p.m Delivered at Cambrian College- Start date: February 11, 2019- End date: June 12, 2019- 15 students- Secondary Course Code: PLB4T	
<ul> <li>College Course Code: PSW1111</li> <li>1 secondary credit</li> <li><b>Top-up class</b></li> <li>Wednesdays 12:30-3:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: September 12, 2018</li> <li>End date: Week of December 3 or December 10, 2018 (pending exam schedule-consult teacher)</li> </ul>	<ul> <li>College Course Code: FLM1150</li> <li>1 secondary credit</li> <li>Congregated class</li> <li>Tuesdays and Thursdays – 12:30 – 2:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: February 12, 2019</li> <li>End date: June 13, 2019</li> </ul>	
<ul> <li>[TPDC] Trades Practice Applications [TTP4T]</li> <li>15 students</li> <li>Secondary Course Code: TTP4T</li> <li>College Course Code: APP1101</li> <li>1 secondary credit</li> <li>Congregated class</li> <li>Mondays and Wednesdays – 12:30-3:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: September 24, 2018</li> <li>End date: January 23, 2019</li> </ul>	[TPDC] Trades Practice Applications [TTP4T]- 12 students- Secondary Course Code: TTP4T- College Course Code: APP1101- 1 secondary credit- Congregated class- Mondays and Wednesdays – 5:30-8:30 p.m Delivered at Cambrian College- Start date: February 12, 2019- End date: June 13, 2019	

FALL 2018 DELIVERIES	WINTER 2019 DELIVERIES
<ul> <li>[ATDC] Applied Technology I [TAP4T] <ul> <li>2 students</li> <li>Secondary Course Code: TAP4T</li> <li>College Course Code: PRT1000</li> <li>1 secondary credit</li> <li>Top-up class</li> <li>Mondays and Wednesdays - 12:30-2:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: September 10, 2018</li> <li>End date: Week of December 3 or December 10, 2018 (pending exam schedule-consult teacher)</li> </ul> </li> <li>[YYY4X] Millwright Machining I <ul> <li>14 students</li> <li>Secondary Course Code: YYY4X</li> <li>College Course Code: IMM1177</li> <li>1 secondary credit</li> <li>Congregated Class</li> <li>Tuesdays and Thursdays– 12:30-2:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: September 25, 2018</li> <li>End date: January 24, 2019</li> </ul> </li> </ul>	<ul> <li>[YYY4X] Metal Trades Practices <ul> <li>14 students</li> <li>Secondary Course Code: YYY4X</li> <li>College Course Code: WLD1003</li> <li>1 secondary credit</li> <li>Congregated</li> <li>Mondays and Wednesdays – 12:30-2:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: February 11, 2019</li> <li>End date: June 12, 2019</li> </ul> </li> <li>[CVDC] Commercial Vehicle &amp; Heavy Equipment - Level 1 Apprenticeship [TTO4Y] <ul> <li>14 students (4 RTA's and 10 exploring)</li> <li>Secondary Course Code: TTO4Y</li> <li>College Course Code: 421A</li> <li>2 secondary credits</li> <li>Congregated class</li> <li>Monday to Friday – 12:30-4:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: February 11, 2019</li> <li>End date: May 24, 2019</li> <li>Placement for four weeks at end: May 27 – June 21</li> </ul></li></ul>
<ul> <li>[YYY4X] Construction Technology <ul> <li>5 students</li> <li>Secondary Course Code: YYY4X</li> <li>College Course Code: CIV2331</li> <li>1 secondary credit</li> <li>Top-up class</li> <li>Tuesdays and Thursdays – 12:30-2:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: September 11, 2018</li> <li>End date: Week of December 3 or December 10, 2018 (pending exam schedule - consult teacher)</li> </ul> </li> </ul>	<ul> <li>[GCDC] General Carpenter - Level 1 Apprenticeship</li> <li>[TSA4Y] <ul> <li>14 students (6 RTA's and 8 exploring)</li> <li>Secondary Course Code: TSA4Y</li> <li>College Course Code: 403A</li> <li>2 secondary credits</li> <li>Congregated class</li> <li>Monday to Friday – 12:30 – 4:30 p.m.</li> <li>Delivered at Cambrian College</li> <li>Start date: February 11, 2019</li> <li>End date: June 14, 2019</li> <li>Break for three week co-op: May 13 – May 31</li> <li>Return date to college June 3 <ul> <li>Mandatory Welding component: June 3 - June 7</li> <li>Mandatory Rigging component: June 10 - June 13</li> </ul> </li> </ul></li></ul>

## Specialist High Skills Major Health and Wellness Certificate Requirement Chart

Course Category	Grade 11	Grade 12
	SBI3U (Biology)	HHS4C (Families in Canada)
SHSM Major Subjects	TPJ3M (Health Care)	SBI4U (Biology)
TWO CREDITS IN CRADE 11	HPC3O (Raising Healthy Children)	TPJ4M (Health Care)
TWO CREDITS IN GRADE 11 TWO CREDITS IN GRADE 12	PPL3O (Physical Education)	PPL4O (Physical Education)
		PSK4U (Introductory Kinesiology)
		PAD4O (Outdoor Education)
		SCH4C (Chemistry)
		<b>Dual Credit:</b> PHJ4T (Intro to Health Sciences)
English - ONE CREDIT REQUIRED		ENG4U/ENG4C/ENG4E (English)
Gr 11 or 12 Math	MBF3C (Foundations)	MHF4U (Advanced Functions)
ONE CREDIT REQUIRED	MCF3M (Functions and Applications)	MCV4U (Calculus & Vectors)
	MCR3U (Functions)	
	MEL3E (Essential Math)	
Gr 11 or 12 Science	SBI3C (Biology)	SCH4U (Chemistry)
ONE CREDIT REQUIRED	SCH3U (Chemistry)	SPH4U (Physics)
	SPH3U (Physics)	
		•

Certificates:	4 Compuls	sory Certific	ates (time	will be prov	ided in cl	ass)
Cardio-Pulmonary Resuscitation (CPR)Standard First AidInfection ControlWHMIS			'HMIS			
 Must complete the following 3 electives						
Specialized Care – Respiratory, Diabetes, Dementia		Medical Ter i.e. toxic	rminology cology	Customer S	Service	
						-

## Essential Co-op Placement: Students must do a 2-credit placement (in-school co-op, summer co-op)

• Develop: Essential Skills, Work Habits and Use of Ontario Skills Passport

• Provide evidence of a work plan use.

## Reach Ahead and Experiential Learning Activities (i.e. fieldtrips)

•Guest Speakers (Various from Sudbury Health Unit, CCAC, Laurentian University, NEORCC, HRSRH, Chiropractor, Pediatrician)

•Tour of NOSM •Laurentian University Experiences (School of Nursing and Biology/Chemistry Department) •HRSRH PARTY Program

Students earning a SHSM Certificate receive an Ontario Secondary School Diploma embossed with a red seal. They will also receive a SHSM record that identifies achievement in each of the required components.

http://www.rainbowschools.ca/programs/SHSM /Overview.php



# **REGISTRATION FORM**

# Specialist High Skills Major – Health and Wellness

Personal Information: Please print neatly and provide the information below.

Legal Name:	<u></u>	Plant Marca Attable Later	
	Surname	First Name Middle Initial	
Current School:	it School: Student ID		
Home Address:			
City/Town:		Postal Code:	
Home Telephone:	Cell:	E-Mail:	
Which pathway do you pl	an to pursue? (ple	ase check one)	
Apprenticeship Training	Workplace	College University	
Are you currently enrolled	d as an OYAP stud	ent? 🗆 Yes 🗔 No	
Have you taken or are you	u currently enrolle	ed in any Dual Credit courses? 🖵 Yes 🕒 No	
lf yes, please provide details: C	ourse Code	Course Name	
C	urrently enrolled: 🔲 ompleted: 🗌	Yes 🔲 No Yes 🗔 No If yes, provide date of completion:	
Student's Sign	ature	Parent/Guardian Signature	
Print name (Student)		Print name (Parent/Guardian)	
		Date	
Once you have completed the Registration	on Form, please submit it to t	he Guidance Department at your school for processing.	

A member of the SHSM team will be in contact with you shortly to set up your file and get you started on your journey to success.

In accordance with the Municipal Freedom of Information and Protection of Privacy Act, personal information is being collected under the authority of the Education Act and will be used to register students in a Specialist High Skills Major. For more information, please contact the Principal.

# Congratulations on choosing an exciting future!

School Contact Information:

# SHSM.rainbowschools.ca

# Specialist High Skills Major Mining Certificate Requirement Chart

Course Category	Grade 11	Grade 12
SHSM Major Subjects	SGM38 (Introduction to Mining)	SCH4U (Chemistry)
FOUR CREDITS REQUIRED	SPH3U (Physics)	SPH4U/SPH4C (Physics)
	TTJ3C (Transportation Technology)	TTJ4C (Transportation Technology)
(Any combination but one	TDJ3M (Technological Design)	TDJ4M (Technological Design)
must be from Grade 11 and	TCJ3C (Construction Technology)	TCJ4C (Construction Technology)
one from Grade 12)		Dual Credits:
		TLA4Y (Welding)
		TTO4Y (Heavy Equipment)
English		
ONE CREDIT REQUIRED		ENG4U/ENG4C/ENG4E (English)
Math	MBF3C (Foundations Math)	MAP4C (Foundations Math)
ONE CREDIT REQUIRED	MEL3E (Essential Math)	MCT4C (Tech Math)
		MHF4U (Advanced Functions)
Gr 11 or 12 Science or	SBI3U/SBI3C (Biology)	CGR4M (Environment & Resource Management)
Canadian & World Studies	SCH3U (Chemistry)	SCH4C (Chemistry)
ONE CREDIT REQUIRED		

Certificates: 4 Compulsory Certificates (no cost to students)						
Cardio-Pulmonary Resuscitation (CPR)	Standard First Aid	General Safety Awareness (GSA)	WHMIS			
Must complete 3 electives from the list below						
Certified GPS		Fall Protection				
Lock Out & Tagging		Personal Protective Equipment				
Surface Miner & Underground Orientation		Electrical Safety				
Confined Space Awareness		Lift Truck Safety				

Essential Co-op Placement - Students must do a 2-credit placement (in-school co-op, summer co-op)

- Develop: Essential Skills, Work Habits and Use of Ontario Skills Passport
- Provide evidence of a work plan use.

## Reach Ahead and Experiential Learning Activities (i.e. fieldtrips)

Professional Conferences 
 Underground Tours 
 Smelting / Mill Tour 
 Cambrian College and Laurentian University Experiences

Students earning a SHSM Certificate receive an Ontario Secondary School Diploma embossed with a red seal. They will also receive a SHSM record that identifies achievement in each of the required components.



# **REGISTRATION FO**

# Specialist High Skills Major – Mining

Personal Information: Please print neatly and provide the information below.

Legal Name:		<b>2</b> - 11		
	Surname	First Name	Middle Initia	
Current School:		Student ID #:		
Home Address:				
City/Town:		Postal Code:		
Home Telephone:	Cell:	E-Mail:		
Which pathway do you pl	an to pursue? (plea	ase check one)		
Apprenticeship Training	Workplace	College University		
Are you currently enrolled Have you taken or are you	d as an OYAP stude	ent? 🗅 Yes 🗅 No d in any Dual Credit courses? 🗅 Yes 🗅 No		
lf yes, please provide details: C C C	ourse Code urrently enrolled: 🔲 ` ompleted: 🔲 `	Course Name Yes I No Yes I No If yes, provide date of completion:		
Student's Signature		Parent/Guardian Signat	Parent/Guardian Signature	
Print name (Student)		Print name (Parent/Guard	lian)	
		Date		
Once you have completed the Registratio	n Form, please submit it to th	ne Guidance Department at your school for processing.		

A member of the SHSM team will be in contact with you shortly to set up your file and get you started on your journey to success.

In accordance with the Municipal Freedom of Information and Protection of Privacy Act, personal information is being collected under the authority of the Education Act and will be used to register students in a Specialist High Skills Major. For more information, please contact the Principal.

# Congratulations on choosing an exciting future!

School Contact Information:

# SHSM.rainbowschools.ca

## Science and Technology Education Program (STEP)

STEP is a specialty program focusing on Science, Technology, Mathematics, Humanities, and English. It is an opportunity for academically motivated students to learn in a unique way as they prepare themselves for careers in the areas of Science, Engineering, Design, Medicine, Business, and Computer Technology.

STEP relies on the integration of Science and Technology courses for its success. Our program emphasizes 'hands-on' learning as opposed to a traditional textbook approach. Students will design, build, assemble, create and manipulate. The teacher's role is that of a facilitator: assisting the student with learning and exploration as opposed to simply providing direct instruction. As a result, in addition to the student acquiring the required knowledge as outlined in the curriculum, the student also acquires a variety of transferable skills.

STEP continues in Grade 10, 11 and 12 with a designated curriculum. Upon the successful completion of this curriculum students receive a **STEP certificate**. This certificate and the student's ongoing portfolio of work may be used in the selection of students for particular programs at the post-secondary levels, such as in engineering and the graphic arts.

Students in STEP are expected:

- to maintain an overall 70% average in each semester of high school;
- to submit all assignments on time; and
- to participate in projects.

STEP has the following objectives:

- to encourage an interest in Science, Technology and how they interrelate in the student's life;
- to give students the opportunity to explore their curriculum in non-traditional ways through the use of inquiry based learning;
- to introduce students to careers related to Science and Technology;
- to assist students in developing their problem solving skills and thinking skills by analyzing, correlating, comparing, experimenting and synthesizing; and
- to develop proper methods of communication and collaboration through written and electronic media.

To achieve these objectives, students in STEP are offered the opportunities to experience:

- traditional science fair projects
- environmental group actions
- enhanced competency with various forms of computer communication
- mentorships with professionals in our community
- the benefits from partnerships with local post-secondary institutions.

STEP students will, if outside the Lockerby area, be **eligible for school bus transportation** according to the policies of the Rainbow District School Board.

#### **STEP LAPTOP Learning Option**

Students who select the Laptop Learning Option for their STEP courses will follow the same curricula as in the STEP non-laptop courses. However, the way in which the course content is presented is significantly different:

- Students will be provided with their own high-speed Internet connection in all e-labs;
- Laptops will be used to supplement traditional methods of note taking;
- Many courses offer online courseware in lieu of textbooks or to supplement textbooks;
- Students will be provided with server space to store backup files;
- Students will be granted access to specialty software designed to augment learning;
- Students will have more frequent access to Internet and Intranet learning resources;
- Teachers take advantage of multimedia technology to deliver curriculum;
- Students will use email to communicate more extensively with teachers;
- Students will have opportunities to take online tests and quizzes.

The Laptop Learning Option provides students with the most modern and progressive form of curriculum delivery. Lockerby is the acknowledged leader of laptop learning of all public schools in Ontario.

#### **STEP Certificate Criteria**

- Grade 9 SNC1DT/L (Science) TIJ1OT/L (Technology)
- Grade 10 SNC2DT/L (Science) TDJ2OT/L (Technology)
- Grade 11 TDJ3MT/L (Technical Design) or TPJ3MT (Health Care) or TDV3MT (Interior Design) and at *least two* of SCH3UT, SCH3UL, SPH3UL, SPH3UL, SBI3UL, SBI3UL, SBI3UZ, SCH3UZ, SPH3UZ
- Grade 12 Any one of SBI4UT, SBI4UL, SBI4UZ, SCH4UT, SCH4UL, SCH4UZ, SNC4MT, SPH4UT, SPH4UL

A STEP Certificate will be issued to graduating students upon the successful completion of these five compulsory STEP courses plus at least three other STEP courses. One must be taken in Grade 12.

## STEP Courses for 2018-2019

In 2012-2013, the senior courses in the STEP program were revised. The flow charts for technology and science will allow students to easily see the prerequisites for their senior courses.

#### TIJ1OT / TIJ1OL - Exploring Technologies

This course enables students to explore and develop technological knowledge and skills in a variety of areas including web page development, woodworking, auto mechanics, electrical applications, and drafting (AutoCAD). Students will apply the design process to design and build a variety of projects such as solar cookers, balsa bridges, and airplanes. Emphasis will be placed on linking projects to scientific concepts as this course is a mandatory course for students enrolled in the STEP program.

#### **TDJ2OL - Tech Design**

This course provides students with opportunities to apply a design process in a variety of new ways. Students will further develop their drafting (AutoCAD) and woodworking skills while learning new skills in graphics/photo editing and film making. This course will prepare students for other technological course options in Grade 11 while linking projects to scientific concepts where possible. This course will fulfill the Grade 10 technological component for students in the STEP program.

#### IDC3OT – Inquire, Connect, Design

This course focuses on strands from the English and Social Science curriculum. Students will engage in cross-curricular conversations that allow students to become experts in an area of their passion. Using an inquiry framework, students will develop valuable process and research skills while they critically analyze their own interests. By the end of this course, students will have developed a number of 21<sup>st</sup> century skills including communication, collaboration, critical thinking, and creativity.



#### **TDJ3M - Technological Design (Engineering)**

Students will be focused on designing and building solutions to a number of problems that relate to the construction and engineering field. Design projects will compliment the Engineering Physics Course and focus on these key areas: Robotics, Surveying and Road Construction, Deck Design and Construction, Renewable Energy, Mine Design, Catapult Design and Construction, and Crane Design and Construction.

#### **TPJ3M - Health Care**

Students enrolled in Grade 11 health care will examine the major body systems, organ donation, spread of infections, agespecific health topics, clinical skills and career options. While covering this content students will also have opportunities to investigate health care topics of interest to them. This is accomplished with the use of a variety of tools such as a nursing manikins and guest speakers from the community. This course is an excellent opportunity for students to practice skills that could be useful in a future career in a health care field and explore careers of interest to them. This course would prepare students for Grade 12 Health Care.

#### **TDV3M - Interior Design**

In this activity based course, students use the elements and principles of design to remodel interior and exterior spaces. Specialized software helps to create virtual models. Students will visit the shop on a regular basis to extend one's knowledge of building structures, accessories and finishes. An academic design portfolio will be produced using a variety of media.



#### **SPH3UZ – Physics for Engineers**

Engineering is applied science that has engineers using scientific principles to solve real world problems. The new grade eleven physics offering will introduce students to the principles of engineering through the format of SPH 3U. All units will have a special focus on engineering and community members will serve as guest speakers who will introduce students to the various disciplines of engineering.

#### **SBI3UZ – Medical Biology**

Students will complete a contextualized course on medical topics to cover the required curriculum for Grade 11 biology. While covering the topics of organ systems students will have an opportunity to work on case-based problems to examine the normal function of an organ and diagnose problems that may arise. They will also have an opportunity to go on related field trips to places such as the Northern Ontario School of Medicine and Laurentian University. This course will introduce students to a possible future in a health care field while also allowing them to be prepared for the Grade 12 biology options.

#### SCH3UZ – Environmental Chemistry

Environmental chemistry is the study of chemical reactions that take place in nature, with a focus on aquatic, atmospheric and land based ecosystems. The new Grade 11 chemistry offering will introduce students to the principles of environmental chemistry through the format of SCH 3U. Students will have the opportunity to analyze and interpret regional chemical findings and seek ways to reduce the impact of human activities on the natural environment.

#### **SBI4UZ - Forensics Biology**

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. Grade 12 STEP biology will have an emphasis on real life scenarios and interactive forensic activities, using innovative activities.

#### **SCH4UZ - Forensics Chemistry**

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. Grade 12 STEP chemistry will have an emphasis on real life scenarios and interactive forensic activities, using innovative activities.

## **Advanced Placement Capstone (AP Capstone)**

AP Capstone is an innovative diploma program developed by the College Board that equips students with the independent research, collaborative, teamwork, and communication skills that are increasingly valued by universities. AP Capstone is built on the foundation of 2 AP courses AP Seminar and AP Research and is designed to complement and enhance the in-depth, discipline-specific study experienced in other AP courses and within Lockerby Composite's STEP Program. It cultivates curious, independent and collaborative scholars and prepares them to make logical and evidence-based decisions.

Students who earn scores of 3 or higher in AP Seminar and AP Research will receive the AP Seminar and Research Certificate. Signify their attainment of university-level academic and research skills. AP Seminar may also be taken as a stand-alone option but the student will not be eligible to earn a Capstone Diploma or Certificate.



## AP Capstone courses for 2018-2019

#### AP Seminar - linked to ENG3UY and ENG4UY

AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational, literary, and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments. This course will be completed over 2 semesters allowing for the completion of two English credits.

#### Prerequisite: ENG2DO/ENG2DL for ENG3UY and ENG3UY for ENG4UY

#### **AP Research - linked to IDP4UY**

In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. Students explore their skill development, document their processes, and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of 4000-5000 words (accompanied by a performance or exhibition of product where applicable) and a presentation with an oral defense. **Prerequisites: ENG3UY and ENG4UY** 

# AP<sup>®</sup> SEMINAR



#### About the Advanced Placement Program<sup>®</sup> (AP<sup>®</sup>)

The Advanced Placement Program<sup>®</sup> has enabled millions of students to take college-level courses and earn college credit, advanced placement, or both, while still in high school. AP Exams are given each year in May. Students who earn a qualifying score on an AP Exam are typically eligible, in college, to receive credit, placement into advanced courses, or both. Every aspect of AP course and exam development is the result of collaboration between AP teachers and college faculty. They work together to develop AP courses and exams, set scoring standards, and score the exams. College faculty review every AP teacher's course syllabus.

#### AP Capstone<sup>™</sup> Program

AP Capstone<sup>™</sup> is an innovative diploma program from the College Board that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. AP Capstone is built on the foundation of two AP courses – **AP Seminar** and **AP Research** – and is designed to complement and enhance the in-depth, discipline-specific study experienced in other AP courses.

In AP Seminar, students investigate real-world issues from multiple perspectives, gathering and analyzing information from various sources in order to develop credible and valid evidencebased arguments.

In AP Research, students cultivate the skills and discipline necessary to conduct independent research in order to produce and defend a scholarly academic thesis.

Students who earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of their choosing will receive the AP Capstone Diploma. Students who earn scores of 3 or higher in AP Seminar and AP Research but not on four additional AP Exams will receive the AP Seminar and Research Certificate. AP Seminar may also be taken as a stand-alone option.

#### **AP Seminar Course Overview**

AP Seminar is a foundational course that engages students in cross-curricular conversations that explore the complexities of academic and real-world topics and issues by analyzing divergent perspectives. Using an inquiry framework, students practice reading and analyzing articles, research studies, and foundational literary and philosophical texts; listening to and viewing speeches, broadcasts, and personal accounts; and experiencing artistic works and performances. Students learn to synthesize information from multiple sources, develop their own perspectives in researchbased written essays, and design and deliver oral and visual presentations, both individually and as part of a team. Ultimately, the course aims to equip students with the power to analyze and evaluate information with accuracy and precision in order to craft and communicate evidence-based arguments.

#### **RECOMMENDED PREREQUISITES**

There are no prerequisite courses for the AP Seminar course.

#### **AP Seminar Course Content**

Students engage in conversations about complex academic and real-world issues through a variety of lenses, considering multiple points of view. Teachers have the flexibility to choose one or more appropriate themes that allow for deep interdisciplinary exploration based on:

- · Concepts or issues from other AP courses
- Student interests
- Local and/or civic issues
- Academic problems or questions
- Global or international topics

Exploring different points of view and making connections across disciplines are fundamental components of the AP Seminar experience. Students consider each topic through a variety of lenses and from multiple perspectives, many of which are divergent or competing. Analyzing topics through multiple lenses aids in interdisciplinary understanding and helps students gain a rich appreciation for the complexity of important issues. Teachers should encourage students to explore a topic through several of the following lenses:

- Cultural and social
- Artistic and philosophical
- · Political and historical
- Environmental
- Economic
- Scientific
- Futuristic
- Ethical

#### **Pedagogical Framework**

Throughout the program, students consider and evaluate multiple points of view to develop their own perspectives on complex issues and topics through inquiry and investigation. The AP Capstone program provides students with a framework that allows them to develop, practice, and hone their critical and creative thinking skills as they make connections between various issues and their own lives.

Students use the following framework as they explore issues and topics:

- Question and Explore
- Understand and Analyze Arguments
- Evaluate Multiple Perspectives
- Synthesize Ideas
- Team, Transform, and Transmit

#### **AP Seminar Assessment Structure**

Students are assessed with two through-course performance assessment tasks and one end-of-course exam. All three assessments are summative and will be used to calculate a final AP score (using the 1–5 scale) for AP Seminar.

#### **Format of Assessment**

#### Team Project and Presentation | 20% of AP Score

- Individual Research Report
- Team Multimedia Presentation and Defense

#### Individual Research-Based Essay and Presentation | 35% of AP Score

- Individual Written Argument
- Individual Multimedia Presentation
- Oral Defense

#### End-of-Course Exam (2 Hours) | 45% of AP Score

- Understanding and analyzing an argument (3 short-answer questions); suggested time 30 minutes
- Synthesizing information to develop an evidence-based argument (evidence-based argument essay); suggested time 90 minutes

#### **Overview of Assessment Tasks**

#### **Team Project and Presentation**

In this project, three to five students collaborate as a team to identify a problem or issue. Team members work together to develop a research question; they then identify approaches, perspectives, or lenses for examining the question and divide responsibilities among themselves for individual research.

Individually, students investigate their assigned approach, perspective, or lens on the issue or topic of the team research question. Each student presents his or her findings and analysis to the group in a well-written individual report that

- identifies the area of investigation and its relationship to the overall problem or issue;
- summarizes, explains, analyzes, and evaluates the main ideas and reasoning in the chosen sources;
- identifies, compares, and interprets a range of perspectives about the problem or issue; and
- cites all sources used and includes a list of works cited or bibliography.

Working collaboratively, the team considers all the research and analyses from individual team members for the purpose of proposing one or more solutions or resolutions. The team:

- collaboratively synthesizes and evaluates individual findings and perspectives to create a collective understanding of different approaches to the problem or issue;
- considers potential solutions or resolutions and conducts additional research in order to evaluate different solutions within the context of the problem; and
- proposes one or more solutions or resolutions and prepares an argument to support their proposal.

The team develops an 8–10 minute presentation that presents a convincing argument for the proposed solutions or recommendations. The team should ensure the claims made are supported by evidence and that they have considered different perspectives and the limitations and implications of their proposed solutions or recommendations. The presentation and the media used to enhance the presentation should consider audience, context, and purpose. Following the presentation, the team will defend its argument, with each student responding to a question posed by the teacher. Each team member should be prepared to answer questions about any part of the presentation.

#### **Individual Research-Based Essay and Presentation**

On or around Jan. 2 of each year, the College Board will release academic, cross-curricular source material (texts) focused on a theme representing a range of perspectives from each of the following domains:

- Natural Sciences, Technology, Mathematics, Environment
- Social Sciences, Politics, Economics, Psychology
- Arts (Visual Arts, Music, Dance, Theater)
- Culture, Languages, Linguistics
- History
- Literature, Philosophy, Critical Theory/Criticism

The following will be represented in the texts: visual text and/or multimedia and quantitative data.

Students read and analyze the provided stimulus materials to identify thematic connections among the sources and possible areas for inquiry. They compose a research question prompted by their analysis of the stimulus material. They then gather additional information through research; analyze, evaluate, and select evidence; and develop a logical, well-reasoned argument of 2,000 words. The final paper must refer to and incorporate at least one of the sources provided.

Students must avoid plagiarism by acknowledging, attributing and/ or citing sources throughout the paper and including a bibliography (see AP Capstone Policy on Plagiarism and Falsification or Fabrication of Information).

Students each develop a 6–8 minute presentation using appropriate media and present it to an audience of their peers. This presentation is an opportunity for students to present their conclusions by building arguments that convey their perspectives. The presentations should use the evidence to support students' own arguments and situate their perspectives in their larger contexts rather than merely summarizing student research. Finally, students defend their research process, use of evidence, and conclusion through oral responses to two questions asked by the teacher.

#### **End-of-Course Exam**

During the AP Exam administration window, students will take the AP Seminar End-of-Course Exam. The exam consists of four items (three short-answer and one essay question). The three short-answer questions assess analysis of an argument in a single source or document. The essay question assesses students' skills in synthesizing and creating an evidence-based argument.



Educators: collegeboard.org/apcapstone Students: apstudent.collegeboard.org/apcourse/ap-seminar

# **AP® RESEARCH**



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#### AP Capstone<sup>™</sup> Program

AP Capstone<sup>™</sup> is an innovative diploma program from the College Board that equips students with the independent research, collaborative teamwork, and communication skills that are increasingly valued by colleges. AP Capstone is built on the foundation of two AP courses – **AP Seminar** and **AP Research** – and is designed to complement and enhance the in-depth, discipline-specific study experienced in other AP courses.

In AP Seminar, students investigate real-world issues from multiple perspectives, gathering and analyzing information from various sources in order to develop credible and valid evidence-based arguments.

In AP Research, students cultivate the skills and discipline necessary to conduct independent research in order to produce and defend a scholarly academic paper.

Students who earn scores of 3 or higher in AP Seminar and AP Research and on four additional AP Exams of their choosing will receive the AP Capstone Diploma. Students who earn scores of 3 or higher in AP Seminar and AP Research but not on four additional AP Exams will receive the AP Seminar and Research Certificate. AP Seminar may also be taken as a stand-alone option.

#### **AP Research Course Overview**

AP Research allows students to deeply explore an academic topic, problem, or issue of individual interest. Through this exploration, students design, plan, and conduct a year-long research based investigation to address a research question.

In the AP Research course, students further their skills acquired in the AP Seminar course by understanding research methodology; employing ethical research practices; and accessing, analyzing, and synthesizing information as they address a research question. Students explore their skill development, document their processes, and curate the artifacts of the development of their scholarly work in a portfolio. The course culminates in an academic paper of 4000–5000 words (accompanied by a performance or exhibition of product where applicable) and a presentation with an oral defense.

#### **RECOMMENDED PREREQUISITES**

Students must have successfully completed the AP Seminar course.

#### **AP Capstone Research Course Content**

Although the topic of each research study will vary, the course requires students to plan and conduct a study or investigation.

The course provides opportunities (activities/assignments) for students to

- Understand principles of discipline-specific research methods (e.g., qualitative, quantitative, mixed).
- Employ appropriate disciplinary research methods to develop, manage, and conduct an in-depth study or investigation in an area of student's own interest, culminating in a 4000–5000 word paper (accompanied by an additional piece of scholarly work — where applicable — to be performed or exhibited).
- Present (using appropriate media) and defend the research design, approach, and findings to a panel.
- Document their processes and curate the artifacts of the development of their scholarly work in a portfolio.

#### **Pedagogical Framework**

Throughout the program, students consider and evaluate multiple points of view to develop their own perspectives on complex issues and topics through inquiry and investigation. The AP Capstone program provides students with a framework that allows them to develop, practice, and hone their critical and creative thinking skills as they make connections between various issues and their own lives.

Students use the following framework as they explore issues and topics:

- Question and Explore
- Understand and Analyze
- Evaluate Multiple Perspectives
- Synthesize Ideas
- Team, Transform, and Transmit

#### **AP Research Assessment Structure**

Students are assessed on the academic paper and presentation and oral defense of research. The academic paper is 4,000–5,000 words, and the presentation and defense take approximately 15-20 minutes.

#### **Assessment Overview**

- Academic Paper 75% of score
- Presentation and Oral Defense 25% of score

#### Format of Assessment

- Academic Paper
  - Introduces and contextualizes the research question and initial student assumptions and/or hypotheses
  - Reviews previous work in the field to synthesize information and a range of perspectives related to the research question (e.g., Literature Review)
  - Identifies the gap in the current field of knowledge to be addressed
  - Explains and provides justification for the chosen method, process, or approach
  - o Presents the findings, evidence, results, or product
  - Interprets the significance of the findings, results, or product; explores connections to original research question
  - Discusses the implications and limitations of the research or creative work
  - $\circ\;$  Reflects on the process and how this project could impact the field
  - $\circ~$  Discusses possible next steps and/or future directions
  - Provides a complete list of sources cited and consulted in the appropriate disciplinary style
- Presentation and Oral Defense
  - All students will develop a 15 to 20-minute presentation (using appropriate media) and deliver it to an oral defense panel. Students may choose any appropriate format for their presentation, as long as the presentation reflects the depth of their research. Prior to the presentation, students whose academic paper was accompanied by an additional piece of scholarly work (e.g., performance, exhibit, product) will arrange for the teacher and panelists to view the scholarly work.
  - The defense will include three to four questions from a panel consisting of the AP Research teacher and two additional panel members (chosen at the discretion of the AP Research teacher).

#### ARTS

#### **Instrumental Music**

#### AMI2OB

This course emphasizes the creation and performance of music on a traditional concert band instrument at a level consistent with previous experience. Students will develop musical literacy skills by using the creative and critical analysis processes in composition, performance, and a range of reflective and analytical activities. Students will develop their understanding of musical conventions, practices, and terminology and apply the elements of music in a range of activities. They will also explore the function of music in society with reference to the self. communities, and cultures. Note- This credit is achieved through full year co-curricular participation in concert band which takes place outside the normally scheduled school day.

#### Prerequisite: AMU100 / AMI10B / AMU200 or approval of instructor

#### **AMU200**

This course emphasizes the creation and performance of music at a level consistent with previous experience. Students will develop musical literacy skills by using the creative and critical analysis processes in composition, performance, and a range of reflective and analytical activities. Students will develop their understanding of musical conventions, practices, and terminology and apply the elements of music in a range of activities. They will also explore the function of music in society with reference to the self, communities, and cultures.

#### AMG300

Music - Guitar (Open)

Senior Band (College/University)

This course emphasizes performance of music at an intermediate level that strikes a balance between challenge and skill. Student learning will include participating in creative activities and listening perceptively. Students will also be required to develop a thorough understanding of the language of music, including the elements, terminology and history. This course focuses on the development of basic guitar technique.

#### AMI3MB

This course develops students' musical literacy through performance and the preparation and presentation of music productions. Students will perform works on a traditional concert band instrument at a level consistent with previous experience. Independently and collaboratively, students will use current technology and the creative and critical analysis processes to plan, produce, present, and market musical productions. Students will respond to, reflect on, and analyse music from various genres and periods, and they will develop skills transferable to other aspects of their life and their careers. Note - This credit will be achieved through full year participation in co-curricular concert band scheduled outside the regular school day.

#### Prerequisite: AMU100 / AMI10B / AMU200 / AMI20B or approval of instructor

#### AMU3M0

This course provides students with opportunities to develop their musical literacy through the creation, appreciation, analysis, and performance of music on a traditional concert band instrument, including traditional, commercial, and art music. Students will apply the creative process when performing appropriate technical exercises and repertoire and will employ the critical analysis processes when reflecting on, responding to, and analysing live and recorded performances. Students will consider the function of music in society and the impact of music on individuals and communities. They will explore how to apply skills developed in music to their life and careers. Prerequisite: AMU100 / AMU200 / AMI20B

#### AMI4MB

#### Senior Band (College/University)

This course develops students' musical literacy through performance and the preparation and presentation of music productions. Students will perform works on a traditional concert band instrument at a level consistent with previous experience. Independently and collaboratively, students will use current technology and the creative and critical analysis processes to plan, produce, present, and market musical productions. Students will respond to, reflect on, and analyse music from various genres and periods, and they will develop skills transferable to other aspects of their life and their careers. Students will perform technical exercises and appropriate repertoire, complete detailed creative activities, and analyse and evaluate live and recorded performances. Note - This credit will be achieved through full year participation in co-curricular concert band scheduled outside the regular school day.

Prerequisite: AMU3MB / AMI3MB / AMH3MB or approval of instructor

#### AMU4M0

This course enables students to enhance their musical literacy through the creation, appreciation, analysis, and performance of music on a traditional concert band instrument. Students will perform traditional, commercial, and art music, and will respond with insight to live and recorded performances. Students will enhance their understanding of the function of music in society and the impact of music on themselves and various communities and cultures. Students will analyse how to apply skills developed in music to their life and careers. Prerequisite: AMU3MB / AMI3MB / AMH3MB

#### Senior Concert Band

## Music (College/University)

Music (Open)

Music (College/University)



#### VISUAL ARTS - Visual Arts classes are enhanced classes.

#### AVI2O0

This course enables students to develop their skills in producing and presenting art by introducing them to new ideas, materials, and processes for artistic exploration and experimentation. Students will apply the elements and principles of design when exploring the creative process. Students will use the critical analysis process to reflect on and interpret art within a personal, contemporary, and historical context.

#### AVI3M0

This course focuses on studio activities in the visual arts, such as drawing, painting, sculpture, photography, printmaking, collage, and/or multimedia art. Students will use the creative process to create art works that reflect a wide range of subjects and will evaluate works using the critical analysis process. Students will also explore works of art within a personal, contemporary, historical, and cultural context.

#### Prerequisite: AVI101 or AVI201

#### AVI4M0

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

#### Prerequisite: AVI3M0

#### AWI300

This course focuses on studio activities in fashion and textile design as well as one or more of the other visual arts such as drawing, painting, sculpture, photography, printmaking, collage and/or multimedia art. This course explores art skills, fabric art, and fashion design, while offering students a hands-on approach to learning. Students will study fundamental art and drawing skills, and gain experience in drawing the human figure and designing their own fashion line. Students will use the creative process to create art works that reflect a wide range of subjects and will evaluate works using the critical analysis process. A variety of art projects will focus on fashion design and the design industry. Students will also be exposed to several fabric art techniques such as silk screen, batik, and beginner sewing projects. Students will also explore works of art within a personal, contemporary, historical and cultural context. The history aspect of the course will focus on contemporary trends and designers.

#### Prerequisite: AVI100 and AVI200

#### AWM4M0

#### Drawing and Painting (College/University)

This course focuses on the refinement of students' skills and knowledge in visual arts. Students will analyse art forms, use theories of art in analysing and producing art, and increase their understanding of stylistic changes in modern and contemporary Western art, Canadian (including Native Canadian) art, and art forms from various parts of the world. Students will produce a body of work demonstrating a personal approach. **Due to the independent nature of this course, a meeting is required with the teacher prior to the course being scheduled.** 

Visual Arts (Open)

#### Visual Arts (College/University)

#### Visual Arts (College/University)

# Fashion and Textile Design (Open)

#### **BUSINESS STUDIES/COMPUTER STUDIES**

#### BBI2O0/BBI20L

This course introduces students to the world of business. Students will develop and understanding of the functions of business including accounting, marketing, information and communication technology, human resources and production and of the importance of ethics and social responsibility. This course builds a foundation for further studies in business and helps students develop the business knowledge and skills they will need in their everyday lives. For students choosing the laptop option, this course will integrate laptop computers with course expectations.

#### BAF3M0/BAF3ML

This course introduces the fundamental principles and procedures of accounting. Students will develop financial analysis and decision-making skills that will assist them in future studies and/or career opportunities in business. Students will acquire an understanding of accounting for a service and a merchandising business, computerized accounting, financial analysis, ethics and current issues in accounting. For students choosing the laptop option, this course will integrate laptop computers with course expectations.

#### **BAT4M0**

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

#### Prerequisite: BAF3M0/BAF3ML

#### BOH4M0

This course focuses on the development of leadership skills used in managing a successful business. Students will analyse the role of a leader in business, with a focus on decision making, management of group dynamics, workplace stress and conflict, motivation of employees, and Planning. Effective business communication skills, ethics, and social responsibility are also emphasized.

#### BMI3C0/BMI3CL

This course introduces the fundamental concepts of product marketing, which includes the marketing of goods, services, and events. Students will examine how trends, issues, global economic changes, and information technology influence consumer-buying habits. Students will engage in marketing research, develop marketing strategies and produce a marketing plan for a product of their choice. For students choosing the laptop option, this course will integrate laptop computers with course expectations.

#### **CANADIAN AND WORLD STUDIES**

#### CHC2D0/CHC2DL

Canadian History Since World War I (Academic/Laptop) This course explores social, economic, and political developments and events and their impact on the lives of different groups in Canada since 1914. Students will examine the role of conflict and cooperation in Canadian society, Canada's evolving role within the global community, and the impact of various individuals, organizations, and events on Canadian identity, citizenship, and heritage. They will develop their ability to apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, when investigating key issues and events in Canadian history since 1914.

#### CHC2P0

This course focuses on the social context of historical developments and events and how they have affected the lives of people in Canada since 1914. Students will explore interactions between various communities in Canada as well as contributions of individuals and groups to Canadian heritage and identity. Students will develop their ability to apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, when investigating the continuing relevance of historical developments and how they have helped shape communities in present-day Canada.

#### CHV2O0/CHV2OL (.5 credit)

This half credit course explores rights and responsibilities associated with being an active citizen in a democratic society. Students will explore issues of civic importance such as healthy schools, community planning, environmental responsibility, and the influence of social media, while developing their understanding of the role of civic engagement and of political processes in the local, national, and/or global community. Students will apply the concepts of political thinking and the political inquiry process to investigate, and express informed opinions about, a range of political issues and developments that are both of significance in today's world and of personal interest to them.

#### CGG300

This course focuses on issues related to travel and tourism within and between various regions of the world. Students will investigate unique environmental, sociocultural, economic, and political characteristics of selected world regions. They will explore travel patterns and trends as well as tensions related to tourism, and will predict future tourism destinations. Students will apply the concepts of geographic thinking and the geographic inquiry process, including spatial technologies, to investigate the impact of the travel industry on natural environments and human communities.

Prerequisite: CGC1D0/CGC1P0

#### Financial Accounting Principals (College/University)

Financial Accounting Fundamentals (College/University)

Introduction to Business (Open)

## **Business Leadership: Management Fundamentals**

#### Marketing: Goods, Services, Events (College)

#### Canadian History Since World War I (Applied)

Civics and Citizenship (Open/Laptop Option)

## Travel and Tourism: A Geographic Perspective (Open)

#### **CANADIAN AND WORLD STUDIES** - Continued

#### CHW3M0/CHW3ML

#### World History to the End of the Fifteenth Century (College/University) This course explores the history of various societies around the world, from earliest times to around 1500 CE. Students will examine life in and the legacy of various ancient and pre-modern societies throughout the world, including those in Africa, Asia, Europe, and the Americas, Students will extend their ability to apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, when investigating social, political, and economic structures and historical forces at work in various societies and in different historical eras.

#### Prerequisite: CHC2D0/CHC2P0

#### **CHT3O0**

This course focuses on major developments in world history from 1900 to the present. Students will explore the causes and consequences of global and regional conflicts as well as responses to social, economic, and political developments in various countries and regions. Students will extend their ability to apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, when investigating historical developments and events, including those that continue to affect people in various parts of the world. Prerequisite: CHC2D0/CHC2P0

#### CLU3M0/CLU3ML

#### Understanding Canadian Law (College/University)

World History Since 1900: Global and Regional Interactions (Open)

This course explores Canadian law, with a focus on legal issues that are relevant to the lives of people in Canada. Students will gain an understanding of rights and freedoms in Canada, our legal system, and family, contract, employment, tort, and criminal law. Students will use case studies and apply the concepts of legal thinking and the legal inquiry process to develop legal reasoning skills and to formulate and communicate informed interpretations of legal issues, and they will develop the ability to advocate for new laws. Prerequisite: CHC2D0/CHC2P0

#### CGW4U0/CGW4UL

World Issues: A Geographic Analysis (University) This course looks at the global challenge of creating a more sustainable and equitable world. Students will explore a range of issues involving environmental, economic, social, and geopolitical interrelationships, and will examine governmental policies related to these issues. Students will apply the concepts of geographic thinking and the geographic inquiry process, including spatial technologies, to investigate these complex issues, including their impact on natural and human communities around the world.

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

#### CGR4M0

#### The Environment and Resource Management (College/University)

This course explores interactions between the natural and human environment, with a particular focus on the impact of human activity on various ecosystems. Students will explore resource management and sustainability practices, as well as related government policy and international protocols. Applying the concepts of geographic thinking and the geographic inquiry process, including spatial technologies, students will investigate the relationship between people and the natural environment and will propose approaches for developing more sustainable relationships, including environmentally responsible actions that support stewardship.

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

#### CHY4U0

#### World History since the Fifteenth Century (University)

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

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

#### CLN4U0

#### Canadian and International Law (University)

This course explores a range of contemporary legal issues and how they are addressed in both Canadian and international law. Students will develop their understanding of the principles of Canadian and international law when exploring rights and freedoms within the context of topics such as religion, security, cyberspace, immigration, crimes against humanity, and environmental protection. Students will apply the concepts of legal thinking and the legal inquiry process when investigating these issues in both Canadian and international contexts, and they will develop legal reasoning skills and an understanding of conflict resolution in the area of international law.

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

#### ENGLISH

#### ENG2D0

This course is designed to extend the range of oral communication, reading, writing, and media literacy skills that students need for success in their secondary school academic programs and in their daily lives. Students will analyse literary texts from contemporary and historical periods, 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 the selective use of strategies that contribute to effective communication. This course is intended to prepare students for the compulsory Grade 11 university or college preparation course.

Prerequisite: ENG1D0/ENG1P0

#### **ENGLISH** - continued

#### ENG2P0

This course is designed to extend the range of oral communication, reading, writing, and media literacy skills that students need for success in secondary school and daily life. Students will study and create a variety of informational, literary, and graphic texts. An important focus will be on the consolidation of strategies and processes that help students interpret texts and communicate clearly and effectively. This course is intended to prepare students for the compulsory Grade 11 college or workplace preparation course. Prerequisite: ENG1D0/ENG1P0

#### ENG3C0

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.

#### Prerequisite: ENG2P0

#### ENG3E0

**English (Workplace)** 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.

#### Prerequisite: ENG2P0

#### ENG3U0

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. The course is intended to prepare students for the compulsory Grade 12 university or college preparation course.

#### Prerequisite: ENG2D0

#### **EPS3O0**

This course emphasizes the knowledge and skills required to plan and make effective presentations and to speak effectively in both formal and informal contexts, using such forms as reports, speeches, debates, panel discussions, storytelling, recitations, interviews, and multimedia presentations. Students will research and analyse the content and characteristics of convincing speeches and the techniques of effective speakers; design and rehearse presentations for a variety of purposes and audiences; select and use visual and technological aids to enhance their message; and assess the effectiveness of their own and others' presentations.

#### Prerequisite: English, Grade 10, Academic or Applied

#### ENG4C0

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

#### Prerequisite: ENG3C0

#### ENG4E0

This course emphasizes the consolidation of literacy, communication, and critical and creative thinking skills necessary for success in the workplace and in daily life. Students will analyse informational, graphic, and literary texts and create oral, written, and media texts in a variety of forms for workplace-related and practical purposes. An important focus will be on using language accurately and organizing ideas and information coherently. The course is intended to prepare students for the workplace and active citizenship. Prerequisite: ENG3E0

#### ENG4U0

This course emphasizes the consolidation of the literacy, communication, and critical and creative thinking skills necessary for success in academic and daily life. Students will analyse a range of challenging literary texts from various periods, countries, and cultures; interpret and evaluate informational and graphic texts; and create oral, written, and media texts in a variety of forms. An important focus will be on using academic language coherently and confidently, selecting the reading strategies best suited to particular texts and particular purposes for reading, and developing greater control in writing. The course is intended to prepare students for university, college, or the workplace. Prerequisite: ENG3U0

#### ETS4U0

This course is for students with a special interest in literature and literary criticism. The course may focus on themes, genres, time periods, or countries. Students will analyse a range of forms and stylistic elements of literary texts and respond personally, critically, and creatively to them. They will also assess critical interpretations, write analytical essays, and complete an independent study project. Prerequisite: ENG3U0

#### Presentation and Speaking Skills (Open)

#### English (College)

#### **English (University)**

Studies in Literature (University)

**English (Workplace)** 

#### 34

#### **English (Applied)**

#### **ENGLISH** - continued

#### EWC4U0

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

#### Prerequisite: ENG3U0

#### **OLC400**

**Ontario Secondary School Literacy Course** This course can be taken in combination with ENG4E0. It is designed to help students acquire and demonstrate the cross-curricular literacy skills that are evaluated by the Ontario Secondary School Literacy Test. Students who complete the course successfully will meet the provincial literacy requirement for graduation. Students will read a variety of informational, narrative and graphic texts and will produce a variety of forms of writing, including summaries, information paragraphs, opinion pieces, and news reports. This course is for students who have been eligible to write the OSSLT at least twice (including deferred), and have been unsuccessful at least once. These students are eligible to take this one credit course to achieve both a Grade 12 English credit, of the Group One additional compulsory credit, and their literacy credential for graduation.

#### FRENCH

#### FSF2D0

**Core French (Academic)** This course provides opportunities for students to communicate in French about personally relevant, familiar, and academic topics in real-life situations with increasing independence. Students will exchange information, ideas, and opinions with others in guided and increasingly spontaneous spoken interactions. Students will continue to develop their language knowledge and skills through the selective use of strategies that contribute to effective communication. They will also increase their understanding and appreciation of diverse French-speaking communities, and will continue to develop the skills necessary to become life-long language learners.

Prerequisite: FSF1D0

#### FSF3U0

This course offers students extended opportunities to speak and interact in real-life situations in French with greater independence. Students will develop their creative and critical thinking skills through responding to and exploring a variety of oral and written texts. They will continue to broaden their understanding and appreciation of diverse French-speaking communities and to develop the skills necessary for lifelong language learning.

Prerequisite: FSF2D0

#### FSF4U0

This course provides extensive opportunities for students to speak and interact in French independently. Students will apply language-learning strategies in a wide variety of real-life situations, and will continue to develop their creative and critical thinking skills through responding to and interacting with a variety of oral and written texts. Students will also continue to enrich their understanding and appreciation of diverse French-speaking communities and to develop the skills necessary for life-long language learning. Prerequisite: FSF3U0

#### FRENCH IMMERSION

#### FIF2DI

Français This course provides students with extensive opportunities to communicate, interact, and think critically and creatively in French. Students will use a variety of language-learning strategies in listening, speaking, reading, and writing, and will respond to and interact with print, oral, visual, and electronic texts. Students will develop their knowledge of the French language through the study of contemporary and historically well-known French European literature. They will also continue to increase their understanding and appreciation of diverse French-speaking communities and to develop the skills necessary to become life-long language learners.

**Prerequisite: FIF1DI** 

#### FIF3UI

Français

French Immersion (University)

Francais

This course provides opportunities for students to consolidate the communication skills required to speak and interact with increasing confidence and accuracy in French in a variety of academic and social contexts. Students will apply language-learning strategies while exploring a variety of concrete and abstract topics, and will increase their knowledge of the language through the study of French literature from around the world. They will also continue to deepen their understanding and appreciation of diverse French-speaking communities and to develop the skills necessary to become life-long language learners.

#### Prerequisite: FIF2DI

#### FIF4UI

This course provides students with extensive opportunities to communicate, interact, and think critically and creatively in French. Students will consolidate language-learning strategies and apply them while communicating about concrete and abstract topics, and will independently respond to and interact with a variety of oral and written texts. Students will study a selection of French literature from the Middle Ages to the present. They will also continue to enrich their understanding and appreciation of diverse French-speaking communities and to develop the skills necessary to become life-long language learners.

#### Prerequisite: FIF3UI

## **Core French (University)**

#### **Core French (University)**

# French Immersion (University)

French Immersion (Academic)



#### **FRENCH IMMERSION** - Continued

#### CHV2OI (.5 credit)

#### Civics and Citizenship (Open-Immersion/Laptop Option) Étude de la citoyenneté

This course explores rights and responsibilities associated with being an active citizen in a democratic society. Students will explore issues of civic importance such as healthy schools, community planning, environmental responsibility, and the influence of social media, while developing their understanding of the role of civic engagement and of political processes in the local, national, and/or global community. Students will apply the concepts of political thinking and the political inquiry process to investigate, and express informed opinions about, a range of political issues and developments that are both of significance in today's world and of personal interest to them.

#### GLC2OI (.5 credit)

#### Career Studies (Open Immersion Laptop) Étude des carrières

This half credit course teaches students how to develop and achieve personal goals in education, work and contribute to their communities. Student learning will include assessing their own knowledge, skills, characteristics and investigating economic trends, workplace organization, work opportunities, and ways to search for work. The course explores post-secondary learning options, prepares students for community-based learning, and helps them build the capabilities needed for managing work and life transitions. Students will design action plans for pursuing their goals.

#### CHC2DI

#### Canadian History Since World War I (Academic/Immersion/ Laptop Option) Histoire du Canada

This course explores social, economic, and political developments and events and their impact on the lives of different groups in Canada since 1914. Students will examine the role of conflict and cooperation in Canadian society, Canada's evolving role within the global community, and the impact of various individuals, organizations, and events on Canadian identity, citizenship, and heritage. They will develop their ability to apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, when investigating key issues and events in Canadian history since 1914.

#### PPL2OI

#### Co-ed Healthy Active Living Education (STEP LAPTOP – Academic) Éducation physique et santé

This course emphasizes regular participation in a variety of enjoyable physical activities that promote lifelong healthy active living. Student learning will include the application of movement principles to refine skills; participation in a variety of activities that enhance personal competence, fitness and health; examination of issues related to healthy sexuality, healthy eating, substance use and abuse; and the use of informed decision-making, conflict resolution and social skills in making personal choices. At Lockerby, this course will be taught using the laptop computer. Instruction, reports, notes, tests and evaluation exercises will be delivered using the laptop, as well as providing access to healthy and active living resources on the World Wide Web.

Prerequisite: CGC1DI

#### PPL3OI

#### Physical and Health Education (Open) Éducation physique et santé

This immersion course focuses on the development of a healthy lifestyle and participation in a variety of enjoyable physical activities that have the potential to engage students' interest throughout their lives. Students will be encouraged to develop personal competence in a variety of movement skills and will be given opportunities to practise goal-setting, decision-making, social and interpersonal skills. Students will also study the components of healthy relationships, reproductive health, mental health and personal safety.

#### PPL4OI

#### Physical and Health Education (Open) Éducation physique et santé

This immersion course focuses on the development of a healthy lifestyle and participation in a variety of enjoyable physical activities that have the potential to engage students' interest throughout their lives. Students will be encouraged to develop personal competence in a variety of movement skills and will be given opportunities to practise goal-setting, decision-making, social and interpersonal skills. Students will also study the components of healthy relationships, reproductive health, mental health and personal safety.

#### TDJ2OI

#### Technological Design (Open - Immersion)

This French Immersion course provides students with opportunities to apply a design process to meet a variety of technological challenges. Students will research projects, create designs, build models and/or prototypes, and assess products and/or processes using appropriate tools, techniques, and strategies. Student projects may include designs for homes, vehicles, bridges, robotic arms, clothing, or other products. Students will develop an awareness of environmental and societal issues related to technological design, and will learn about secondary and postsecondary education and training leading to careers in the field.

#### Prerequisite: TIJ10I

#### 36

#### **GUIDANCE & CAREER EDUCATION**

#### GLS100/GLE100/GLE200

This course focuses on learning strategies to help students become better, more independent learners. Students will learn how to develop and apply literacy and numeracy skills, personal management skills, and interpersonal and teamwork skills to improve their learning and achievement in school, the workplace, and the community. The course helps students build confidence and motivation to pursue opportunities for success in secondary school and beyond.

#### Prerequisite: For GLS10 - None

For GLE1O and GLE2O - Recommendation of principal

#### GLC2O0/GLC2OL (.5 credit)

This course teaches students how to develop and achieve personal goals for future learning, work, and community involvement. Students will assess their interests, skills, and characteristics and investigate current economic and workplace trends, work opportunities, and ways to search for work. The course explores postsecondary learning and career options, prepares students for managing work and life transitions, and helps students focus on their goals through the development of a career plan. For students choosing the laptop option this course will integrate laptop computers with course expectations.

#### **GPP3O0**

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.

#### GLS400/GLE400/GLE300

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.

#### Prerequisite: For GLS4O - None

For GLE4O and GLE3O - Recommendation of principal

#### **Co-operative Education (Open)**

COOP Co-operative education provides the reality and relevancy to education by developing the "whole person" through the combination of classroom learning with practical experience. Prerequisites for co-op include that students be 16 years of age and have a minimum of 20 credits. Interested students are asked to do the following: a) select the course (COOP) on the option sheet, b) fill out a co-operative credit application form, c) have the parental consent form signed, d) be prepared to be interviewed by the in-school co-op education teacher and guidance counsellor. Upon completion of this course, students receive 2, 3 or 4 credits.

#### Prerequisite: A related senior course

#### **Summer Co-operative Education**

Opportunities are being extended to Grade 11/12 students to earn 1 or 2 credits toward their OSSD. This planned learning experience integrates classroom theory and learning experiences in a workplace setting. This experience will enable students to apply and refine the knowledge and skills acquired in a related curriculum course.

#### OYAP

#### **Ontario Youth Apprenticeship Program**

The Ontario Youth Apprenticeship Program (OYAP) provides Grade 11 and 12 students with the opportunity to participate in a work experience placement in a skilled trade while working toward the completion of a Grade 12 diploma. Students who demonstrate potential may have the opportunity to register officially as apprentices.

Students who register under the OYAP option will earn co-operative education credits while participating in either a half-day or a full day work experience placement alongside a qualified journeyperson in a skilled trade. Placements can be in either the motive, service, industrial or construction sector in restricted, compulsory or voluntary skilled trades.

OYAP is designed to:

- Introduce students to careers in a variety of skilled trades
- Help students develop practical hands on experience in a skilled trade of their choice
- Provide students with the opportunity to register officially as youth apprentices while still in secondary school
- Enrich school courses through related trade experience
- Connect students to the world of work
- Enhance opportunities for employment in the skilled trades after graduation

OYAP provides students with an accelerated and viable career path.

#### Skills for Success in Secondary School (Open)

# Career Studies /Laptop (Open)

## Leadership and Peer Support (Open)

Skills for Success After Secondary School (Open)

#### **GUIDANCE & CAREER EDUCATION** – Continued

#### **OYAP** Eligibility Criteria

Students who may be eligible for the OYAP option:

- Are at least 16 years of age
- Have completed Grade 10 (at least 16 credits)
- Have senior credits in the skilled trade of their interest
- Enjoy learning by doing
- Are recommended by the guidance counsellor and the co-op teacher
- Demonstrate a career focus in a skilled trade, a strong interest in learning a trade, aptitude, maturity and commitment

For further information, please contact your guidance office.

#### **HEALTH & PHYSICAL EDUCATION**

#### Daily participation is essential for meeting the outcomes of these courses.

#### PPL2OF/PPL2OM

Healthy Active Living Education (F-Females, M-Males, Open)

This course emphasizes regular participation in a variety of enjoyable physical activities that promote life long healthy active living. Student learning will include the application of movement principles to refine skills; participation in a variety of activities that enhance personal competence, fitness, and health; examination of issues related to healthy sexuality, healthy eating, substance use and abuse; and the use of informed decision-making, conflict resolution, and social skills in making personal choices.

#### PPL3OF/PPL3OM

#### Healthy Active Living Education (F-Females, M-Males, Open)

This course focuses on the development of a healthy lifestyle and participation in a variety of enjoyable physical activities that have the potential to engage students' interest throughout their lives. Students will be encouraged to develop personal competence in a variety of movement skills and will be given opportunities to practice goal-setting, decision-making, social and interpersonal skills. Students will also study the components of healthy relationships, reproductive health, mental health, and personal safety.

#### PAL3OY

#### Volleyball Activities Class (Open)

This course emphasizes regular participation in a variety of enjoyable physical activities that promote life long healthy active living. Student learning will include the application of movement principles to refine skills; participation in a variety of activities that enhance personal competence, fitness and health; examination of issues related to healthy sexuality, healthy eating, substance use and abuse; and the use of informed decision-making, conflict resolution, and social skills in making personal choices. The emphasis of this course is on volleyball skill development with 40-45 sessions of on-court time. A minimum of 25 students must be enrolled for this course to be scheduled.

#### PPL4OF/PPL4OM

Healthy Active Living Education (F-Females, M-Males Open) This course focuses on the development of a personalized approach to healthy active living through participation in a variety of sports and recreational activities that have the potential to engage student interest throughout their lives. Students will develop and implement personal physical fitness plans. In addition, they will be given opportunities to refine their decision-making, conflict resolution, and interpersonal skills, with a view to enhancing their mental health and their relationships with others.

#### **PAD3O0**

#### **Outdoor Education Activities (Open)**

Personal and Fitness Activities - Males (Open)

Personal and Fitness Activities - Females (Open)

This is a program of outdoor activities ranging from curling and alpine skiing to canoeing and quince building. It is designed to develop confidence and to build interest and skills in lifetime activities. This course is an enhanced program and there will be a fee payable within the first two weeks of this program. This fee is non refundable even if students do not participate in the canoe trip. Due to the range of activities in the program, lunch time and after school time, may be required. Throughout the semester, students prepare for a final 2-3 day canoe trip. Enrolment will be limited to 21 students.

#### PAF4OM

#### This course is designed to provide multiple fitness and health opportunities to healthy, active, male students in Grade 12. The following vigorous activities will be included (weight training programs using F.I.T.T. principles, fitness testing and personalized training programs, aerobic walking, jogging, rope jumping, yoga, pilates, weight and circuit training, as well as a number of other fun physical fitness activities. Outside resources such as guest speakers and access to local fitness facility will be utilized to increase the effectiveness of this course. Teachers will guide students to make individual decisions about their personal fitness programs and to develop positive attitudes and behaviours toward proper nutrition, stress, and personal safety and fitness activities. A variety of self-assessment activities will be used so that students can design and implement a personal wellness plan.

#### PAF3OF/PAF4OF

This course is designed to provide multiple fitness and health opportunities to healthy, active, female students in Grade 11 or 12. The following vigorous activities will be included (aerobic walking, jogging, aerobics, rope jumping, yoga, pilates, weight and circuit training, as well as a number of other fun physical fitness activities. Outside resources such as guest speakers and access to local fitness facility will be utilized to increase the effectiveness of this course. Teachers will guide students to make individual decisions about their personal fitness programs and to develop positive attitudes and behaviours toward proper nutrition, stress, and personal safety and fitness activities. A variety of self-assessment activities will be used so that students can design and implement a personal wellness plan.

#### 38

39

#### HEALTH & PHYSICAL EDUCATION - Continued

#### PAI3OF

This Yoga course is designed for healthy, active female students who are interested in becoming empowered. The class will be a judgment free zone where each yogini is respected, nurtured and challenged. While practicing a variety of poses, students will develop a positive body image, increase their strength, flexibility, and balance while reducing stress in their everyday lives. Each student is encouraged to have their own mat, water bottle and tea cup.

#### PAI4OF

Yoga 12 introduces students to the ancient tradition of Yoga in its various forms and styles. With its vast capacity to bring vibrant health to body, mind and emotion, the intention is for students to develop a lifelong personal practice of yoga. Students will participate in various activities, including the physical practice, personal reflection, partner exercises, meditation group, discussion and classroom theory. Each student is encouraged to have their own mat, water bottle and tea cup.

#### PAL4OW

This course emphasizes regular participation in the sport of basketball which promotes lifelong healthy active living. Student learning will include the application of movement principles to refine skills; participation in a variety of activities that enhance personal competence, fitness and health. The emphasis of this course is on basketball skill development, coaching, conditioning and officiating. Opportunities may present themselves to obtain certification in basketball officiating level I and/or coaching level I. Students must be in Grade 11 or 12.

#### PSK4U0

This course focuses on the study of human movement (bones and muscles) and systems, biomechanics, factors, and principles involved in human development. Students will learn about the effects of physical activity on health and performance, the evolution of physical activity and sports, and the factors that influence an individual's participation in physical activity. The course prepares students for university programs in physical education, kinesiology, anatomy, recreation, and sports administration.

Prerequisite: Any Grade 11 University or University/College Preparation or course in science or any Grade 11 or 12 course in health or physical education.

#### HUMANITIES

#### **HFN2O0**

This course focuses on guidelines for making nutritious food choices. Students will investigate factors that influence food choices, including beliefs, attitudes, current trends, traditional eating patterns, food marketing strategies, and individual needs. Students will also explore the environmental impact of a variety of food choices at the local and global level. The course provides students with opportunities to develop food preparation skills and introduces them to the use of social science research methods in the area of food and nutrition.

#### HFC3M

This course focuses on the flavours, aromas, cooking techniques, food and cultural traditions of world cuisines. Students will explore the origins of and developments in diverse food traditions. They will demonstrate the ability to cook with ingredients and equipment from a variety of cultures, compare food related etiquette in many countries and cultures, and explain how Canadian food choices and traditions have been influenced by other cultures. Students will develop practical skills and apply social science research methods while investigating foods and food practices from around the world.

#### **HPC3O0**

**Raising Healthy Children (Open)** This course focuses on the skills and knowledge parents, guardians, and caregivers need, with particular 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.

#### HHS4U0

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

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

#### Food and Nutrition (Open)

Food and Culture (College/University)

Exercise Science (University)

#### Yoga - Females (Open)

#### Families in Canada (University)

Yoga - Females (Open)

#### Basketball Activities - Females & Males (Open)

#### **<u>HUMANITIES</u>** - Continued

#### HHG4M0

#### Developmental Psychology (College/University)

This course offers a multidisciplinary approach to the study of human development throughout the life cycle, with particular emphasis on enhancing growth and development. Students will examine how early brain and child development are linked to lifelong learning, health, and well-being, and will develop child-care and human-relationship skills through lessons and activities with practical applications. This course will also refine students' skills in researching and investigating issues related to human growth and development.

Prerequisite: Any university/college or college preparation course in social sciences and humanities, English or Canadian and World Studies

#### HSB4U0

#### Challenge and Change (College/University)

This course focuses on the use of social science theories, perspectives, and methodologies to investigate and explain shifts in knowledge, attitudes, beliefs, and behaviour and their impact on society. Students will critically analyze how and why cultural, social, and behavioural patterns change over time. They will explore the ideas of social theorists and use those ideas to analyze causes of and responses to challenges such as technological change, deviance, and global inequalities. Students will explore ways in which social science research methods can be used to study social change.

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

## Pre-requisite Chart for Mathematics, Grades 9 – 12



On the next page, the summary **Mathematics: Links to Post Secondary Destinations** is a helpful guide provided by the Ministry of Education to aid students and their parents in knowing the math requirements needed for a specific career path.



## **UNIVERSITY DESTINATIONS:**



Grade 12 U Advanced Functions MHF4U University Mathematics, Engineering, Economics, Science, Computer Science, some Business Programs and Education – Secondary Mathematics

University Kinesiology, Social Sciences, Programs and some Mathematics, Health Science, some Business Interdisciplinary Programs and Education – Elementary Teaching



Some University Applied Linguistics, Social Sciences, Child and Youth Studies, Psychology, Accounting, Finance, Business, Forestry, Science, Arts

## **COLLEGE DESTINATIONS:**

Grade 12 C Mathematics for College Technology MCT4C

College Biotechnology, Engineering Technology (e.g. Chemical, Computer), some Technician Programs



General Arts and Science, Business, Human Resources, some Technician and Health Science Programs

## WORKPLACE DESTINATIONS:



Steamfitters, Pipefitters, Sheet Metal Worker, Cabinetmakers, Carpenters, Foundry Workers, Construction Millwrights and some Mechanics

## Mathematics Decision Guide – Advice to Students

Many apprentice, college and university programs require Grade 12 mathematics, but the math course(s) one needs varies greatly in each area of study. Students must choose their math requirements carefully and keep all their possible post secondary plans in mind. Before deciding which math course(s) to take, one must check www.ontariocolleges.ca for college information. Then, go to the individual college web site to ensure you get up-to-date information. For university requirements, visit http://www.electronicinfo.ca for the specific mathematics prerequisites needed for one's program.

Students are encouraged to talk to their math teacher about their plans in mathematics. As well, students are strongly advised to refer to the mathematics course descriptions in their Course Selection Handbook. The prerequisite chart following this page is a helpful guide. The following information is a brief summary.

- If your destination is a university program that requires *Calculus and Vectors* (MCV4U), you will need to take Advanced Functions (MHF4U) either as a prerequisite (recommended) or concurrently with MCV4U.
- If your destination is a university program that requires *Advanced Functions* (MHF4U), you will need to take Functions (*MCR3U*) in Grade 11 or follow the alternative pathway of MCF3M plus MCT4C.
- If your destination is a university program that requires *Mathematics of Data Management* (MDM4U), you need to take either MCR3U or MCF3M in Grade 11.
- If your destination is a college program that requires *Mathematics for College Technology* (MCT4C), you will need to take MCF3M in Grade 11.
- If your destination is a college program that requires *Foundations for College Mathematics* (MAP4C), you will need to take Foundations for College Mathematics (MBF3C) in Grade 11.
- The *Grade 11 Mathematics for Everyday Life* (MEL3E) is designed to equip students with the knowledge and skills they need to meet the expectations of employers, if they plan to enter the workplace directly after graduation, or the requirements for admission to certain apprenticeship or other training programs.
- Mathematics for Work and Everyday Life (MEL3E) is the prerequisite for *Mathematics for Work and Everyday Life* (MEL4E).

#### MATHEMATICS

#### MFM2P0

#### Foundations of Mathematics (Applied)

This course enables students to consolidate their understanding of linear relations and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and hands-on activities. Students will develop and graph equations in analytic geometry; solve and apply linear systems, using real-life examples; and explore and interpret graphs of quadratic relations. Students will investigate similar triangles, the trigonometry of right triangles, and the measurement of three-dimensional figures. Students will consolidate their mathematical skills as they solve problems and communicate their thinking.

#### Prerequisite: MFM1P0/MPM10

#### MPM2D0/MPM2DL

#### **Principles of Mathematics (Academic)**

**Principles of Mathematics (Enriched)** 

This course enables students to broaden their understanding of relationships and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and abstract reasoning. Students will explore quadratic relations and their applications; solve and apply linear systems; verify properties of geometric figures using analytic geometry; and investigate the trigonometry of right and acute triangles. Students will reason mathematically and communicate their thinking as they solve multi-step problems. For students choosing the laptop option, this course will integrate laptop computers with course expectations.

#### Prerequisite: MPM10/MPM1DE

#### MPM2DE

This course enables students to broaden their understanding of relationships and extend their problem-solving and algebraic skills through investigation, the effective use of technology, and abstract reasoning. Students will explore quadratic relations and their applications; solve and apply linear systems; verify properties of geometric figures using analytic geometry; and investigate the trigonometry of right and acute triangles. Students will reason mathematically and communicate their thinking as they solve multi-step problems. Students enrolled in this course will prepare for and write a Canadian mathematics contest. Students in this course should enjoy doing mathematics and solving problems.

#### Prerequisite: MPM1D0/MPM1DE

#### MBF3C0

#### Foundations for College Mathematics (College)

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; and develop their ability to reason by collecting, analysing, 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 **Prerequisite: MFM2P0** 

#### **MATHEMATICS** – Continued

#### MCF3M0

#### This course introduces basic features of the function by extending students' experiences with quadratic relations. It focuses on quadratic, trigonometric, and exponential functions and their use in modelling real-world situations. Students will represent functions numerically, graphically, and algebraically; simplify expressions; solve equations; and solve problems relating to financial and trigonometric applications. Students will reason mathematically and communicate their thinking as they solve multi-step problems.

#### Prerequisite: MPM2D0/MPM2D0/MFM2P0

#### MCR3U0

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 equivalent algebraic expressions. Students will reason mathematically and communicate their thinking as they solve multistep problems.

#### Prerequisite: MPM2D0/MPM2DE

#### MEL3E0

Mathematics for Work and Everyday Life (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.

Prerequisite: MPM2D0/MPM2DE/MFM2P0 or a ministry-approved locally developed Grade 10 mathematics course

#### MAP4C0

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

## Prerequisite: MBF3C0/MCF3M0

#### MCT4C0

#### Mathematics for College Technology, Grade 12 (College) This course enables students to extend their knowledge of functions. Students will investigate and apply properties of polynomial, exponential, and trigonometric functions; continue to represent functions numerically, graphically, and algebraically; develop facility in simplifying expressions and solving equations; and solve problems that address applications of algebra, trigonometry, vectors, and geometry. Students will reason mathematically and communicate their thinking as they solve multi-step problems. This course prepares students for a variety of college technology programs.

#### Prerequisite: MCF3M0/MCR3U0

#### MCV4U0

Calculus and Vectors, Grade 12 (University) 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, radical and sinusoidal functions; and apply these concepts and skills to the modelling of real-world relationships. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. This course is intended for students who plan to study mathematics in university and who may choose to pursue careers in fields such as physics and engineering.

#### **Prerequisite: MHF4U0**

Note: in some schools, it may be necessary to take the prerequisite course concurrently with MCV4U

#### MCV4UY

## **Calculus and Vectors (Advanced Placement)** This course is designed for students with a keen interest and a solid background in mathematics. It covers both the material in the Grade 12

(Year 4) Vectors & Calculus (MCV4U) course, as well as the extra subject areas of the AP Calculus AB syllabus. The calculus topics include functions, limits, differential and integral calculus, as well as applications and problem solving that apply the methods learned in this course. The vectors strand studied in MCV4U, is also covered in this course after the AP exam in May and qualifies students to earn the corresponding Ontario credit. Technology is used to discover results and to present solutions on assignments. TI-84 Plus graphics calculators are compulsory for this course and the AP examination. Prerequisite: MHF4U

#### MEL4E0

#### Mathematics for Work and Everyday Life, Grade 12 (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 and create household budgets; use proportional reasoning; estimate and measure; and apply geometric concepts to create designs. Students will consolidate their mathematical skills as they solve problems and communicate their thinking. Prerequisite: MEL3E0

44

#### Functions and Applications (College/University)

#### **Functions (University)**

#### Foundations for College Mathematics, Grade 12 (College)

#### **MATHEMATICS** – Continued

#### MDM4U0

#### This course broadens students' understanding of mathematics as it relates to managing data. Students will apply methods for organizing large amounts of information; solve problems involving probability and statistics; and carry out a culminating project that integrates statistical concepts and skills. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. Students planning to enter university programs in business, the social sciences, and the humanities will find this course of particular interest. Prerequisite: MCF3M0 or MCR3U0

#### MHF4U0

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 who plan to study mathematics in university and for those wishing to consolidate their understanding of mathematics before proceeding to any one of a variety of university programs.

Prerequisite: MCR3U0 or MCT4C0

#### **SCIENCE**

#### SNC2D0

This course enables students to enhance their understanding of concepts in biology, chemistry, earth and space science, and physics, and of the interrelationships between science, technology, society, and the environment. Students are also given opportunities to further develop their scientific investigation skills. Students will plan and conduct investigations and develop their understanding of scientific theories related to sustainable ecosystems; chemical reactions, with a particular focus on acid-base reactions; forces that affect climate and climate change; and the interaction of light and matter.

#### Prerequisite: SNC1D0 or SNC1P0

#### SNC2P0

This course enables students to develop a deeper understanding of concepts in biology, chemistry, earth and space science, and physics, and to apply their knowledge of science in real-world situations. Students are given opportunities to develop further practical skills in scientific investigation. Students will plan and conduct investigations into everyday problems and issues related to ecosystems; chemical reactions; factors affecting climate change; and the interaction of light and matter.

#### Prerequisite: SNC1P0/ SNC1D0

#### SBI3C0

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.

#### Prerequisite: SNC2P0/SNC2D0

#### SBI3U0

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.

#### Prerequisite: SNC2D0

#### SCH3U0

Chemistry (University) 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. Prerequisite: SNC2D0

#### SPH3U0

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. Prerequisite: SNC2D0

#### SBI4U0

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

#### Prerequisite: SBI3U0 (SCH3U0 is highly recommended)

#### Mathematics of Data Management, Grade 12 (University)

#### Advanced Functions, Grade 12 (University)

#### **Biology** (College)

Science (Applied)

Science (Academic)

#### **Biology** (University)

# Physics (University)

#### **Biology** (University)

#### **SCIENCE** – Continued

#### SCH4C0

#### Chemistry (College)

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

#### Prerequisite: SNC2 Courses

#### SCH4U0

Chemistry (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.

#### Prerequisite: SCH3U0

#### SPH4C0

Physics (College) 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. Students 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. This course is crucial for many college programs.

Prerequisite: SNC2 Courses

#### SPH4U0

Physics (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 relating to a variety of physics concepts and principles. Students will also consider the impact of technological applications of physics on society and the environment. Prerequisite: SPH3U0

#### **STEP/STEP LAPTOP – GRADE 10**

#### ENG2DT/ENG2DL

English (Academic - STEP/STEP LAPTOP) This course is designed to extend the range of oral communication, reading, writing, and media literacy skills that students need for success in their secondary school academic programs and in their daily lives. Students will analyse literary texts from contemporary and historical periods, 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 the selective use of strategies that contribute to effective communication. This course is intended to prepare students for the compulsory Grade 11 university or college preparation course. For students choosing the laptop option, this course will integrate laptop computers with course expectations. Prerequisite: ENG1DT/ENG1DL

#### SNC2DT/SNC2DL

This course enables students to enhance their understanding of concepts in biology, chemistry, earth and space science, and physics, and of the interrelationships between science, technology, society, and the environment. Students are also given opportunities to further develop their scientific investigation skills. Students will plan and conduct investigations and develop their understanding of scientific theories related to sustainable ecosystems; chemical reactions, with a particular focus on acid-base reactions; forces that affect climate and climate change; and the interaction of light and matter. The content of the STEP course is presented in an integrated manner in conjunction with TDJ2OT/L, Grade 10 Technological Design. For students choosing the laptop option, this course will integrate laptop computers with course expectations. Prerequisite: SNC1DT/SNC1DL

#### TDJ2OT/TDJ2OL

Technological Design (STEP/STEP LAPTOP - Open)

This course provides students with opportunities to apply a design process to meet a variety of technological challenges. Students will research projects, create designs, build models and/or prototypes, and assess products and/or processes using appropriate tools, techniques, and strategies. Student projects may include designs for homes, vehicles, bridges, robotic arms, clothing, or other products. Students will develop an awareness of environmental and societal issues related to technological design, and learn about secondary and postsecondary education and training leading to careers in the field. This course will engage students in hands-on learning through a variety of tech subjects including woodworking, automotive, drafting, and communications.

#### Prerequisite: TTI1OT/TTI1OL

Science (Academic - STEP/STEP LAPTOP)

#### STEP/STEP LAPTOP - GRADE 10 - Continued

#### **TDJ2OI**

#### This French immersion course provides students with opportunities to apply a design process to meet a variety of technological challenges. Students will research projects, create designs, build models and/or prototypes, and assess products and/or processes using appropriate tools, techniques, and strategies. Student projects may include designs for homes, vehicles, bridges, robotic arms, clothing, or other products. Students will develop an awareness of environmental and societal issues related to technological design, and will learn about secondary and postsecondary education and training leading to careers in the field.

#### Prerequisite: TIJ10I

#### PPL2OL

This course emphasizes regular participation in a variety of enjoyable physical activities that promote lifelong healthy active living. Student learning will include the application of movement principles to refine skills; participation in a variety of activities that enhance personal competence, fitness and health; examination of issues related to healthy sexuality, healthy eating, substance use and abuse; and the use of informed decision-making, conflict resolution and social skills in making personal choices. At Lockerby, this course will be taught using the laptop computer. Instruction, reports, notes, tests and evaluation exercises will be delivered using the laptop, as well as providing access to healthy and active living resources on the World Wide Web.

#### **STEP/STEP LAPTOP – GRADE 11**

#### **ENG3UL or ENG3UY**

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. The course is intended to prepare students for the compulsory Grade 12 university or college preparation course. For students choosing the laptop option, this course will integrate laptop computers with course expectations.

#### Prerequisite: ENG2D0/ENG2DL

#### **SBI3UZ**

#### Medicine & Health Care - Biology (STEP/ STEP LAPTOP- University)

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. This course is recommended for STEP students and there will be partnerships with post secondary institutions to support the emphasis placed on medicine, technology and health care.

Prerequisite: SNC2DT/SNC2DL

#### SBI3UT/SBI3UL

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. This course is recommended for STEP students. For students choosing the laptop option, this course will integrate laptop computers with course expectations.

Prerequisite: SNC2DT/SNC2DL

#### SCH3UT/SCH3UL

Chemistry (STEP/STEP LAPTOP – University) 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. This course is recommended for STEP students. For students choosing the laptop option, this course will integrate laptop computers with course expectations. Prerequisite: SNC2DT/SNC2DL

#### SCH3UZ

Environmental Chemistry (STEP/STEP LAPTOP – University) 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. Students will interpret regional chemical findings and seek ways to reduce the impact of human activities on the natural environment. Prerequisite: SNC2DT/SNC2DL

#### SGM38T

#### Introduction to Mining (College/University)

This course will provide students with an overview of mining industry from the geological processes involved in discovery of an ore body to extraction and refining of products. Students will obtain an understanding of the economics that drive mine development and the environmental impact of mine development. Students will gain a better understanding of the mining processes through hands-on activities, guest speakers and participation in topic appropriate field trips. Students will also obtain a number of certifications required for the Specialist High Skills Major: Primary Industries - Mining.

#### **Co-ed Healthy Active Living Education (STEP LAPTOP – Academic)**

## Biology (STEP/ STEP LAPTOP- University)

47

#### **Technological Design (Open Immersion)**

#### English (STEP LAPTOP / AP Capstone - University)

#### STEP/STEP LAPTOP - GRADE 11 - Continued

#### SPH3UT/SPH3UL

Physics (STEP/ STEP LAPTOP - University) 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. This course is recommended for STEP students. For students choosing the laptop option, this course will integrate laptop computers with course expectations. Prerequisite: SNC2DT/SNC2DL

#### SPH3UZ

#### Physics for Engineers (STEP/ STEP LAPTOP – University)

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. All units will focus on the principles of engineering and guest speakers will introduce studens to the various disciplines of engineering. Prerequisite: SNC2DT/SNC2DL

#### TDJ3MT/TDJ3ML

#### Technological Design (STEP/ STEP LAPTOP – College/University)

This course examines how technological design is influenced by human, environmental, financial, and material requirements and resources. Students will research, design, build, and assess solutions that meet specific human needs, using working drawings and other communication methods to present their design ideas. They will develop an awareness of environmental, societal, and cultural issues related to technological design, and will explore career opportunities in the field, as well as the college and/or university program requirements for them. This fulfills a course requirement for the STEP program. Students will use the design process to complete a number of hands-on design activities in a variety of contexts (e.g. robotics, surveying, electricity, etc.). For students choosing the laptop option, this course will integrate laptop computers with course expectations.

#### Prerequisite: TDJ2OT/TDJ2OL

#### TDV3MT

**Technological Interior Design (College/University)** This activity-based course examines how the technological design of interior/exterior spaces is influenced by human, environmental, financial, and material requirements and resources. Students will research, design, build and assess the remodeling of interior and exterior spaces, and use specialized software to create virtual models to present design ideas. Through practical experience, students will develop knowledge and skills in the building of structures, their accessories and finishes. An academic design portfolio will be produced and students will explore career/school program opportunities in this field.

#### Prerequisite: TDJ2OT/TDJ2OL

#### **ТРЈЗМТ**

This course focuses on the development of knowledge and skills that will benefit students planning a career in the health care field. Students will learn about human anatomy and physiology, homeostasis, vital signs, disease prevention and treatment, how lifestyle choices affect health and well-being, and conventional and complementary methods of disease prevention and treatment. Students will develop an awareness of workers' health and safety issues, environmental and societal issues related to health care, and career opportunities in the field. This course will examine health issues through project-based work, learning hands-on clinical skills and the expertise of guest speakers. Prerequisite: TDJ2OT/TDJ2OL

#### **STEP/STEP LAPTOP – GRADE 12**

#### ENG4UL or ENG4UY

#### English (STEP LAPTOP / AP Capstone – University)

Health Care (STEP/ STEP LAPTOP - College/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 particular texts and particular purposes for reading, and developing greater control in writing. The course is intended to prepare students for university, college, or the workplace. This course will also integrate laptop computers with course expectations.

Prerequisite: ENG3UL for ENG4UL and ENG3UY for ENG4UY

#### SBI4UT/SBI4UL

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. For students choosing the laptop option, this course will integrate laptop computers with course expectations.

#### Prerequisite: SBI3UT/SBI3UL

#### SCH4UT/SCH4UL

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. For students choosing the laptop option, this course will integrate laptop computers with course expectations. Prerequisite: SCH3UT/SCH3UL

## **Biology (STEP/ STEP LAPTOP - University)**

Chemistry (STEP/STEP LAPTOP – University)

#### STEP/STEP LAPTOP - GRADE 12 - Continued

#### SNC4MT

#### Science (STEP - College/University)

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

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

#### SPH4UT/SPH4UL

#### Physics (STEP/STEP LAPTOP - 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 relating to a variety of physics concepts and principles. Students will also consider the impact of technological applications of physics on society and the environment. For

students choosing the laptop option, this course will integrate laptop computers with course expectations. Prerequisite: SPH3UT/SPH3UL

#### SBI4UZ

#### Forensics Biology (STEP/STEP LAPTOP - 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. Grade 12 STEP biology will have an emphasis on real life scenarios and interactive genetic and forensic activities, using innovative activities. SBI4UZ will be taught concurrently with SCH4UZ. Prerequisite: SBI3UT/SBI3UL/SBI3UZ

#### SCH4UZ

Forensics Chemistry (STEP/STEP LAPTOP – 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. Grade 12 STEP chemistry will have an emphasis on real life scenarios and interactive genetic and forensic activities, using innovative activities. SCH4UZ will be taught concurrently with SBI4UZ. Prerequisite: SCH3UT/SCH3UL

#### SBI4UY

#### **Biology (Advanced Placement)**

This course is designed for students with a keen interest in life science and a solid background in biology. The AP Biology course is divided into two sessions taken consecutively in Year 3 and Year 4. The AP programme at LCS covers all of the material prescribed by the provincial curriculum (SBI3U and SBI4U), in addition to topics mandated by the AP College Board. Grade 11 focuses on Cell Structure and Function, Genetics, select Body Systems, Diversity of Life and Evolution. Grade 12 covers Metabolic Pathways, Molecular Genetics, communication-based Body Systems and Ecology. The eight major themes of AP Biology - energy transfer, continuity and change, structure and function, regulation, interdependence, and science technology and nature are emphasized in each unit as a means to bring fundamental biological concepts together. Recurrent connections to the themes such as evolution, structure and function, and the nature of science give students a better appreciation of the multi-faceted nature of biology in society. Prerequisite: SBI 3U

## TDJ4MT/TDJ4ML

#### Technological Design (STEP/ STEP LAPTOP - College/University)

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

#### Prerequisite: TDJ3MT/TDJ3ML

#### **TPJ4MT**

#### Health Care (STEP/ STEP LAPTOP - College/University)

This course focuses on the development of clinical skills needed to assess general health status. Students will learn about accepted health care practices and about how to perform various procedures, using appropriate instruments and equipment. They will learn about the human immune system, pathology, and disease prevention and treatment. Students will also expand their awareness of workers' health and safety issues, environmental and societal issues related to health care and postsecondary destinations in the field. This course will focus on learning hands-on clinical skills and applying knowledge to the diagnosis of individual and societal health issues. Prerequisite: TPJ3MT

Any ONE of SBI4UL, SBI4UT, SBI4UZ, SCH4UL, SCH4UT, SCH4UZ, SNC4MT, SPH4UL or SPH4UT is compulsory for STEP students.

#### TECHNOLOGICAL EDUCATION

#### **TCJ2O0**

# This course introduces students to building materials and processes through opportunities to design and build various construction projects. Students will learn to create and read working drawings, become familiar with common construction materials, components and processes, and perform a variety of fabrication, assembly and finishing operations. They will use a variety of hand and power tools and apply knowledge of imperial and metric systems of measurement, as appropriate. Students will develop an awareness of environmental and social issues related to construction technology and will explore secondary and postsecondary pathways leading to careers in the industry.

#### **TEJ2O0**

#### **Computer Technology (Open)**

**Construction Technology (Open)** 

This course introduces students to computer systems, networking, and interfacing, as well as electronics and robotics. Students will assemble, repair, and configure computers with various types of operating systems and application software. Students will build small electronic circuits and write computer programs to control simple peripheral devices or robots. Students will also develop an awareness of environmental and societal issues related to the use of computers, and learn about secondary and postsecondary pathways to careers in computer technology. This is an introductory course in computer studies. Its focus is on hardware, programming, graphics, web design, networking and basic electronics.

#### TER3M0

This course examines computer systems and control of external devices. Students will assemble computers and small networks by installing and configuring appropriate hardware and software. Students will develop knowledge and skills in electronics, robotics, programming, and networks, and will build systems that use computer programs and interfaces to control and/or respond to external devices. Students will develop an awareness of environmental and societal issues related to the use of computers, and will learn about college and university programs leading to careers in computer engineering. This course offers the student a hands-on opportunity to learn about robotics as well as electricity, electronics, computer programming and digital design.

#### ICS3U0

This course introduces students to computer science. Students will design software independently and as part of a team, using industrystandard programming tools and applying the software development life-cycle model. They will also write and use subprograms within computer programs. Students will develop creative solutions for various types of problems as their understanding of the computing environment grows. They will also explore environmental and ergonomic issues, emerging research in computer science, and global career trends in computer-related fields. This project-based programming course offers students the opportunity to learn basic programming techniques while focusing on video game design.

#### TDA3M0

#### Technological Design: Architectural Design (College/University)

Introduction to Computer Science (University)

**Computer Engineering Technology: Robotics (College/University)** 

This course examines how technological design is influenced by human, environmental, financial, and material requirements and resources. Students will research, design, build, and assess solutions that meet specific human needs, using working drawings and other communication methods to present their design ideas. They will develop an awareness of environmental, societal, and cultural issues related to technological design, and will explore career opportunities in the field, as well as the college and/or university program requirements for them. Students design and draw floor plans, details, landscape plans, and perspectives for a single-family residence; both computer-aided drafting and manual drafting skills are developed.

#### TTJ3C0

#### Transportation Technology (College) Transportation

This course enables students to develop technical knowledge and skills as they study, test, service, and repair engine, electrical, suspension, brake, and steering systems on vehicles, aircraft, and/or watercraft. Students will develop communication and teamwork skills through practical tasks, using a variety of tools and equipment. Students will develop an awareness of environmental and societal issues related to transportation and will learn about apprenticeship and college programs leading to careers in the transportation industry. Students will spend a large part of their class time practical skills by maintaining and repairing automotive systems.

#### Prerequisite: None

#### TCJ3C0

#### Construction Engineering Technology (College) Woodworking

This course focuses on the development of knowledge and skills related to residential construction. Students will gain hands on experience using a variety of construction materials, processes, tools, and equipment; learn about building design and planning construction projects; create and interpret working drawings and sections; and learn how the Ontario Building Code and other regulations and standards apply to construction projects. Students will also develop an awareness of environmental and societal issues related to construction technology, and explore career opportunities in the field. Students will explore working with wood through a variety of hands-on projects.

#### TGJ3M0

#### **Communications Technology (College/University)**

This course examines communications technology from a media perspective. Students will develop knowledge and skills as they design and produce media projects in the areas of live, recorded, and graphic communications. These areas may include TV, video, and movie production; radio and audio production; print and graphic communications; photography; digital imaging; broadcast journalism; and interactive new media. Students will also develop an awareness of related environmental and societal issues and explore college and university programs and career opportunities in the various communications technology fields. In this project-based course, students will develop skills and create projects using computer graphics, photography, video, audio, animation and web design.

#### **TECHNOLOGICAL EDUCATION** – Continued

#### TER4M0

#### Computer Engineering Technology: Robotics, Grade 12 (College/University) This course extends students' understanding of computer systems and computer interfacing with external devices. Students will assemble computer systems by installing and configuring appropriate hardware and software, and will learn more about fundamental concepts of electronics, robotics, programming, and networks. Students will examine environmental and societal issues related to the use of computers, and explore postsecondary pathways leading to careers in computer engineering and related fields. This project-based course offers the student a hands-on opportunity to work with robotics, computer hardware, electronics, robotics, networking and computer programming. Prerequisite: TER3M0 or TEJ3M0

#### ICS4U0

**Computer Science (University)** This course enables students to further develop knowledge and skills in computer science. Students will use modular design principles to create complex and fully documented programs, according to industry standards. Student teams will manage a large software development project, from planning through to project review. Students will also analyse algorithms for effectiveness. They will investigate ethical issues in computing and further explore environmental issues, emerging technologies, areas of research in computer science, and careers in the field. In this course, the student will learn advanced programming techniques in the Java programming language. Prerequisite: ICS3U0

#### TTJ4C0

#### Transportation Technology (College)

This course enables students to further develop technical knowledge and skills as they study, test, service, and repair engine management systems; power trains; steering/control, suspension, brake, and body systems on vehicles, aircraft, and/or watercraft; and/or small-engine products. Students will refine communication and teamwork skills through practical tasks, using a variety of tools and equipment. Students will expand their awareness of environmental and societal issues related to transportation and their knowledge of apprenticeship and college programs leading to careers in the transportation industry. Students will spend a large part of their class time practicing practical skills by maintaining and repairing automotive systems. Prerequisite: TTJ3C0

#### TDA4M0

Technological Design: Architectural Design (College/University) This course introduces students to the fundamentals of design advocacy and marketing, while building on their design skills and their knowledge of professional design practices. Students will apply a systematic design process to research, design, build, and assess solutions that meet specific human needs, using illustrations, presentation drawings, and other communication methods to present their designs. Students will enhance their problem-solving and communication skills, and explore career opportunities and the postsecondary education and training requirements for them. Students develop various types of construction drawings for a variety of different projects; colour rendering, sketching, and independent project selection is included in this Grade 12 course. Prerequisite: TDA3M0

TCJ4C0

#### **Construction Engineering Technology (College)** Woodworking

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

#### Prerequisite: TCJ3C0

#### **TGJ4M0**

**Communications Technology (College/University)** This course enables students to further develop media knowledge and skills while designing and producing projects in the areas of live, recorded, and graphic communications. Students may work in the areas of TV, video, and movie production; radio and audio production; print and graphic communications; photography; digital imaging; broadcast journalism; and interactive new media. Students will also expand their awareness of environmental and societal issues related to communications technology and will investigate career opportunities and challenges in a rapidly changing technological environment. In this project-based course, students will further develop their skills in the areas of computer graphics, video, audio, animation, web design and modeling. Prerequisite: TGJ3M0

#### LOCALLY DEVELOPED CREDIT COURSES

#### ENG2L0

#### Locally Developed Compulsory Credit Course, English

In this course, students focus on extending their literacy and communication skills to prepare for success in their daily lives, in the workplace, in the English Grade 11 Workplace Preparation course, or in the English: Contemporary Aboriginal Voices, Grade 11 Workplace Preparation Course. The course is organized by strands that extend listening and talking skills, reading and viewing skills, and writing skills. In all strands, the focus is on refining foundational literacy skills and in using language clearly and accurately in a variety of authentic contexts. Students build on their strategies and engage in the processes involved in talking, listening, reading, viewing, writing, and thinking, and reflect regularly upon their growth in these areas.

Prerequisite: A Grade 9 English Credit

## 51

#### LOCALLY DEVELOPED CREDIT COURSES - Continued

#### ENG3E0

#### 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.

#### Prerequisite: ENG2P0

#### ENG4E0

**English (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 analyse informational, graphic, and literary texts and create oral, written, and media texts in a variety of forms for workplace-related and practical purposes. An important focus will be on using language accurately and organizing ideas and information coherently. The course is intended to prepare students for the workplace and active citizenship. Prerequisite: ENG3E0

#### MAT2L0

#### Locally Developed Compulsory Credit Course, Math

**English (Workplace)** 

This course emphasizes the extension of mathematical knowledge and skills to prepare students for success in their everyday lives, in the workplace, and in the Mathematics Grade 11 and Grade 12 Workplace Preparation courses. The course is organized by three strands related to money sense, measurement, and proportional reasoning. In all strands, the focus is on strengthening and extending key foundational mathematical concepts and skills by solving authentic, everyday problems. Students have opportunities to extend their mathematical literacy and problem-solving skills and to continue developing their skills in reading, writing, and oral language through relevant and practical math activities.

#### Prerequisite: MPM1D0/MFM1P0/MAT1L

#### MEL3E0

#### Mathematics for Work and Everyday Life (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.

#### Prerequisite: MPM2D0/MPM2DE/MFM2P0 or a ministry-approved locally developed Grade 10 mathematics course

#### MEL4E0

#### Mathematics for Work and Everyday Life, Grade 12 (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 and create household budgets; use proportional reasoning; estimate and measure; and apply geometric concepts to create designs. Students will consolidate their mathematical skills as they solve problems and communicate their thinking. **Prerequisite: MEL3E0**