



## Senior High Course Selection *Spring 2021*



## **BEGIN WITH THE END IN MIND: Graduation**

**Students MUST have a Grand Total of at least 80 credits (Ministry Requirements) 92 credits (Deer Lake Requirement) to graduate. Of these 80 credits:**

- At least 16 credits must be at the Grade 12 level, including the required English Studies 12
- At least 28 credits must be elective course credits
- 52 credits are required from the following:
  - Two Career Education courses (8 credits total--grade 10 & 12)
  - Physical and Health Education 10 (4 credits)
  - Science 10 (4 credits), and a Science 11 or 12 (4 credits)
  - Social Studies 10 (4 credits), and a Social Justice 12 (or equivalent course) (4 credits)
  - A Math 10 (4 credits), and a Math 11 or 12 (4 credits)
  - A Language Arts 10, 11 & 12 (12 credits total)
  - An Arts Education 10, 11, or 12 and/or an Applied Design, Skills, and Technologies 10, 11, or 12 (4 credits total)

In addition, students must also complete THREE graduation assessments aligned with the redesigned curriculum – two in literacy and one in numeracy:

- Graduation Numeracy Assessment (written in grade 10 and can be rewritten twice more)
- Graduation Literacy Assessments: one in grade 10 and one in grade 12

These assessments are scored out of 4 and their results appear on the bottom of the high school transcript.

In addition, because we strongly believe in the importance of character, service and ethics, **Deer Lake School requires** 12 credits of Religious Studies (grades 10, 11, and 12), as well as Social Justice 12.

### **Note on Career Life Education:**

The following careers courses are required in all BC schools:

- Career Life Education 10
- Career Life Connections 12

The following chart will help students track their minimum 80 (Deer Lake School requires 92) credits for graduation.

Grade 10		Grade 11		Grade 12	
Course Credits		Course Credits		Course Credits	
Religious Studies 10	4	Religious Studies 11	4	Religious Studies 12	4
Creative Writing 10	2	New Media 11 (English course)	4	English Studies 12	4
Spoken Language 10	2			<b>Three Gr. 12 level courses</b>	
Science 10	4	a Science 11	4		
a Math 10	4	a Math 11	4		
Socials 10	4	Social Justice 12	4		
P.E. 10	4	<b>Electives:</b>			
Career Life Education 10	4	French 11 (if planning for university)	4	<b>Electives:</b>	
<b>Electives:</b>					
French 10 (if planning for university) (or other elective)	4				
				Career Life Connections 12	4
				*External Credits	
<b>ADD Grade 10 Total Credits</b>		<b>ADD Grade 11 Total Credits</b>		<b>ADD Grade 12 Total Credits</b>	

$$\text{Grand Total Credits } \underline{\quad\quad} + \underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

Gr. 10      Gr. 11      Gr. 12      Grand Total

**\*Eternal Credits Policy**

This policy describes how students earn credit towards graduation through certain external credentials approved by the Ministry. All students enrolled with a Board of Education class are entitled to receive credit if they have earned a Ministry-approved credential.

[http://www.bced.gov.bc.ca/policy/policies/earning\\_credit\\_through.htm](http://www.bced.gov.bc.ca/policy/policies/earning_credit_through.htm) Examples: Life Guarding Certification, Royal Conservatory Music Exam Level Certification, Scuba Diving Certification, etc.

**Other Graduation Requirements:**

1. 60 hours of work experience or volunteer work accumulated from grade 10-12
2. Career Life Connections with a Capstone Graduation Project
3. Numeracy Assessment (can begin writing in grade 10 and write up to 3 times before graduating)
4. Literacy Assessment 10 (can begin writing in grade 10 and write up to 3 times before graduating)
5. Literacy Assessment 12 (to be introduced for the first time in 2021-2022)

## BE PROACTIVE AND SHARPEN THE SAW: Aim for a Balanced Life

### 1. COURSE LOAD FOR HIGH SCHOOL STUDENTS

Grade 10 students will take a full course load of 8 classes with no spare blocks. Exceptions for individualized learning (ELL blocks, learning assistance blocks, online schooling, etc) can be made at the discretion of the Administrative Team.

Grades 11 & 12 students enrolled at DLS will take 28-32 credits (7 classes and 1 spare or a full course load of 8 classes). Students may request a spare block from the Administrative Team. Qualifying students may only have one spare per year. Students who receive approval for a spare block will be assigned to a supervising teacher for a volunteer block, and provide a minimum of 30 minutes a day volunteer work. Or they may be assigned to a supervised STUDY HALL. Exceptions for individualized learning (ELL blocks, learning assistance blocks, online schooling, etc) can be made at the discretion of the Administrative Team.

**Besides that, choose to be a part of something bigger: check out our great sports teams and co-curricular clubs. Or run to for Student Association. Find your passion and give back to the community.**

### 2. ONLINE COURSES AND SUMMER SCHOOL

All online courses and summer school classes must be approved by the academic advisor, Mrs. Jakovac. Please see her before registering. Many university applications now ask whether the courses you took were in your school of record (DLS), summer school, challenge exams or online. They also want to know **WHY** you chose to take courses outside of Deer Lake School. Please check with Mrs. Jakovac so your course selection does not impede university acceptance.

**NOTE: All courses required for graduation must be taken at the school of record. If you plan to attend university, you will need a language 11 course. Should that course be French, please take the course at Deer Lake School, the school of record.**

### 3. CAREER COURSE REQUIREMENTS

The **Career Life Education** and **Career Life Connections** courses are the final phase of career and life learning and focus on the experiential and applied learning that support students in determining their next steps, post-graduation. Through numerous learning experiences within and outside the classroom, students are expected to **develop an integrated post-graduation plan that is connected to a capstone or culminating project, which demonstrates their learning in an area of personal interest, as well as their post-secondary plans.** Deer Lake School incorporates the **7 Habits** into the Career Courses. Grade 12 also uses the **Leader in Me curriculum called *Finding Your Voice*** to examine and practice soft skills for future relationships and job situations.

#### Integrated Plan for Post-Graduation

An integrated plan for post-graduation is a personal plan that articulates student choices related to:

- Career: possible pathways and directions based on student's passions, skill set, contribution to society, volunteer work, employment and where these intersect
- Education: formal (e.g., school based), informal (e.g., life learning), non-formal (e.g., workshops), and on-the-job training (e.g., apprenticeship, work experiences)

- Finances: determining a budget and financing options for post-graduation plans
- Health and well-being: choices that support a healthy lifestyle that include self-care, balance, stress management, maintaining healthy relationships, resilience for transitions, coping mechanisms

Students will create their plans drawing from other areas of learning and courses, educational and/or life experiences, and through information gathering and research. The articulation of this plan begins in Career Life Education (grade 10) where students are required to ‘*create an initial career and education plan, considering financial implications*’, and the refinement of the plan happens in Career Life Connections (grade 11 & 12). The integrated post-graduation plan is a key component linked to the culminating capstone project.

**NOTE: Deer Lake School uses the learning aid, MyBlueprint, to help students navigate career and personal growth learning, as well as a foundation for creating the capstone project.**

#### **4. CHOOSING YOUR COURSES FOR NEXT YEAR:**

Parents are encouraged to have open discussions with their students about educational and career choices, and plan for pre-requisites accordingly.

**NOTE: This initial planning process is subject to change in the following ways:**

- Students have a change of heart and may choose to drop or amend courses in September or January (for second semester classes).**
- Courses may NOT be offered if insufficient students register, so students are given second choices.**

As far as is possible, the Deer Lake School Administration Team will accommodate the academic needs and desires of its students within its sometimes restrictive timetable.

## **SEEK FIRST TO UNDERSTAND...**

### **Description of Courses Offered at Deer Lake School**

#### **GRADE 10**

##### **Religious Studies 10 (4 credits):**

This course offers students an opportunity to investigate and engage with the Christian faith. Students begin by exploring the evidence for the existence of God. Students consider the characteristics and personality of God. Students explore what it means to have a meaningful relationship with God by reflecting on the examples of Biblical characters. Students do not need to espouse any particular faith to participate in this class, but should understand that this class will focus on examining ideas from a Biblical perspective. Students are encouraged to compare and contrast their personal faith with course content.

**This course is a Deer Lake School requirement for graduation.**

##### **Creative Writing 10 (2 credits)**

This course is designed for students who have an interest in creative expression through language. The course provides students opportunities to build their writing skills through the exploration of identity, memory, and story in a range of genres. Within a supportive community of writers, students will collaborate and develop their skills through writing and design processes. This course is intentionally grounded in the sampling of writing processes, inviting students to express themselves creatively as they experiment with, reflect on and practice their writing. **Required for Graduation.**

##### **Spoken Language 10 (2 credits)**

This course is designed to support students in their development of spoken communication through processes of questioning, exploring, and sampling. The course builds students' spoken language competencies by introducing them to varied structures, forms, and styles of oral compositions and by providing opportunities for students to individually and collaboratively study, draft, and use language to create original pieces in a variety of modes. This area of choice will also provide students with opportunities for performance, storytelling, and public speaking. **Required for Graduation.**

**NOTE: In both these courses,** critical thinking will be emphasized during writing, speaking, listening, viewing, and reading. Special emphasis will also be given to critical analysis, and determining and expressing values.

##### **Science 10 (4 credits)**

This course enables students to develop scientific knowledge, skills, and attitudes that are fundamental for future scientific study. The four units include: biology, chemistry, physics, and earth science. Fundamental concepts examined in the Biology unit are related to genetics and DNA as the source of diversity in living things. Chemistry explores the relationship between energy and the rearrangement of atoms. Physics focuses on the conservation and transformation of energy and how this impacts living things and our environment. The Earth Science unit examines the idea of the formation of the universe according to the Big Bang Theory as well as Biblical creation. **Required for Graduation.**

##### **Foundations and Pre-Calculus Math10 (4 credits)**

Foundations and Pre-Calculus Math 10 is designed to provide students with the mathematical understandings and critical-thinking skills identified for post-secondary studies in programs that require an academic or pre-calculus mathematics credit. Topics include financial mathematics, geometry, measurement, numeracy, arithmetic sequences and series, relations and functions, radicals and trigonometry.

**A math 10 course is required for graduation.**

### **Workplace Mathematics 10 (4 credits)**

As an alternative to Foundations and Pre-Calculus Math 10, this course prepares students for the working world. Topics include: Measurement (SI and Imperial); Geometry (right triangles, scale, perspective); Finances (personal budgets, compound interest, credit options, numerical reasoning); Algebra (formula manipulation, slope, proportional reasoning and unit analysis). Applications of Math used in this course would be highly valued in trades programs, culinary programs, personal budgeting, and direct entry into the workforce after graduation. **A math 10 course is required for graduation.**

### **Social Studies 10 (4 credits)**

This course revolves around one key theme: *What does it mean to be Canadian?* Within the historical context of early 1900s to present day, the course explores concepts of autonomy, identity, good citizenship, human rights, global responsibility, changing worldviews and discrimination. Students also learn about Canadian government as well as Canadian involvement in both domestic and international affairs. **Required for Graduation.**

### **Career Life Education 10 (4 credits)**

The ideal of CLE is to enable students to develop the skills they need to become self-directed citizens who set goals, make thoughtful decisions, and take responsibility for pursuing their goals throughout life. Topics include graduation requirements, self-awareness & self-inventories, health related topics and relationships, post secondary & career research, employability skills, job seeking & résumés, transition planning, and budgeting & personal finance. Concepts will be taught in correlation with Career Life Connections and the capstone project as well as the 7 Habits. **Required for Graduation.**

### **Physical Education 10 (4 credits)**

This course is designed to provide students with opportunities to develop the skills, knowledge and proper attitude to lead and maintain a healthy, active lifestyle. “Active living” is emphasized by implementing physical activities that the students can value and integrate into their daily life. Through a variety of sports, both team and individual, students will develop specific motor skills. Students also focus on a personal and social responsibility, as well as a health component whereby they practice leadership skills and become aware of different careers related to physical activity.. **Required for Graduation.**

### **French 10 (4 credits)**

This course focuses on building French narrative, both oral and written, as it relates to both French and Quebecois culture. Students will respond in basic conversational French regarding cultural differences, film and media discussions, and restaurants and cuisine interactions. Students will use French language skills to explore different nationalities and professions. Student narrative will be conducted in simple future, present and past tense with particular focus on the following verbs: aller, venir, pouvoir, devoir, vouloir, boire and IR verbs. **Recommended: This course is a pre-requisite for French 11 which meets the Language requirement for university entrance.**

## GRADE 11

### Religious Studies 11 (4 credits)

This course explores the concept of God as a God of law and a God of love, while investigating what happens in a world ruled by anarchy or ruled by grace. Using the Bible as a reference, the goal is to understand different worldviews of God: absentee landlord, angry lord, supreme justice, forgiving saviour? Students are challenged to examine if the gospels show the laws of God as being acts of love or acts of control. The life and teachings of Jesus Christ, as well as other Bible stories such as Hosea, are reviewed and scrutinized for present day relevance as students explore socially impacting topics. Students are encouraged to examine their own faith base and build a stronger personal faith/prayer life. **This course is a Deer Lake School requirement for graduation.**

### New Media 11 (4 credits)

As a required English course, New Media is designed to reflect the changing role of technology in today's society and the increasing importance of digital media in communicating and exchanging ideas. Digital literacy is an essential characteristic of the educated citizen. In this course, the focus will be on communication of many different styles, from blogs to film, public performance to private journal. Critical thinking will be emphasized during speaking, listening, viewing, reading, and writing. Special emphasis will be given to critical analysis, and determining and expressing values. **Required for Graduation.**

### Social Justice 12 (4 credits)

This course explores themes of equity and equality, ethics, diversity and worth, human rights, privilege, oppression and peace. Students study about human struggles related to First Nations peoples, women's issues, genocide, racial and cultural diversity, civil rights and the law, while exploring their own worldview. Topics include the Residential School System and the Sixties Scoop; Missing and Murdered Indigenous Women and Girls, as well as the wider topic of violence against women; the Holocaust and other genocides; the American Civil Rights movement and other protest movements. The goal is to generate awareness, empathy and a voice for those who have no voice. **This course is a Deer Lake School requirement for graduation.**

### Pre-Calculus Math11 (4 credits)

Pre-Calculus 11 is a mathematics course intended for students going into math, science, engineering and other post-secondary programs that require calculus. The key concepts covered in Pre-Calculus 11 are as follows: Algebra and Number, Geometry involving trigonometry, Relations and Functions and Finances. **A math 11 course is required for graduation. Pre-Calculus 11 is a pre-requisite for Pre-Calculus 12.**

### Foundations of Mathematics 11 (4 credits)

This course is intended for students who will not take STEM courses at university, but wish to enter an Arts program or trades. It fulfills the Grade 11 math requirements for graduation, but cannot be used as a prerequisite for Pre-Calculus 12. The course covers the following topics:

- Linear Inequalities
- Properties of Angles and Triangles
- Non-Right Angle Trigonometry
- Statistical analysis (students notice, wonder about, and answer questions about variation)
- Graphing Quadratic Functions
- Solutions to Systems of Equations
- Inductive and Deductive Reasoning & Proportional Reasoning
- Financial Literacy

**A math 11 course is required for graduation.**



### **Life Sciences 11 (4 credits)**

In this course students consider the characteristics of living things, examining the structure and function of cells as compared to viruses. Students learn about the different taxons and how living organisms are grouped according to similar and identifiable traits. This includes the study of the three domains archaea, bacteria, and eukaryotes; as well as the six kingdoms archaeobacteria, eubacteria, protista, fungi, plantae, and animalia. Students consider and evaluate how the process of evolution can be used to explain the changes that are seen to have taken place between the simplest and the most complex organisms. They will also have the opportunity to investigate and examine evidence for a Biblical creation. This course specifically focuses on examining the First People's perspective of animal body plans and use of local plants.

**At least 4 credits of a science 11 are required for graduation. While not necessarily required for graduation, Life Sciences 11 is a pre-requisite for many university health sciences/ medical fields of study and is highly recommended, especially as a foundation for Anatomy and Physiology 12.**

### **Chemistry 11 (4 credits)**

This course expands on key ideas from Science 10 and introduces fundamental concepts for further study in Chemistry. Students will grow in their understanding of lab safety and communication of accurate and precise measurements, using the appropriate number of significant figures and units. Topics covered include: moles, quantitative properties of matter, atomic bonds, energy and chemical reactions, and organic compounds. In addition to this, students will establish a fundamental understanding of solution chemistry, considering the nature of solutes and solvents, as well as organic chemistry. Laboratory skills are essential to this course and will be developed in lab activities that focus on hypothetical, as well as practical scenarios.

**At least 4 credits of a science 11 are required for graduation. While not necessarily required for graduation, Chemistry 11 is a pre-requisite for Chemistry 12.**

### **Physics 11 (4 credits)**

This course is organized around 7 main ideas:

- Kinematics allows us to predict, describe, and analyze an object's motion.
- Forces influence the motion of an object.
- Momentum is conserved in a closed system.
- Energy is found in different forms, is conserved, and has the ability to do work.
- The application of conservation laws explains the flow of electricity within a circuit.
- Quantum mechanics can be used to describe the behaviour of very small particles.
- Special relativity helps explain the relationship between space and time.

Two additional advanced sections are available: Light can be modelled as a wave or a particle AND nuclear reactions involve changes in the atomic nucleus.

**At least 4 credits of a science 11 are required for graduation. While not necessarily required for graduation, Physics 11 is a pre-requisite for Physics 12 and is a pre-requisite for many health sciences and engineering courses at the university level.**

### **Earth Science 11 (4 credits)**

Earth Science 11 explores the processes that shaped our planet and other celestial bodies, as well as the current issues that impact our planet. Topics to examine and research include: astronomy (solar system, stellar formation, Earth and moon); tectonic plate motion and theory; weather systems, atmosphere and climate change; oceanography; rocks and minerals. Included in the course is an emphasis of conservation and good stewardship, recognizing the earth as a gift that needs care and attention.

**At least 4 credits of a science 11 are required for graduation.**

### **Foods and Nutrition 11 (4 credits)**

In this hands-on course, students learn the foundations of healthy, safe, and delicious food preparation. They also learn the secrets to life-long nutrition and healthy eating. Social, economic, and cultural influences of food around the world are explored, along with an investigation into Foods-based career opportunities.

**(Elective that meets the Applied Arts graduation criteria)**

### **French 11 (4 credits)**

The goal of modern languages is to foster better world communication, opening up vistas of cultural exchange for students. This course focuses on everyday vocabulary and phrases as well as intermediate and advanced grammar formulations related to five major themes: *Sports, Everyday Encounters at Home, Shopping & Money Transactions, Travelling & Driving*. Throughout the course, students will listen to, read, write and communicate in practical French that would aid in everyday life or travel.

**Recommended: This course meets the Language 11 credit required for university entrance.**

### **Active Living 11 & 12 (4 credits)**

Active Living is a course designed to give grade 11 and 12 students an opportunity to pursue leadership experiences in the school and the community, while building the blueprint for an active, healthy lifestyle post graduation. Students demonstrate organizational and public speaking skills through participation in a variety of activities. Students also take part in a variety of sporting activities both inside and outside of school, including alternative leisure activities such as canoeing, kayaking and rock climbing. This course empowers students to understand the role they play within Deer Lake School as well as in society; develops communication skills that will facilitate decision-making; and teaches service/work skills such as refereeing, score-keepings, and coaching. **(Elective courses)**

### **Art Studio 11/12 (4 credits)**

Art Studio is intended for students who have already developed an interest in art. In this class students will work towards creating a body of work that can be marketed and sold in a professional setting. They will learn some of the fundamental skills associated with being a working artist while building on the artistic skills, knowledge, and talents they have cultivated prior to this class. Students will diversify their exposure by making projects that include mediums like pencil, charcoal, acrylic paint, clay, spray paint, paper mache', watercolour etc. Students will also be lead to reflect on the socio-economic effects and influence of art, and how it both shapes and undermines society.

**(Electives that meet the Fine Arts graduation criteria)**

### **Woodwork 11 & 12 (2 or 4 credits)**

These courses focus on safety and specific skills and techniques required in construction and joinery trades. Students are introduced to hand and power tools. They learn skills in painting, cabinet rebuilding and installation, shingle roofing, framing, basic laminate installation, and eaves/trough installation. Students are also responsible for creating many of the larger set and prop pieces for the school's Christmas and Spring drama programs. Students also ideate, draw and research their own personal carpentry project and take it through to completion, with specific finishing skills.

**(Electives that meet the Applied Arts graduation criteria)**

### **Concert Choir 11 & 12 (4 credits)**

Choral Choir 11 and 12 courses focus on developing the knowledge, skills, and attitudes students require to perform in choral ensembles. In these courses, students have opportunities to:

- develop the techniques required to sing in a variety of ensemble contexts, demonstrating technical competence and stylistic interpretation
- develop an understanding of the aesthetic qualities of music & music literacy
- perform diverse repertoire, exploring how choral music differs across cultures and throughout history
- examine the various roles and purposes of choral music in society
- explore career opportunities related to music, and develop skills for pursuing those options. Choral Music 11 and 12 are performance-based courses. Certain concepts and skills can be identified and experienced only in the ensemble setting.

**(Electives that meet the Fine Arts graduation criteria)**

### **Media Arts 11 & 12 (4 credits)**

This course provides students with a guided process that improves photography, digital art, audio recording, film production, client-based projects and team leadership management. Students engage in the production process, which includes: research, concept development /story-boarding, script writing, draft development, final editing and self-critiquing.

**(Elective meets the Fine Arts/Applied Arts graduation criteria)**

## GRADE 12

### Religious Studies 12 (4 credits)

This course focuses on the Biblical Jesus Christ: who He is, where he came from, His life here on earth, what His plan is for each individual, and how to develop a personal relationship with Him. Students are challenged to look at issues of faith and try to discover what they believe in and why. Concepts of salvation, the need for redemption, Godly decision making, and assurance of God's love are also investigated. Volunteering and service are emphasized because they help show God's love in a practical way. A large portion of the course is also devoted to learning about other world religions, seeing difference and similarities, and learning about love for humanity. .

**This course is a Deer Lake School requirement for graduation.**

### English Studies 12 (4 credits)

This course refines the ability to communicate effectively in a variety of contexts, and helps students to achieve personal and career goals. They will learn to think critically and creatively about the uses of language, and explore texts from a variety of sources, in multiple modes, and reflect on diverse worldviews. They will gain insight into the diverse factors that shape identity, appreciating the importance of self-representation through text. They will contribute to Reconciliation by building greater understanding of the knowledge and perspectives of First Peoples, and expand their understandings of what it means to be educated Canadian and global citizens, deepening their understanding of themselves and others in a changing world. **Required for Graduation.**

**NOTE: Students are required to write a standardized Literary Assessment before they graduate.**

### Pre-Calculus Math 12 (4 credits)

Pre-Calculus 12 is an elective class and not a graduation requirement. However, it is needed for students who are planning to go into math, science, engineering and other post-secondary programs that require calculus. Topics include transformations and functions, trigonometry, exponential and logarithmic functions, rational functions, function operations and permutations, combinations, the binomial theorem and finances.

**Recommendation: While not required for graduation, Pre-Calculus Math 12 is a pre-requisite for many university science programs.**

### 20<sup>th</sup> Century World History 12 (4 credits)

This course is an interpretive look at the world of the 20<sup>th</sup> century and how people and events have shaped our worldviews today. The course is comprehensive in scope with viewpoints from Europe, Asia, Africa and the Middle East. Through research and film interpretation, the goal of the course is to reflect on patterns and decisions of the past, with the hope of being inspired by heroic trailblazers while avoiding the mistakes and corruption of power-hungry leaders. History aims to develop thoughtful, responsible, involved citizens who are aware, tolerant and reasoning. Events and issues, both past and present, are investigated and debated as students begin to see the past that has molded them and the future that awaits their leadership. **(Elective course that meets the social studies requirement for graduation)**

### Career Life Connections 12 (4 credits)

This courses helps students explore and plan for post secondary life through practical assignments and seminars. Topics include: examination of educational and career opportunities along with pre-requisites, financial literacy (*budgeting, tuition, housing costs, taxes, credit cards*), self assessments and self-awareness (using MyBlueprint), soft skills necessary for success in personal and business relationships, using 7 Habits and Leader in Me resources. Students complete the course with a final capstone project highlighting their personal and academic journey as well as their transitional plans. **Required for graduation.**

### **Anatomy & Physiology 12 (4 credits)**

This course is a combination of cellular and human biology. Students develop an understanding of cells and cellular systems by examining the biochemical components that make up these systems and the body systems composed of these cells. Organ systems studied in this course include: nervous, digestive, circulatory, respiratory, urinary, and reproductive. The diverse systems are studied to understand how homeostasis is maintained within internal environments. Laboratory skills are essential to this course and will be developed in lab activities that focus on hypothetical, as well as practical, scenarios.

**Recommendation: Anatomy & Physiology 12 is not a required course for graduation, but should be considered for students planning to enter any health or biological science-related field at the university level.**

### **Chemistry 12 (4 credits)**

This course expands on the concepts taught in Chemistry 11. Students first examine reaction rates; considering how reaction rates can be measured, calculated, and altered according to an understanding of collision theory. Students then consider chemical reactions that exhibit chemical equilibrium, or those that exist in a state of balance. This understanding is applied to various types of chemical systems including ions in solutions, acid-base and reduction-oxidation reactions. Laboratory skills and safety are essential to this course and will be developed in lab activities that focus on hypothetical, as well as practical scenarios.

**Recommendation: Chemistry 12 is not a required course for graduation, but is a pre-requisite for many science related fields of study at university.**

### **Physics 12 (4 credits)**

This course is organized around 5 main ideas:

- Kinematics allows us to predict, describe, and analyze an object's motion.
- Forces influence the motion of an object.
- Momentum and energy are conserved within a closed system.
- The electromagnetic force produces both electricity and magnetism.
- Circular motion occurs as a result of a centre-seeking force and can be used to describe and predict the motion of objects on earth and in the universe, if you include gravitational forces and fields describing how masses interact.

**Recommendation: While Physics 12 is not required for graduation, it is a pre-requisite for students taking engineering at the university level.**

### **Theatre Performance 11 & 12 (4 credits)**

These courses focus on developing dramatic presentation and communication skills, including spoken word. In a safe environment, students learn to effectively express their ideas and emotions in a variety of forms and styles. Using an interactive creative process, they have opportunities to examine human experiences through character and situation while connecting with others, resolving conflict, and creating meaning in their world. Emphasis is on individual participation and growth, as well as the finished "product", including, set production, props, rehearsals, collaborative script writing and staging.

**(Electives that meet the Fine Arts graduation criteria)**