



## Summer School 2024

### **Mathematics 9 – Math Readiness**

This course is intended for students who would like additional support preparing for credit earning Grade 10 Mathematics courses. A review of Grade 9 math concepts and pre-teaching and exposure to Grade 10 math concepts will occur. Topics include powers and exponent laws, rational numbers, linear relations, linear equations and inequalities, and polynomials.

### **Foundations of Mathematics and Pre-Calculus 10**

*Prerequisite: Mathematics 9*

This pathway is designed to provide students with mathematical understanding and critical thinking skills identified for entry into post-secondary programs. Topics include measurement, trigonometry, exponents, polynomials, factoring, irrational numbers, and relations and functions.

### **Foundations of Mathematics 20**

*Prerequisite: Foundations of Mathematics and Pre-Calculus 10*

This pathway is designed to provide students with the mathematical understanding and critical-thinking skills identified for post-secondary studies in programs that do not require the study of theoretical calculus. Topics include logical and proportional reasoning, geometry, trigonometry, algebra, statistics, and probability.

### **Foundations of Mathematics 30**

*Prerequisite: Foundations of Mathematics 20*

This pathway is designed to provide students with the mathematical understanding and critical-thinking skills identified for post-secondary studies in programs that do not require the study of theoretical calculus. Topics include financial decision making, logical reasoning, counting principles, probability, polynomial functions, periodic functions, logarithmic, and exponential functions.

### **Pre-Calculus 20**

*Prerequisite: Foundations of Mathematics and Pre-Calculus 10*

This pathway is designed to provide students with the mathematical understanding and critical-thinking skills identified for entry into post-secondary programs that require the study of theoretical calculus. Topics include absolute value, radicals, trigonometry, rational expressions and equations, factoring, quadratic functions, quadratic inequalities, reciprocal functions, sequences, and series.

### **Pre-Calculus 30**

*Prerequisite: Pre-Calculus 20*

This pathway is designed to provide students with the mathematical understanding and critical-thinking skills identified for entry into post-secondary programs that require the study of theoretical calculus. Topics include the unit circle, trigonometric functions, trigonometric equations and identities, logarithmic and exponential functions, and equations, counting principles, transformations and composition of functions, radical functions, rational functions and polynomial functions.

### **English Language Arts A10**

*Prerequisite: English Language Arts 9*

Themes include “The Challenges of Life” and “The Mysteries of Life.” This course involves the study of novels, poetry, essays, drama, short stories, etc.



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**English Language Arts B10**

*Prerequisite: English Language Arts 9*

Themes include “Equality and Ethics” and “The World Around and Within Us.” This course involves the study of novels, poetry, essays, drama, short stories, etc.

**English Language Arts 20**

*Prerequisite: English Language Arts 10*

A variety of learning strategies will be used with an emphasis on the writing process. You will participate in discussion groups, panel presentations and oral readings. There will be two novel studies.

**English Language Arts A30**

*Prerequisite: English Language Arts 20*

ELA A30 is an integrated course (i.e., literature and composition combined, with much of the composition based on the studied literature). All the literature studied is Canadian. Composition study will include correct word usage, sentence structure, misplaced and dangling modifiers, spelling and vocabulary study, informal essay structure and formal essay structure.

**English Language Arts B30**

*Prerequisite: English Language Arts 20*

Global perspectives are examined using traditional and contemporary world literature. Themes include world perspectives, cultural heroes, the human condition, and social experience. The development of grammatical/writing skills is a predominant focus of the program.

**Science 10**

*Prerequisite: Science 9*

This course introduces concepts of sustainability of ecosystems, motion, and chemistry. The scope of the course is designed to help students experience a variety of sciences to help them choose appropriate courses in grades 11 and 12. Students will participate in various activities that seek to foster the development of scientific skills. There will be an emphasis on the impact of science on the cultural perspectives of our society, as well as the use of scientific inquiry and technological problem solving. An exploration of careers in science along with a laboratory hands-on approach are used throughout the course.

**Physical Science 20**

*Prerequisite: Science 10*

Units covered include heat (effect of heat on matter), foundations of chemistry (predicting products, understanding mole unit measurement, using stoichiometry to determine reactions), properties of waves (investigating waves, how waves reflect, how waves refract) and career exploration (exploring physical science occupations).

**Biology 30**

*Prerequisite: Environmental Science 20 or Health Science 20*

Units covered include life and evolution (scientific understandings of life, principles, processes, and patterns of evolution), organization of life (cell structures and processes, comparisons of multicellular organisms and the dynamic nature of classification), genetics and biotechnology (inheritance, storing, transmitting of genetic information, impact of biotechnology).



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### **Chemistry 30**

*Prerequisite: Physical Science 20*

Units covered include chemical bonding and materials science (role of valence electrons in bonding, how materials depend on forces, nature and classification of organic compounds, sustainability of materials), chemical equilibria (applications of equilibrium in chemical reactions, aqueous solution equilibria, acid-base reactions, and equilibrium), electrochemistry (chemistry of oxidation and reduction reactions, applications of electrochemistry).

### **Physics 30**

*Prerequisite: Physical Science 20*

Units covered include modern physics (importance of relativistic principles and quantum mechanics, effects of radioactivity and nuclear technology), forces and motion (analyzing motion in one- and two-dimensions, effects of forces on objects), conservation laws (law of conservation of energy, law of conservation of momentum), fields (gravitational fields and matter, electric and magnetic fields, and matter).

### **History 30: Canadian Studies**

Topics covered include an overview of Canadian history, Indigenous worldview, Confederation, the Red River and Northwest Resistance, Canada's wartime roles, Canadian unity, Canada's changing international relationships, constitutional issues, and political development. Students will also be expected to follow current events.

### **Indigenous Studies 30**

Topics covered from Indigenous perspectives include Treaty rights, Indigenous economic development, land claims, justice and health care, education, Métis governance and the impact of colonial rule. Students will also be expected to follow current events.

### **Wellness 10**

*Prerequisite: Physical Education*

In Wellness 10, students acquire the knowledge, skills and confidence needed to take action toward a healthy active lifestyle. Wellness 10 combines the goals of health and physical education to prepare students to enjoy and engage in physical activity and to make informed decisions to improve personal health.

### **English Language Course for International & EAL Learners – English for Academic Purposes 20L**

This language development course is an immersive language experience in and out of the classroom! The course will support small groups of international and EAL students of all proficiency levels in grades 9 – 12 (of the current school year) in building their academic language skills through interacting with skilled EAL teachers, local guides, and classmates. Speaking, listening, reading, and writing lessons and workshops, and six afternoon excursions, will help students to quickly advance their language skills. Students who meet all course objectives may receive an elective credit of English for Academic Purposes 20L.