

## **Elkhorn School Courses Potentially Offered for Grade 11 & 12 Students**

### **Grade 11 Compulsory Courses (4 credits)**

In Grade 11, students are offered three choices for mathematics. Students only require one grade 11 math credit for graduation, but students are encouraged to take more than one course if possible. The mathematics options are Essential Mathematics 30S (MES30S), Applied Math 30S (MAP30S), and Pre-Calculus Math 30S (MPC30S).

**Students must have completed Introduction to Applied and Pre-Calculus Math (MAC20S) in order to take Applied Math 30S or Pre-Calculus Math 30S.**

#### **Essential Mathematics 30S (MES30S)**

Grade 11 Essential Mathematics (30S) is intended for students whose post-secondary planning does not include a focus on mathematics and science-related fields. Topics include slope, surface area, volume, trigonometry, scale representations, financial services, budgets, and graphical representation. Grade 11 Essential Mathematics builds on the knowledge and skills of Grade 10 Essential Mathematics and provides a foundation for the topics studied in Grade 12 Essential Mathematics.

#### **Applied Math 30S (MAP30S)**

Grade 11 Applied Mathematics (30S) is intended for students considering post-secondary studies that do not require a study of theoretical calculus. It is context driven and promotes the learning of numerical and geometrical problem-solving techniques as they relate to the world around us. It builds upon the foundation knowledge and skills from Grade 10 Introduction to Applied and Pre-calculus Mathematics and builds a foundation for Grade 12 Applied Mathematics. The Grade 11 Applied Mathematics course includes the following topics: measurement, geometry, logical reasoning, statistics, and relations and functions. Additionally, students will complete a Mathematics Research Project.

#### **Pre-Calculus Math 30S (MPC30S)**

Continues where Introduction to Applied and Pre-Calculus Math 20S leaves off in preparing students for calculus at the university and college level. Many areas of math, science, technologies, and management require calculus. The course contains units on quadratic functions, trigonometry, algebra, analytic geometry, geometry, consumer math, logic/proof, and functions. Students will be required to complete 54 twenty-question exercises that are very challenging in order to complete this course. A TI-83 graphing calculator is required for this course.

#### **English 30S (LAC30F)**

This course continues the focus on the same 5 General Outcomes and the expanded 56 specific outcomes as in Grade 9 and Grade 10. The General Outcomes are: exploring thoughts, ideas, feelings, and experiences, comprehending and responding personally and critically to literary and media text, managing ideas and information, enhancing the clarity and artistry of communication, celebrating and building community. Students will practice and develop skills in reading, writing, listening, speaking, representing, and viewing. This course provides a balanced program of practical and literary texts and skills.

#### **History 30F (HIS30F)**

This course is a social and political history of Canada. The important political events are studied against the background of the economic and social events in the country, with some stress placed on the lives of "average people". This course consists of six units which are developed into basic themes such as the peopling of Canada; new societies to 1867; government, federalism and politics; social and economic changes in modern Canada; Western Canada; and Canada's external relations.

### **Physical Education 30F (PED30F)**

This compulsory full-credit course is designed to help youth take greater ownership of their own physical fitness, to encourage them to seek out activities that interest them, and to engage in active lifestyles into their futures. Students will study topics related to fitness management, mental health, substance use and abuse prevention, and the social impact of sport as well as a variety of sports and activities. The focus of this content will be on health and personal planning and promoting life-long fitness.

### **Grade 12 Compulsory Courses (3 credits)**

In Grade 12, students are offered three choices for compulsory mathematics courses. Students only require one grade 12 math credit for graduation, but students are encouraged to take more than one course if possible. The mathematics options are Essential Mathematics 40S (MES40S), Applied Math 40S (MAP40S), and Pre-Calculus Math 40S (MPC40S). **Students must have completed Applied Math 30S in order to take Applied Math 40S and they must have completed Pre-Calculus Math 30S in order to take Pre-Calculus Math 40S.**

#### **Essential Mathematics 40S (MES40S)**

Grade 12 essential Mathematics (40S) is intended for students whose post-secondary planning does not include a focus on mathematics and science-related fields. Topics include vehicle finance, statistics, precision measurement, career life, home finance, geometry and trigonometry, business finance and probability.

**STUDENTS WILL WRITE A PROVINCIAL EXAMINATION IN THIS COURSE.**

#### **Applied Mathematics 40S (MAP40S)**

Grade 12 Applied Mathematics (40S) is intended for students considering post-secondary studies that do not require a study of theoretical calculus. It is context driven and promotes the learning of numerical and geometrical problem solving techniques as they relate to the world around us. The Grade 12 Applied Mathematics course includes the following topics: Financial Mathematics, Logical Reasoning, Probability, Relations and Functions, and Design and Measurement. Additionally, students will complete a Mathematics Research Project.

**STUDENTS WILL WRITE A PROVINCIAL EXAMINATION IN THIS COURSE.**

#### **Pre-Calculus Math 40S (MPC40S)**

Grade 12 Pre-calculus Mathematics (40S) is designed for students who intend to study calculus and related mathematics as part of post-secondary education. It builds on the topics studied in Grade 11 Pre-calculus Mathematics and provides background knowledge and skills for the study of calculus in post-secondary institutions. The course comprises a high-level study of theoretical mathematics with an emphasis on problem solving and mental mathematics. The topics include study of transformations of functions, trigonometric functions, exponential functions, logarithmic functions, polynomial functions, radical functions, rational functions, and the binomial theorem.

**STUDENTS WILL WRITE A PROVINCIAL EXAMINATION IN THIS COURSE.**

#### **English 40S Comprehensive Focus (LAC40S)**

This course continues the focus on the same 5 General Outcomes and the expanded 56 specific outcomes as in Grade 9, Grade 10, and Grade 11. The General Outcomes are: exploring thoughts, ideas, feelings, and experiences, comprehending and responding personally and critically to literary and media text, managing ideas and information, enhancing the clarity and artistry of communication, celebrating and building community. This course provides a balanced program of practical and literary texts and skills. This course is 50% literature and 50% transactional and technical.

**STUDENTS WILL WRITE A PROVINCIAL EXAMINATION IN THIS COURSE.**

### **Physical Education 40F (PED40F)**

This compulsory full-credit course is designed to help youth take greater ownership of their own physical fitness, to encourage them to seek out activities that interest them, and to engage in active lifestyles into their futures. Students will study topics related to fitness management, nutrition, relationships, social/emotional health, and personal development, as well as a variety of sports and activities. The focus of this content will be on health and personal planning and promoting life-long fitness.

### **Grade 11 and 12 Optional Courses**

#### **French (FRE30S, FRE40S)**

The French curriculum enhances many aspects of other courses. Students acquire different learning processes, which are only developed by taking a second language. Students read, write, view and speak as they explore different themes. Students are actively involved in their learning at each step of the process. Evaluation is varied and frequent, including a final exam. The French curricula recognize that learning is a gradual and cumulative process. Each grade level builds on past concepts, skills, knowledge, and experiences; each level contains specific communication, experience, and language objectives. A second language enhances personal opportunities for jobs, careers, education, travel, and relationships.

#### **Band (BAN30S, BAN40S)**

Band classes meet every second day for the entire school year. The Band program covers all types of music from Baroque to Modern 20<sup>th</sup> Century music. Band skills such as technical, expressive and reading skills are developed and emphasized. Music history, theory and ear training are part of the Band program. The band performs throughout the year. In all band years, the goal is to develop a well-trained and skilled band member. Out-of-class activities include performances at assemblies, concerts, Virden Festival and Optimist Festival (Winnipeg), band tours, and clinics. Enthusiasm and a love of music is required.

#### **Chemistry 30S (CHE30S)**

**Prerequisite:** Science 20F and either Intro to Pre-Calculus Math 20S, Applied Math 30S, or Pre-Cal Math 30S

Chemistry opens doors to all the sciences including biology-related fields such as medicine, lab technician, and nursing. Students examine the role of chemistry in the past, present, and future; and the major branches of chemistry. Physical properties and changes in matter are studied. Emphasis is placed upon chemical reactions – how, why, and what quantities of chemicals react with each other. Other units include solubility, acids and bases, and organic chemistry.

#### **Chemistry 40S (CHE40S)**

**Prerequisite:** Chemistry 30S

The course begins with the nature of chemistry – emphasis is placed upon further developing observation, inference, and communication skills in science. Students generate questions about chemical reactions, and design experiments to help answer these questions. Studies of kinetics, chemical equilibrium, acid-base equilibrium, solubility equilibrium and oxidation-reduction reactions make up the remainder of the course.

#### **Physics 30S (PHY30S)**

**Prerequisite:** Science 20F and either Intro to Applied and Pre-Cal 20S, Applied Math 30S, or Pre-Calculus Math 30S

Topics include:

Introduction to Physics – Measurement skills, graphics analysis and vectors

Mechanics – Position and displacement, velocity, acceleration, dynamics, impulse and momentum

Fields- Gravitational, electric, magnetic and electromagnetic fields

Waves – Waves in one and two dimensions, sound and light  
Introduction to Modern Physics – Radiation

### **Physics 40S (PHY40S)**

**Prerequisite:** Physics 30S

Topics include:

Introduction to Physics – Relationships, order of magnitude, and vectors

Mechanics – Kinematics, dynamics, projectiles, circular motion, work, energy fields, electric currents, and electromagnetic induction

Introduction to Modern Physics – Particle and wave models of light, photons, and wave/particle duality

### **Biology 30S (BIO30S)**

This course builds on what students know and are able to do as a result of studies in Science 10G and Science 20F. It continues to retain a human body systems focus. Evaluation is based on quizzes, unit tests, group work, laboratory work, and an examination.

### **Biology 40S (BIO40S)**

This course builds on what students know and are able to do as a result of their studies in Science 20F and the new Biology 30S. The main core units include genetics (heredity, human genetics, genetic engineering, molecular genetics, and bioethics), biodiversity (evolutionary theory, viruses, monerans, protists, fungi, plant kingdom, animal kingdom), and ecology (ecosystem, biomes, community interactions, population ecology field research). Both Biology 30S and 40S include topics of relevance to students and are prerequisites to further study of biology.

### **Computer Science 20S/30S/40S (CSC20S, CSC30S, CSC40S)**

**Prerequisite:** Intro to Applied Math and Pre-Calculus 20S

This course is specifically designed for students who want to learn computer programming. Programming is done using Microsoft Visual Basic. Students will recognize that many of the features in Windows-based programs originate in Visual Basic. This course will allow students to acquire the skills necessary to program their own simple computer games and utilities, incorporating .JPEG visual files and .WAV audio files into their programs. This course will also enhance students' abilities to program their graphing calculators. Students entering Engineering, Management, Computer Science, or Statistics at the university level, or Information Systems Technology, Computer Analyst/programmer, Computer Animation, or Computer Gaming at the community college level, or any other Information Technology (IT) program will find this course very valuable. Also, students in accounting will find that a background in Visual Basic programming will greatly help as they learn how to set up and manage data-base driven accounting programs in college.

### **Family Studies 30S (FST30S)**

Deals with the social, emotional, intellectual, and physical growth of the child aged two to six. Factors influencing all aspects of child development are included, such as the "play" of children. "Parenting roles" are also discussed, stressing the importance of character building and behavior through the understanding of values, goals, and responsibilities.

### **Family Studies 40S (FST40S)**

Family Studies 40S focuses on providing skills and knowledge in areas of parenting, human development, relationships, and the well-being of individuals and families. Students have the opportunity to increase their knowledge as to how individuals and families function in society during different stages of the life cycle. Students focus on understanding others, parenthood, and careers.

### **Venture Development 30S**

Venture Development 30S is designed to build on the concepts introduced in Business Innovations. This course is beneficial for students who would like to develop the skills and attributes required to help meet the challenges of the ever changing economic realities of our world. These skills will be extremely important so that graduating students will have the opportunity to market their skills to prospective organizations. Course highlights include looking at working environments, types of businesses, business skills required for the changing workplace, and entrepreneurship. During the semester, we will be responsible for setting up mini-ventures, creating a formal business plan, operating the school store, and have significant involvement with the fun fair.

### **Business Communications 30S**

Business Communications focuses on communication skills and techniques that are essential in business. Students will develop effective written, verbal, interpersonal, and visual communication skills. They will also learn how to use current technologies to create communications that are clear, concise, and designed for business. Business Communications is designed for students interested in pursuing post-secondary studies in the business field. It is also a desirable course option for future entrepreneurs or any individual who wants to develop effective workplace communication skills.

### **Accounting Principles 30S (ACP30S) / Accounting Systems 40S (ACS40S)**

Completion of ACP 30S is required before taking ACS 40S.

Introduces students to financial principles and practices important to both personal and business life, promotes job entry level skill, and provides an introduction to accounting concepts and procedures studied at the post-secondary level. Accounting 30S is the introductory course and Accounting 40S is an extension of it. Accounting 40S includes “hands on” experience with the computer.

### **Applied Business Technologies (ABT 40S)**

Applied Business Technologies 40S is a full-credit course designed for those students who are pursuing business and office work. The course covers practical topics that students will be able to apply to future careers in business and the office. The course consists of seven units of study: Computer Skills, Electronic Communications, Information Management, Desktop Publishing, Reprographics & Machine Transcription, Office Practicum/Simulation, and Keyboarding.

### **Language and Transactional Forms 40S (LAT40S)**

Provides learners with experiences related to reading, writing, listening, speaking, viewing, and thinking. In transactional English, however, use of language is more specialized and designed to meet individual post-secondary needs.

This course is intended for students whose post-secondary goals include an emphasis on journalism, public relations, media or creative communications.

### **Intro to Calculus 45S and Advanced Math 45S**

**Prerequisite:** Pre-Cal Math 40S

The prime objective of this course is to introduce the student to areas of mathematics which will be studied in depth in post-secondary programs. Students are introduced to the concepts of limits, derivatives, applications of derivatives and integration. In this course, problem-solving, communication, reasoning, and mental math are some of the themes in each module.

### **Geography 40S (GIS Focus)**

Geographic Information Systems (GIS) are used in a wide variety of planning, facilities management, resource management, business, and applied research applications. This course provides an introduction to digital mapping and spatial analysis using GIS. Students learn how to create their own maps, how to use GIS software to analyze geographic problems, and learn techniques that can be applied to the topics of Geography 40S.

### **Cinema as a Witness to Modern History 40S (CMH40S)**

Students will view films from various time periods in history (key historical events). They will consider how these films and documentaries reflect the values and perspectives of the society in which they originated. Students will deconstruct and respond to selected films from Canadian cinema, American Mass Media, and international cinema.

### **Topics in Science – Land Management Water Conservation 30S and Environmental Science 30S (SC330S)**

**Prerequisite:** Science 10F

The goals of this course include the students acquiring a greater appreciation and understanding of the environment in addition to gaining an academic background in the field of environmental studies. This will be achieved in part by on-line assignments but also by hands-on field activities in the areas of water sampling, GPS orientation, insect and plant specimen collection and identification.

### **Psychology 40S (PSY40S)**

This course is intended to introduce students to the exciting field of psychology, to help students gain a better understanding of themselves and others, and to prepare students for post-secondary education in related fields such as social sciences, health related occupations, management, education, etc. This course will cover interesting topics such as the influence of heredity and environment, motivation and emotions, sensation and perception frustration and conflict, personality disorders, learning and thinking and much more. Psychology is fun to learn about because it is all about why we behave, think, and feel the way we do and students will leave this course with a better understanding of themselves and the world around them.

### **Law 40S (LAW40S)**

Develops an understanding of the making of laws, an understanding of the court system in Canada, and an appreciation for the importance of law in our daily lives. Topics include history of law, Canadian Government, criminal law, human rights, contract law, consumer law, family law, and labor law.

### **Economics 40S (ECO40S)**

Economics is a part of daily life in the choices we make, in the decisions of communities, governments and business and in the media. While developing the theoretical framework of economics, this course offers real-world examples and explores current economic issues. Major topics include economic systems, supply, demand, monopolies, oligopolies, income distribution, consumption and savings, government spending, money and banking, unemployment, international trade and inflation. This is an introductory economics course and would be an asset to students planning to attend college or university to take business or other related courses.