UMEI Christian High School
Grade 12
Course Selection 2022-2023

Student Name: _____

Compulsory Courses:

Math English

Religious Studies (Anabaptist Perspectives in a Global Community)

Choose the appropriate course for your future plans:

Semester 1: ☐ Functions 12 OR ☐ College Math

Semester 2: ☐ Calculus and Vectors OR ☐ Spare

☐ Academic English **ENG4U** OR ☐ College English **ENG4C**

Electives - choose one from each option:
***Note: Students may only have 1.5 spares per semester**

SEMESTER 1

☐ Senior Robotics or ☐ French 12, **FSF4U**

☐ Chemistry 11, **SCH3U** or ☐ Exploring & Creating in the Arts, **AEA4O**

SEMESTER 2

☐ Chemistry 12, **SCH4U** or ☐ Intro to Kinesiology, **PSK4U**

☐ Environmental Science, **SVN3M** or ☐ Financial Accounting, **BAF3M**

Non-Semestered

☐ Vocal Choir **AVM4M** or ☐ Cooperative Education

☐ Sr. Phys. Ed., **PPL3O** or ☐ Sr. Art, **AVI3O**

Course descriptions are on the backside of this page. Please read through each carefully.

Course Coding System
The first three characters of the Common Course Code are assigned by the Ministry and represent the discipline, the subject and the course.

The fourth character refers to the grade of the course as follows:

1 - grade 9
2 - grade 10
3 - grade 11
4 - grade 12

The fifth character refers to the type of course:

D - Academic (Post-Secondary track)
P - Applied (College track)
O - Open (used in calculating overall average)
U - University (counts toward a student's top 6 courses when applying to University)
C - College (counts toward applying for College)
M - College/University (counts toward a student's top 6 when applying to University)

Course Descriptions

MAP4C - Foundations for College Mathematics, Grade 12, College

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: Foundations for College Mathematics, Grade 11, College Preparation, or Functions and Applications, Grade 11, University/College Preparation)

MHF4U – Advanced Functions, Grade 12, University

This course extends students' experience with functions. Students will investigate the properties of polynomial, rational, logarithmic, and trigonometric functions; develop techniques for combining functions; broaden their understanding of rates of change; and develop facility in applying these concepts and skills. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. This course is intended both for students taking the Calculus and Vectors course as a prerequisite for a university program and for those wishing to consolidate their understanding of mathematics before proceeding to any one of a variety of university programs.

(Prerequisite: Functions, Grade 11, University Preparation, or Mathematics for College Technology, Grade 12, College Preparation)

MCV4U - 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, sinusoidal, exponential, rational, and radical functions; and apply these concepts and skills to the modelling of real-world relationships. Students will also refine their use of the mathematical processes necessary for success in senior mathematics. This course is intended for students who choose to pursue careers in fields such as science, engineering, economics, and some areas of business, including those students who will be required to take a university-level calculus, linear algebra, or physics course.

Note: MHF4U must be taken prior to or concurrently with Calculus and Vectors (MCV4U)

TEJ4M, Computer Engineering, Grade 12, College OR 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 related environmental and societal issues and will explore postsecondary path- ways leading to careers in computer technology.

(Prerequisite – Computer Engineering, Grade 11)

FSF4U – FRENCH, Grade 12, University

This course draws on a variety of themes to promote extensive development of reading and writing skills and to reinforce oral communication skills. Students will read a wide variety of materials, including a short novel or a play. Students will produce various written assignments, including a formal essay.

(Prerequisite – Grade 11 French, University)

SCH3U – CHEMISTRY, Grade 11, 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 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 – Grade 10 Science, Academic)

AEA3O/4O – EXPLORING AND CREATING IN THE ARTS, Grade 11/12, College OR University

This course offers students the opportunity to explore connections between dance, drama, media arts, music, and/or visual arts. Students will use the creative process individually and/or collaboratively to produce integrated art works that draw on various disciplines and they will critically analyse art works and determine how interpreting these works affects their own development. Studnets will develop responsible practices that are transferable beyond the classroom. They will explore solutions to integrated arts challenges and discover that art is everywhere, influencing and reflecting society.

(Prerequisite – Any Grade 9 or 10 arts course)

SCH4U – CHEMISTRY, Grade 12, 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 investigative 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 – Grade 11 Chemistry, University)

PSK4U – Introductory Kinesiology , Grade 12, College OR University

This course focuses on the study of human movement and of systems, 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 sport, and the physiological, psychological, and social factors that influence an individual's participation in physical activity and spot. This course prepares students for university programs in physical education and health, kinesiology, health sciences, health studies, recreation, and sports administration.

(Prerequisite – Any grade 11 university or university/college preparation course in science, or any grade 11 or 12 course in health and physical education)

SPH3U – ENVIRONMENTAL SCIENCE, Grade 11, College OR University

This course provides students with the fundamental knowledge of and skills relating to environmental science that will help them succeed in life after secondary school. Students will explore a range of topics, including the role of science in addressing contemporary environmental challenges; the impact of the environment on human health; sustainable agriculture and forestry; the reduction and management of waste; and the conservation of energy. Students will increase their scientific and environmental literacy and examine the interrelationships between science, the environment, and society in a variety of areas.
(Prerequisite – Grade 10 Science, Applied or Academic)

BAF3M – Accounting, Grade 11/12, College OR University

This course introduces students to 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, and ethics and current issues in accounting.
(Prerequisite – none)

AMV4M – VOCAL/CHORAL MUSIC, Grade 11, University/College Preparation

This course emphasizes the appreciation, analysis, and performance of various kinds of music, including baroque and classical music, popular music, and Canadian and non-Western music. Students will perform technical exercises and appropriate repertoire, complete detailed creative activities, and analyse and evaluate live and recorded performances. They will continue to increase their understanding of the elements of music while developing their technical and imaginative abilities.
(Prerequisite – Grade 9 or 10 Music: Vocal/Choral)

Cooperative Education

Cooperative Education allows students to learn outside the classroom in a real workplace environment. This learning opportunity is designed to suit the student's strengths, interests and needs, and to enhance the student's preparation for the future. For a list of possible workplace experiences, please see our website at www.umei.ca.

PPL4O – Health & Physical Education, Open

This course enables students to further develop the knowledge and skills they need to make healthy choices now and lead healthy, active lives in the future. Through participation in a wide range of physical activities and exposure to a broader range of activity settings, students enhance their movement competence, personal fitness, and confidence. Students also acquire an understanding of the factors and skills that contribute to healthy development and learn how their own well-being is affected by, and affects, the world around them. Students build their sense of self, learn to interact positively with others, and develop their ability to think critically and creatively.
(Prerequisite – none)

AVI4O – Visual Arts, Open

This course focuses on studio activities in one or more of the visual arts, including 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 – none)
