

Grade 12 Courses Offered at FFSS (Sorted by Department)

THE ARTS

Dramatic Arts (University/College)

ADA 4MR

Prerequisite: Dramatic Arts, Grade 11 (ADA3MR) U/C

This course requires students to experiment individually and collaboratively with forms and conventions of both drama and theatre from various cultures and time periods. Students will interpret dramatic literature and other texts and media sources while learning about various theories of directing and acting. Students will examine the significance of dramatic arts in various cultures, and will analyse how the knowledge and skills developed in drama are related to their personal skills, social awareness, and goals beyond secondary school.

Music (Band) (University/College)

AMU 4MR

Prerequisite: Music, Grade 11 Band, (AMU3MR) U/C

This course enables students to enhance their musical literacy through the creation, appreciation, analysis, and performance of music. 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.

Visual Arts (University/College)

AVI 4MR

Prerequisite: Visual Arts, Grade 11, (AVI3MR), U/C or Visual Arts, Grade 11 Intermediate Photography, (AWQ3MR), U/C

Recommend: portfolio interview with instructor

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. Students will produce a body of work demonstrating a personal approach. Students will establish their own course of study by; selecting and exploring in depth, a specific approach to art making, furthering their understanding of intellectual and technical concepts (ie. relationships between artists, artworks, and art historical moments of the 20th century - Post Impressionism to Post Modernism) related to art and the process of visual communication, through a shared studio experience; networking with other senior visual art students in a unique environment, evaluating their studio work in concert with their classmates and the instructor, and developing a portfolio of work suitable for post-secondary admissions. (\$10 enhancement fee plus individualized material costs)

BUSINESS

Business Leadership: Becoming a Manager (Workplace)

BOG 4ER

This course helps students prepare for managerial positions in their future careers. Students will focus on the development of core skills required to become a successful manager, including operations management, inventory control, marketing, financial planning, scheduling, and communication. Students will also explore the management challenges of hiring, training, and motivating employees, and complying with legal requirements.

Business Leadership: Management Fundamentals (University/College)**BOH 4MR**

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.

CANADIAN & WORLD STUDIES**Adventures in World History (Workplace)****CHM 4ER**

Prerequisite: Canadian History in the Twentieth Century, Grade 10, Academic or Applied

This course examines significant developments and events in world history from earliest times to the present. Students will explore social, economic, and political forces in different times and places, and how technology, art, and religion have helped shape people's lives and identities. Students will apply the concepts of historical thinking and the historical inquiry process, including the interpretation and analysis of evidence, when investigating a variety of human experiences in world history.

World Issues: A Geographic Analysis (College)**CGW 4CR**

Prerequisite: Canadian Geographic Issues, Grade 9, Academic or Applied

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.

World Issues: A Geographic Analysis (University)**CGW 4UR**

Prerequisite: Any University or University/College preparation course in Canadian and world studies, English, or Social Sciences and Humanities

This course explores the global challenge of meeting the basic needs of all people while sustaining the natural environment. Students will examine global inequities, including those related to food, water, energy, and development, and will explore global issues through environmental, social, economic, and political lenses. Students will apply the concepts of geographic thinking and the geographic inquiry process, including spatial technologies, to investigate a range of current geographic issues facing Canada and the world.

World History since the Fifteenth Century (University)**CHY 4UR**

Prerequisite: Any University or University/College preparation course in Canadian and World Studies, English, or Social Sciences and Humanities

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.

Canadian and International Law (University)**CLN 4UR**

Prerequisite: *Any University or University/College preparation course in Canadian and world studies, English, or Social Sciences and Humanities*

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.

Challenge and Change in Society (University)**HSB 4UR**

Prerequisite: *Any University, University/College, or College preparation course in Social Sciences and humanities, English, or Canadian and world studies*

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 analyse how and why cultural, social, and behavioural patterns change over time. They will explore the ideas of social theorists and use those ideas to analyse 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.

Aboriginal Governance: Emerging Directions (University/College)**NDG 4MR**

This course explores various aspects of First Nations, Métis and Inuit leadership, nationhood, and governance. Students will examine how First Nations, Métis, and Inuit peoples relate to and negotiate with the government of Canada and other organizations including how traditional beliefs, values and cultures inform models of governance. Students will reflect on their own ideas of civic, economic and cultural leadership as they learn about how individual and community Aboriginal leaders are revitalizing and strengthening their communities.

COMPUTER STUDIES

Computer Programming**ICS 4CR**

Prerequisite: *Introduction to Computer Programming, Grade 11, College Preparation*

This course further develops students' computer programming skills. Students will learn object-oriented programming concepts, create object-oriented software solutions, and design graphical user interfaces. Student teams will plan and carry out a software development project using industry-standard programming tools and proper project management techniques. Students will also investigate ethical issues in computing and expand their understanding of environmental issues, emerging technologies, and computer-related careers. **This course will focus on computer programming (coding) and feature elements of video game design.**

Computer Science**ICS 4UR**

Prerequisite: *Introduction to Computer Science, Grade 11, University Preparation*

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. **This course will focus on more advanced computer programming (coding) and feature elements of video game design.**

ENGLISH

English (Workplace)

ENG 4ER

Prerequisite: English, Grade 11, Workplace

This course emphasizes consolidation of literacy, critical thinking, and communication skills. Students will study informational texts and literature from various countries and cultures; write summaries, reports, résumés, and short essays; complete an independent research project; and explain the connections among media forms, audiences, and media industry practices. An important focus will be on using specialized language related to the workplace accurately and coherently in appropriate contexts.

English (College)

ENG 4CR

Prerequisite: English, Grade 11, College

This course emphasizes consolidation of literacy, critical thinking, and communication skills. Students will analyse informational texts and literary works from various time periods, countries, and cultures; write research reports, summaries, and short analytical essays; complete an independent study project; and analyse the interactions among media forms, audiences, and media industry practices. An important focus will be on establishing appropriate style and using business and technical language effectively.

English (University)

ENG 4UR

Prerequisite: English, Grade 11, University

This course emphasizes consolidation of literacy, critical thinking, and communication skills. Students will analyse a range of challenging texts from various time periods, countries, and cultures; write analytical and argumentative essays and a major paper for an independent literary research project; and apply key concepts to analyse media works. An important focus will be on understanding academic language and using it coherently and confidently in discussion and argument.

The Writer's Craft (College)

EWC 4CR

Prerequisite: English, Grade 11, College

This course emphasizes knowledge and skills related to the craft of writing. Students will investigate models of effective writing; use a workshop approach to write a variety of works; and make considered decisions for improving the quality of their writing. They will also complete a creative or analytical independent study project and investigate opportunities for publication and for writing careers.

The Writer's Craft (University)

EWC 4UR

Prerequisite: English, Grade 11, University

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.

FAMILY STUDIES

Managing Personal Resources (Open)

HIP 4OR

This course focuses on preparing students for living independently and working successfully with others. Students will learn to manage their personal resources to meet their basic needs for food, clothing, and housing. They will also learn about their personal, legal, and financial responsibilities and develop and apply interpersonal skills in order to make

wise and responsible personal and occupational choices. Students will apply research and inquiry skills while investigating topics related to personal life management. The course emphasizes the achievement of expectations through practical experiences.

Families in Canada (College)

HHS 4CR

Prerequisite: Any University, University/College, or College preparation course in Social Sciences and humanities, English, or Canadian and world studies

This course enables students to develop an understanding of social science theories as they apply to individual development, the development of intimate relationships, and family and parent-child relationships. Students will explore a range of issues relating to the development of individuals and families in contemporary Canadian society as well as in other cultures and historical periods. They will develop the investigative skills required to conduct research on individuals, intimate relationships, and parent-child roles and relationships in Canada.

Families in Canada (University)

HHS

4UR

Prerequisite: Any University, University/College, or College preparation course in Social Sciences and humanities, English, or Canadian and world studies

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.

Nutrition and Health (University)

HFA

4UR

Prerequisite: Any University, University/College, or College preparation course in Social Sciences and humanities, English, or Canadian and world studies

This course examines the relationships between food, energy balance, and nutritional status; the nutritional needs of individuals at different stages of life; and the role of nutrition in health and disease. Students will evaluate nutrition-related trends and will determine how food choices can promote food security and environmental responsibility. Students will learn about healthy eating, expand their repertoire of food-preparation techniques, and develop their social science research skills by investigating issues related to nutrition and health.

FRENCH

Core French (University)

FSF

4UR

Prerequisite: Core French, Grade 11, University

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.

GUIDANCE AND CAREER EDUCATION

**Advanced Learning Strategies: Skills for Success after Secondary School (Open)
4OR**

GLE

(Available to students with an IEP)

This course improves students' learning skills, preparing them to make successful transitions to work and post secondary education and become independent, lifelong learners. Students will learn how to assess their learning abilities and use critical reading, time management, and other techniques for promoting effective learning. In addition, they will investigate learning requirements for employment and post secondary education or training and develop plans for learning after secondary school.

This course is available to students in consultation with the Head of Special Education.

**Cooperative Education
credits)**

GLN4OD (2 credits) or GLN4OQ (4

Prerequisite: None

A cooperative education course linked to a related course (or courses) from the Ontario curriculum (or a locally developed course) consists of a community-connected experience, the cooperative education curriculum, and a set of expectations from the related course. Students will learn about safety and well-being throughout the experience, and will create, implement, and reflect on, a learning plan that meets their interests and needs and supports education and career/life planning. Through the experience, students will apply and extend their learning from the related course, and make connections with other aspects of their lives.

HEALTH & PHYSICAL EDUCATION

**Healthy Active Living Education (Open)
4OR**

PPL

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 students' 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.

Outdoor Activities

PAD 4OR - (Co-ed)

(Enhancement fee of \$250.00 is required to cover the cost of certification courses.)

Personal and Fitness Activities

PAF 4OF - (Female)

- Live Fit

(This course allows further development of personal fitness and fitness leadership skills. Strongly recommend PAF3OF)

Personal and Fitness Activities

PAF 4OM - (Male)

- Body Shop

Healthy Active Living

PPL 4OR - (Co-ed)

(It is highly recommended that students have a minimum of 2 Healthy Active Living credits before choosing PPL4OR)

**Fitness and Lifestyle Management – Dual Credit
(Co-ed)**

PAF4OU

This is a dual credit (1 high school and 1 college credit) offered at FFSS. Society has come to recognize that physical fitness and wellness is essential to the enhanced quality of life. This course introduces the student to the concepts of physical fitness and provides the means to become fit and develop a healthy lifestyle. Students through practical

experience will address the various components of fitness. The student will engage in an effective fitness program and develop strategies to be successful at the various police services fitness standards.

Introductory Kinesiology (University)

PSK

4UR

Prerequisite: Any Grade 11 University or University/College preparation course in Science, or any Grade 11 or 12 open course in health and physical education

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 sports, and the factors that influence an individual's participation in physical activity. The course prepares students for university programs in physical education, kinesiology, recreation, and sports administration.

An enhancement fee is required to cover the cost of lab/activity workbook.

MATHEMATICS

Mathematics for Work and Everyday Life (Workplace)

MEL

4ER

Prerequisite: Mathematics, Grade 10, Applied, Academic or Essential; or Grade 11 Workplace

This course enables students to broaden their understanding of mathematics as it is applied in the workplace and daily life. Students will use statistics in investigating questions; apply the concept of probability to solve problems in familiar situations; investigate accommodation costs and create household budgets; use proportional reasoning; estimate and measure; and apply geometric concepts to create designs.

This course is open to Grade 11 and 12 students

Foundations for College Math (College)

MAP

4CR

Prerequisite: Foundations of Mathematics, Grade 11, Applied, College Preparation, or Function Models, Grade 11, University/College Preparation (or Functions, Grade 11, University Preparation)

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; apply measurement in designing and constructing physical models; 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.

Mathematics for College Technology (College)

MCT

4CR

Prerequisite: Function Models, Grade 11, University/College Preparation (or Functions, Grade 11, University Preparation)

This course enables students to extend their knowledge of functions. Students will investigate and apply properties of polynomial, rational, 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, and vectors. Students will reason mathematically and communicate their thinking as they solve multi-step problems. This course will be required for a variety of college technology programs.

Calculus and Vectors (University)**MCV****4UR*****Prerequisite: Grade 12 Advanced Functions, University***

This course builds on students' previous experience with functions and their developing understanding of rate 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, and sinusoidal functions; and apply these concepts and skills to the modelling of real-world relationships. Students will also refine their use of 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. **Note:** Advanced Functions must be taken concurrently with or can precede Calculus and Vectors.

Mathematics of Data Management (University)**MDM****4UR*****Prerequisite: Functions, Grade 11, University Preparation, or Functions Models, Grade 11, University/College Preparation***

This course broadens students' understanding of mathematics as it relates to managing information. Students will apply methods for organizing large amounts of information; solve problems involving counting techniques, probability, and statistics; and carry out a culminating project that integrates the expectations of the course. Students will continue to develop the mathematical processes necessary for success in senior mathematics. Students planning to pursue university programs in business, the social sciences, and the humanities will find this course of particular interest.

Advanced Functions (University)**MHF****4UR*****Prerequisite: Functions, Grade 11, University Preparation, or Mathematics for College Technology, Grade 12, College Preparation***

This course extends students' experience with functions. Students will investigate the properties of polynomial, rational, logarithmic, and trigonometric 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.

SCIENCE**Biology (University)****SBI 4UR*****Prerequisite: Biology, Grade 11, 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.

Chemistry (College)**SCH****4CR*****Prerequisite: Science, Grade 10, Academic or Applied***

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.

Chemistry (University)
4UR

SCH

Prerequisite: Chemistry, Grade 11, University

This course enables students to deepen their understanding of chemistry through the study of organic chemistry, energy changes and rates of reaction, chemical systems and equilibrium, electrochemistry, and atomic and molecular structure. Students will further develop problem-solving and laboratory skills as they investigate chemical processes, at the same time refining their ability to communicate scientific information. Emphasis will be placed on the importance of chemistry in daily life, and on evaluating the impact of chemical technology on the environment.

Science (University/College)
4MR

SNC

Prerequisite: Science, Grade 10, Academic, or any Grade 11 course in science

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.

Physics (College)
4CR

SPH

Prerequisite: Science, Grade 10, Academic or Applied

This course develops students' understanding of the basic concepts of physics. Students will explore these concepts as they relate to mechanical, electrical, fluid (hydraulic and pneumatic), and communications systems, as well as to the operation of commonly used tools and equipment. They will develop scientific-inquiry skills as they verify accepted 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.

Physics (University)
4UR

SPH

Prerequisite: Physics, Grade 11, University

This course enables students to deepen their understanding of the concepts and theories of physics. Students will explore further the laws of dynamics and energy transformations, and will investigate electrical, gravitational, and magnetic fields; electromagnetic radiation; and the interface between energy and matter. They will further develop inquiry skills, learning, for example, how the interpretation of experimental data can provide indirect evidence to support the development of a scientific model. Students will also consider the impact on society and the environment of technological applications of physics.

TECHNOLOGY

Yearbook (Open)
4UY

IDC 3OY and IDC

Prerequisite: IDC3OY

This course will help students develop and consolidate the skills required for and knowledge of different subjects and disciplines to solve problems, make decisions, create personal meaning, and present findings beyond the scope of a single subject or discipline. Students will apply the principles and processes of inquiry and research to effectively use

a range of print, electronic, and mass media resources; to analyse historical innovations and exemplary research; and to investigate real-life situations and career opportunities in interdisciplinary endeavours. They will also assess their own cognitive and affective strategies, apply general skills in both familiar and new contexts, create innovative products, and communicate new knowledge.

This course runs in sequence with the Grade 11 Technology IDC3OY

Construction Technology (Workplace)

TCJ

4ER

Prerequisite: Construction Technology, Grade 11, Workplace Preparation TCJ3ER

This course enables students to further develop technical knowledge and skills related to residential construction and to explore light commercial construction. Students will continue to gain hands on experience using a variety of materials, processes, tools, and equipment; create and interpret construction drawings; and learn more about building design and project planning. They will expand their knowledge of terminology, codes and regulations, and health and safety standards related to residential and light commercial construction. Students will also expand their awareness of environmental and societal issues related to construction technology and explore entrepreneurship and career opportunities in the industry that may be pursued directly after graduation.

This course will be designed for students going directly into the workforce.

Construction Technology (College)

TCJ

4CR

Prerequisite: Construction Technology, Grade 11, College Preparation TCJ 3CR

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.

Construction Engineering Technology - Dual Credit (2 high school credits)

TCJ4CA

Prerequisite: Construction Technology, Grade 11, College Preparation TCJ 3CR

This two period course offered at FFSS focuses on the following four areas of carpentry: Estimating, Calculations and Layout; Plans, Specifications and Codes; Safety, Material and Tools; and Welding for Carpenters. The welding component is completed over one week at Fleming College in Peterborough. Successful candidates who meet the college requirements can receive the Level 1 Carpentry in-school component.

Technological Design (University/College)

TDJ

4MR

Prerequisite: Technological Design Grade 11, University/College Preparation TDJ 3MR

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.

Computer Engineering (University/College)

TEJ

4MR

Prerequisite: Computer Engineering, Grade 11, University/College TEJ3MR

This course helps students understand and apply computer engineering concepts. Students will analyse and design computer components such as logic circuits and interfaces; develop and construct systems and write the associated computer programs to drive real-world devices such as traffic lights, models, and robots; and explore networking hardware, protocols, and configurations. As well as developing project management skills, students will examine the ethics of computer use and explore related educational requirements and careers. "Students who successfully complete the computer engineering courses are eligible for advanced status at Sir Sandford Fleming College in the Hardware Fundamentals program."

Hospitality and Tourism (Workplace)

TFJ 4ER

Prerequisite: Hospitality and Tourism, Grade 11, Workplace

This course enables students to further develop knowledge and skills related to the food and beverage services sector of the tourism industry. Students will demonstrate proficiency in using food preparation and presentation tools and equipment; plan nutritious menus, create recipes, and prepare and present finished food products; develop customer service skills; and explore event and activity planning. Students will expand their awareness of health and safety practices, environmental and societal issues, and career opportunities in the food and beverage services sector.

Hospitality and Tourism (College)

TFJ

4CR

Prerequisite: Hospitality and Tourism, Grade 11, College

This course enables students to further develop knowledge and skills related to the various sectors of the tourism industry. Students will demonstrate advanced food preparation and presentation skills; increase health and wellness knowledge; develop tourism administration and management skills; design and implement a variety of events or activities; and investigate principles and procedures that contribute to high-quality customer service. Students will expand their awareness of health and safety issues, environmental and societal issues, and career opportunities in the tourism industry.

Communications Technology (University/College)

TGJ

4MR

Prerequisite: Communications Technology, Grade 11, University/College Preparation TGJ3MR

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.

Manufacturing Technology (Workplace)

TMJ

4ER

Prerequisite: Manufacturing Technology Grade 11, Workplace Preparation TMJ3CR/ER

This project-driven, hands-on course builds on students' experiences in manufacturing technology. Students will further develop knowledge and skills related to the use of engine lathes, milling machines, welding machines, and other related tools and equipment as they design and fabricate solutions to a variety of technological challenges in manufacturing. Students may have opportunities to acquire industry-standard training and certification. Students will expand their awareness of environmental and societal issues and of career opportunities in the manufacturing industry.

Manufacturing Technology (College)

TMJ

4CR

Prerequisite: Manufacturing Technology Grade 11, College Preparation TMJ 3CR

This course enables students to further develop knowledge and skills related to machining, welding, print reading, computer numerical control (CNC), robotics, and design. Students will develop proficiency in using mechanical, pneumatic, electronic, and computer control systems in a project-based learning environment and may have opportunities to obtain industry-standard training and certification. Students will expand their awareness of environmental and societal issues and career opportunities in the manufacturing industry.

Automotive Transportation Technology: Vehicle Maintenance (Workplace)

TTJ

4ER

Prerequisite: Transportation Technology, College Preparation: TTJ3CR/ER

This course introduces students to the servicing, repair, and maintenance of vehicles through practical applications. The course is appropriate for all students as a general interest course to prepare them for future vehicle operation, care, and maintenance or for entry into an apprenticeship in the motive power trades. Students will develop an awareness of environmental and societal issues related to transportation and will learn about careers in the transportation industry and the skills and training required for them.

Automotive Transportation Technology (College)

TTJ

4CR Prerequisite: Transportation Technology, College Preparation: TTJ3CR

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.

Small Engine and Recreational Equipment Transportation Technology (Workplace)

TTJ 4E1

Prerequisite: Transportation Technology, College Preparation: TTJ3C1/E1

This course introduces students to the servicing, repair, and maintenance of vehicles through practical applications. The course is appropriate for all students as a general interest course to prepare them for future vehicle operation, care, and maintenance or for entry into an apprenticeship in the motive power trades. Students will develop an awareness of environmental and societal issues related to transportation and will learn about careers in the transportation industry and the skills and training required for them.

Small Engine and Recreational Equipment Transportation Technology (College)

TTJ 4C1

Prerequisite: Transportation Technology, College Preparation: TTJ3C1

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.

Custom Woodworking (Workplace)

TWJ

4ER

Prerequisite: Custom Woodworking, Grade 11, Workplace Preparation TWJ3ER

This course enables students to further develop knowledge and skills related to the planning, design, and construction of cabinets and furniture for residential and/or commercial projects. Students will gain further experience in the safe use of common woodworking materials, tools, equipment, finishes, and hardware, and will learn about the entrepreneurial skills needed to establish and operate a custom woodworking business. Students will also expand their awareness of health and safety issues and environmental and societal issues related to woodworking, and will explore career opportunities that may be pursued directly after graduation.

This course will be designed for students going directly into the workforce.