

Technological Education

BROAD-BASED TECHNOLOGY

The philosophy that underlies the teaching of broad-based technology is that students learn best by doing. The curriculum in this area takes an activity based, project-driven approach to learning that provides students with knowledge, skills, and experiences in the subjects of their choice. A student can take up to three credits in any broad-based courses. Courses are offered in the following subjects:

- Communications Technology
- Computer Technology
- Construction Technology
- Green Industries
- Hairstyling and Aesthetics
- Health and Personal Services
- Hospitality and Tourism
- Manufacturing Technology
- Technological Design
- Transportation Technology

The broad-based technology courses are designed to be interdisciplinary, emphasizing problem-solving techniques and the attainment of transferable skills. Broad-based technologies use

the student's expertise and knowledge from a variety of subject disciplines—the goal being to integrate that knowledge in the solution to a problem. An example of a course of this nature is Communications Technology. Elements of audio, video, visual arts, photography, desktop publishing, and media studies are integrated to form the core elements of the course. The student taking a course of this type would be expected to use knowledge and skills from all areas of the curriculum in the solution of a communication problem.

EMPHASIS COURSE OPTIONS

These courses are usually a component of one of the broad-based technologies. They concentrate on the skills and knowledge that are specific to a particular technical field and offer a more in-depth study of the subject. Students may take up to three credits in any emphasis course.

PACKAGE PROGRAMS

Some secondary schools combine courses into a packaged program that

frequently extends over more than one year. These packaged programs are usually career-oriented and specific to a field of technology, and they may involve apprenticeship programs. Following are examples of packaged programs:

- Cosmetology could be combined with English, chemistry, business studies, and cooperative education to form a package that is designed to prepare the student for entry into the field of hairstyling and to acquire credit towards apprenticeship.
- Ontario Youth Apprenticeship Program (OYAP) is available to students who are 16 years of age and who have completed a minimum of 16 credits, including Grade 10 English and Mathematics. Details of the OYAP program are available from the Guidance, Cooperative Education or the Technological Education Departments in each school.

TIJ101 **Exploring Technologies,** **Grade 9, Open**

This course enables students to further explore and develop technological knowledge and skills introduced in the elementary science and technology program. Students will be given the opportunity to design and create products and/or provide services related to the various technological areas or industries, working with a variety of tools, equipment, and software commonly used in industry. Students will develop an awareness of environmental and societal issues, and will begin to explore secondary and postsecondary education and training pathways leading to careers in technology-related fields.

Prerequisite: None

TGJ101 **Exploring Communications** **Technology** **Grade 9, Open**

This exploratory course introduces students to concepts and skills in communications technology, which encompasses television/video and movie production, radio and audio production, print and graphic communications, photography, and

NOTE

Students may take up to three credits in any broad-based Technology course or up to three credits in each emphasis course in grades 10, 11 and 12.

animation. Students will develop an awareness of related environmental and societal issues and will begin to explore secondary and postsecondary pathways leading to careers in the field.

Prerequisite: None

TEJ101 **Exploring Computer Technology** **Grade 9, Open**

This exploratory course introduces students to concepts and skills in computer technology, which encompasses computer systems, networking, interfacing, and programming, as well as electronics and robotics. Students will develop an awareness of related environmental and societal issues and will begin to explore secondary and postsecondary pathways leading to careers in the field.

Prerequisite: None

TCJ101

Exploring Construction Technology Grade 9, Open

This exploratory course introduces students to concepts and skills in construction technology, which encompasses plumbing, electrical wiring, masonry, heating/cooling, carpentry, and woodworking. Students will develop an awareness of related environmental and societal issues and will begin to explore secondary and postsecondary pathways leading to careers in the field.

Prerequisite: None

THJ101

Exploring Green Industries Grade 9, Open

This exploratory course introduces students to concepts and skills related to the green industries – agriculture, forestry, horticulture, and landscaping. Students will develop an awareness of related environmental and societal issues and will begin to explore secondary and postsecondary pathways leading to careers in the field.

Prerequisite: None

TXJ101

Exploring Hairstyling and Aesthetics Grade 9, Open

This exploratory course introduces students to concepts and skills related to hairstyling and aesthetics, including hair, nail, and skin care applications. Students will develop an awareness of related environmental and societal issues and will begin to explore secondary and postsecondary pathways leading to careers in the field.

Prerequisite: None

TPJ101

Exploring Health Care Grade 9, Open

This exploratory course introduces students to concepts and skills related

Technological Education

to health care, which encompasses personal health promotion, child and adolescent health concerns, and various medical services, treatments, instruments, and technologies.

Students will develop an awareness of related environmental and societal issues and will begin to explore secondary and postsecondary pathways leading to careers in the field.

Prerequisite: None

TFJ101

Exploring Hospitality and Tourism Grade 9, Open

This exploratory course introduces students to concepts and skills related to hospitality and tourism, focusing on the areas of food handling, food preparation, the origins of foods, event planning, and local tourism. Students will develop an awareness of related environmental and societal issues and will begin to explore secondary and postsecondary pathways leading to careers in the field.

Prerequisite: None

TMJ101

Exploring Manufacturing Technology Grade 9, Open

This exploratory course introduces students to concepts and skills related to manufacturing technology, which encompasses technical drawing, properties and preparation of materials, manufacturing techniques, and control systems. Students will develop an awareness of related environmental and societal issues and will begin to explore secondary and postsecondary pathways leading to careers in the field.

Prerequisite: None

TDJ101

Exploring Technological Design Grade 9, Open

This exploratory course introduces students to concepts and skills related to technological design, which involves the development of solutions to various design challenges and the fabrication of models or prototypes of those solutions.

Students will develop an awareness of related environmental and societal issues and will begin to explore secondary and postsecondary pathways leading to careers in the field.

Prerequisite: None

TTJ101

Exploring Transportation Technology Grade 9, Open

This exploratory course introduces students to concepts and skills related to transportation technology, which encompasses the maintenance, servicing, and repair of various types of vehicles, aircraft, and/or watercraft. Students will develop an awareness of related environmental and societal issues and will begin to explore secondary and postsecondary pathways leading to careers in the field.

Prerequisite: None

COMMUNICATIONS TECHNOLOGY

TGJ201

Communications Technology, Grade 10, Open

This course introduces students to communications technology from a media perspective. Students will work in the areas of TV/video and movie production, radio and audio production, print and graphic communications, photography, and animation. Student projects may include computer-based activities such as creating videos, editing photos, working with audio, cartooning, developing animations, and designing web pages. Students will also develop an awareness of environmental and societal issues related to communications technology and explore secondary and postsecondary education and training pathways and career opportunities in the various communications technology fields.

Prerequisite: None

Technological Education

TGJ3M1

Communications Technology, Grade 11, University/College Preparation

This course examines communications technology from a media perspective. Students will develop knowledge and skills as they design and produce media projects in the areas of live, recorded, and graphic communications. These areas may include 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 develop an awareness of related environmental and societal issues and explore college and university programs and career opportunities in the various communications technology fields.

Prerequisite: None

TGJ3O1

Communications Technology: Broadcast and Print Production, Grade 11, Open

This course enables students to develop knowledge and skills in the areas of graphic communication, printing and publishing, audio and video production, and broadcast journalism. Students will work both independently and as part of a production team to design and produce media products in a project-driven environment. Practical projects may include the making of signs, yearbooks, video and/or audio productions, newscasts, and documentaries. Students will also develop an awareness of related environmental and societal issues and explore secondary and postsecondary education and training pathways and career opportunities in the various communications technology fields.

Prerequisite: None

TGJ4M1

Communications Technology, Grade 12, University/College Preparation

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.

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

TGJ4O1

Communications Technology: Digital Imagery and Web Design, Grade 12, Open

This course enables students to develop knowledge and skills in the areas of photography, digital imaging, animation, 3D modelling, and web design. Students will work both independently and as part of a production team to design and produce media products in a project-driven environment. Practical projects may include photo galleries, digital images, animations, 3D models, and websites. Students will also expand their awareness of environmental and societal issues related to communications technology and explore postsecondary education, training, and career opportunities.

Prerequisite: None

EMPHASIS OPTIONS IN COMMUNICATIONS TECHNOLOGY

TGI3M/4M

Interactive New Media and Animation Grade 11 and 12, University/ College Preparation

This course will explore electronic media such as web design and computer animation. Students will work in a 2D and 3D environment to create animations for the web and TV video productions.

TGP3M/4M

Photography and Digital Imaging Grade 11 and 12, University/ College Preparation

This course enables students to develop knowledge and skills in the area of photography. Students will focus on the fundamentals and principles of great photography as well as the software used to enhance and correct digital images.

TGG3M/4M

Print and Graphic Communications Grade 11 and 12, University/ College Preparation

This course examines the fundamentals and principles of graphic design as it applies to the world of communication and print media. Students will develop their drawing skills through the design process and later work with various software to create their final output for print.

TGR3M/4M

Radio, Audio, and Sound Production Grade 11 and 12, University/ College Preparation

This course is designed to give students an in-depth look at the world of radio, sound production and audio recording. Students will work with equipment and software used in the sound recording industry. Students will study the power of audio as it pertains to sound effects and proper recording methods.

NOTE

*The recommended
preparation for all Grade 12
Emphasis Options is the
preceding Grade 11 course.*

TGV3M/4M

TV, Video and Movie Production Grade 11 and 12, University/ College Preparation

This course is designed to give students an in-depth look at TV video broadcasting and post production film processes. Students will develop fundamentals and principles of proper camera operation as well as pre and post production editing. Students will also gain a better understanding of time management, team work and pre-production planning.

COMPUTER TECHNOLOGY

TEJ201

Computer Technology, Grade 10, Open

This course introduces students to computer systems, networking, and interfacing, as well as electronics and robotics. Students will assemble, repair, and configure computers with various types of operating systems and application software. Students will build small electronic circuits and write computer programs to control simple peripheral devices or robots. Students will also develop an awareness of environmental and societal issues related to the use of computers, and learn about secondary and post-secondary pathways to careers in computer technology.

Prerequisite: None

NOTE

Students may take up to three credits in any broad-based credit or up to three credits in each emphasis course in grades 11 and 12.

Technological Education

TEJ3E1

Computer Technology, Grade 11, Workplace Preparation

This course enables students to develop knowledge and skills related to computer hardware, networks, operating systems, and other software. Students will use utility and application software and learn proper procedures for installing, maintaining, and troubleshooting computer systems and networks. Students will develop an awareness of environmental and societal issues related to the use of computers, and will learn about apprenticeships and other employment opportunities in the field of computer technology that they may choose to pursue after graduation.

Prerequisite: None

TEJ3M1

Computer Engineering Technology, Grade 11, University/College Preparation

This course examines computer systems and control of external devices. Students will assemble computers and small networks by installing and configuring appropriate hardware and software. Students will develop knowledge and skills in electronics, robotics, programming, and networks, and will build systems that use computer programs and interfaces to control and/or respond to external devices. Students will develop an awareness of environmental and societal issues related to the use of computers, and will learn about college and university programs leading to careers in computer engineering.

Prerequisite: None

TEJ4E1

Computer Technology, Grade 12, Workplace Preparation

This course enables students to further develop their practical understanding of computer hardware, software, networks, and operating systems. Students will use utility and application software, and will follow proper procedures for installing, maintaining, and troubleshooting computer systems

and networks. In addition to demonstrating an understanding of the ethical use and environmental effects of computers, students will develop marketable skills and assess career opportunities in the field.

Prerequisite: Computer Technology, Grade 11, Workplace Preparation

TEJ4M1

Computer Engineering Technology, Grade 12, University/College Preparation

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 environmental and societal issues related to the use of computers, and explore postsecondary pathways leading to careers in computer engineering and related fields.

Prerequisite: Computer Engineering Technology, Grade 11, University/College Preparation

EMPHASIS OPTIONS IN COMPUTER TECHNOLOGY

TEC3E/4E

Computer Repair Grade 11 and 12, Workplace

This course enables students to further develop knowledge and skills related to computer hardware. The focus of the course is a practical hands-on approach to proper maintenance and repair of desktop and laptop computers. Students will gain a better understanding of operating systems and proper software installation practices.

TET3E/4E

Information Technology Support Grade 11 and 12, Workplace

This course focuses on skills related to Tier 1 technical support and customer service. Students will develop technical literacy skills along with general computer knowledge.

Technological Education



TEW3E/4E

Network Support Grade 11 and 12, Workplace

This course enables students to gain some experience with computer networking systems. Students will learn how to connect and maintain wiring closets as well as understand home network solutions.

EMPHASIS OPTIONS IN COMPUTER ENGINEERING TECHNOLOGY

TEL3M/4M

Electronics Grade 11 and 12, University/ College Preparation

This course enables students to develop knowledge and a practical understanding of analog and digital electronics. Students will focus on the theory and practical operations of simple and complex hardware circuits. In preparation for college and university, the course will cover circuit design, manufacturing and troubleshooting of electronic hardware circuits.

TEI3M/4M

Interfacing Grade 11 and 12, University/ College Preparation

This course is an in-depth focus on digital and analog circuits used to connect computers and their software to operate peripherals such as printers, lighting and environmental control systems and other external devices. The course can also introduce or further develop knowledge of Programmable Logic Controllers (PLC) and microcontrollers.

TEN3M/4M

Networking Grade 11 and 12, University/ College Preparation

This course enables students to gain further experience with computer networking systems. Students will learn network wiring protocols as well as work with managed and unmanaged switches, hubs, wired and wireless routers.

TER3M/4M

Robotics and Control Systems Grade 11 and 12, University/ College Preparation

This course enables students to further develop knowledge and skills used to design, build and program robots. Students will build practical electronic circuits and write interface programs to control the operations of a robotic device.

CONSTRUCTION TECHNOLOGY

TCJ201

Construction Technology, Grade 10, Open

This course introduces students to building materials and processes through opportunities to design and build various construction projects. Students will learn to create and read working drawings; become familiar with common construction materials, components, and processes; and perform a variety of fabrication, assembly, and finishing operations. They will use a variety of hand and power tools and apply knowledge of imperial and metric systems of measurement, as appropriate. Students will develop an awareness of environmental and societal issues related to construction technology, and will explore secondary and post-secondary pathways leading to careers in the industry.

Prerequisite: None

TCJ3C1

Construction Engineering Technology, Grade 11, College Preparation

This course focuses on the development of knowledge and skills related to residential construction. Students will gain hands on experience using a variety of construction materials, processes, tools, and equipment; learn about building design and planning construction projects; create and interpret working drawings and sections; and learn how the Ontario Building Code and other regulations and standards apply to construction

projects. Students will also develop an awareness of environmental and societal issues related to construction technology, and explore career opportunities in the field.

Prerequisite: None

TCJ3E1

Construction Technology, Grade 11, Workplace Preparation

This course enables students to develop technical knowledge and skills related to carpentry, masonry, electrical systems, heating and cooling, and plumbing for residential construction. Students will gain hands on experience using a variety of materials, processes, tools, and equipment to design, lay out, and build projects. They will create and read technical drawings, learn construction terminology, interpret building codes and regulations, and apply mathematical skills as they develop construction projects. Students will also develop an awareness of environmental and societal issues related to construction technology, and explore postsecondary and career opportunities in the field.

Prerequisite: None

TCJ4C1

Construction Engineering Technology, Grade 12, College Preparation

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

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and practices. Students will also focus on environmental and societal issues related to construction engineering technology, and explore career opportunities in the field.

Prerequisite: *Construction Engineering Technology, Grade 11, College Preparation*

T CJ4E1

Construction Technology, Grade 12, Workplace Preparation

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.

Prerequisite: *Construction Technology, Grade 11, Workplace Preparation*

T WJ3E1

Custom Woodworking, Grade 11, Workplace Preparation

This course enables students to develop knowledge and skills related to cabinet making and furniture making. Students will gain practical experience using a variety of the materials, tools, equipment, and joinery techniques associated with custom woodworking. Students will learn to create and interpret technical drawings and will plan, design, and fabricate projects. They will also develop an awareness of environmental and societal issues

Technological Education

related to the woodworking industry, and explore apprenticeships, post-secondary training, and career opportunities in the field that may be pursued directly after graduation.

Prerequisite: *None*

T WJ4E1

Custom Woodworking, Grade 12, Workplace Preparation

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.

Prerequisite: *Custom Woodworking, Grade 11, Workplace Preparation*

NOTE

The recommended preparation for all Grade 12 Emphasis Options is the preceding Grade 11 course.

EMPHASIS OPTIONS IN CONSTRUCTION TECHNOLOGY

T CC3E/4E

Carpentry, Grade 11 and 12, Workplace

These courses are an application of construction and layout techniques used in this industry. It covers the safe use of hand and machine tools, blue-print reading, foundation layout and construction, house framing, cabinet making.

T CE3E/4E

Electrical/Network Cabling, Grade 11 and 12, Workplace

This course focuses on the development of knowledge and skills related to cabling for computer system networks. Students will learn wiring protocols, network wiring hubs/closets and communication/electrical raceways.

T CH3E/4E

Heating & Cooling, Grade 11 and 12, Workplace

These courses concentrate on the design and installation of air temperature and quality control equipment in buildings, including solar heat, air exchanges, air conditioners, heat pumps and conventional forced air furnaces.

T CM3E/4E

Masonry, Grade 11 and 12, Workplace

This course enables students to develop knowledge and skills in masonry. This is a hands on, project driven program that focuses on the industry trade standards of masonry, building construction and blue print reading.

T CP3E/4E

Plumbing, Grade 11 and 12, Workplace

These courses give students an additional in depth study of commercial, residential and industrial plumbing, concentrating on the following: Part 7 (Plumbing) of the Ontario Building Code, material study, installation techniques hand and equipment skills required to enter a plumbing apprenticeship or a construction management or engineering related field.

EMPHASIS OPTIONS IN CONSTRUCTION ENGINEERING TECHNOLOGY

T CY3C/4C

Civil Engineering, Grade 11 and 12, College Preparation

This course is designed to give students a better understanding of environmental considerations used in urban planning and construction.

Technological Education

TCS3C/4C

Construction Management & Science Grade 11 and 12, College Preparation

This course is designed to give students a better understanding of project management skills. Students will be use software to develop Gantt Charts to look at work flow, coordinate trades on a worksite, safe work site, and read technical data sheets as well as blue prints.

GREEN INDUSTRIES

THJ201

Green Industries, Grade 10, Open

This course introduces students to the various sectors of the green industries – agriculture, forestry, horticulture, floristry, and landscaping. Using materials, processes, and techniques commonly employed in these industries, students will participate in a number of hands-on projects that may include plant or animal propagation; production, maintenance, and harvesting activities; the development of floral or landscaping designs; and/or related construction activities. Students will also develop an awareness of environmental and societal issues related to green industry activities, learn about safe and healthy working practices, and explore secondary and postsecondary education and training pathways and career opportunities in the various industry sectors.

Prerequisite: None

THJ3E1

Green Industries, Grade 11, Workplace Preparation

This course enables students to develop knowledge and skills related to agriculture, floristry, forestry, horticulture, and landscaping. Students will learn to identify a broad range of plant and animal species; examine factors that affect the growth of plants and animals and the quality of products derived from them; and develop process, design, and maintenance skills required in the green industries. Students will also learn about safe and

healthy working practices, develop an awareness of environmental and societal issues related to green industry activities, and learn about apprenticeships and other postsecondary education and training opportunities, as well as employment opportunities that may be pursued directly after graduation.

Prerequisite: None

THJ3M1

Green Industries, Grade 11, University/College Preparation

This course enables students to develop knowledge and skills related to agriculture, forestry, horticulture, and landscaping. Students will study the identification, growth, and management of plants and animals and develop process, design, and management skills required in the green industries. Students will also examine social and economic issues related to the green industries, learn about safe and healthy working practices, study industry standards and codes, and explore postsecondary education programs and career opportunities.

Prerequisite: None

THJ4E1

Green Industries, Grade 12, Workplace Preparation

This course enables students to gain further experience with a variety of industry procedures and operations and to acquire additional industry-specific skills. Students will study more complex processes, develop more advanced design and maintenance skills, and explore ways of enhancing environmental sustainability. They will also examine social and economic issues related to the green industries, learn about safe and healthy working practices, study industry standards and codes, and explore career opportunities in the various industries. The knowledge and skills acquired in this course will prepare students for the workplace and apprenticeship training.

Prerequisite: Green Industries, Grade 11, Workplace Preparation

THJ4M1

Green Industries, Grade 12, University/College Preparation

This course focuses on more complex concepts and skills related to the green industries. Students will focus on developing process skills, design and management techniques, and ways of enhancing environmental sustainability. They will also examine social and economic issues related to the green industries, learn about safe and healthy working practices, study industry standards and codes, and explore career opportunities. The knowledge and skills acquired in this course will prepare students for more specialized studies at the college and university level.

Prerequisite: Green Industries, Grade 11, University/College Preparation

EMPHASIS OPTIONS IN GREEN INDUSTRIES

THA3M/4M

Agribusiness Grade 11 and 12, University/ College Preparation

This course emphasizes the management of an agricultural business. Students will focus on advanced animal husbandry, plant production, marketing methods and technological advances in the agricultural industry.

THO3M/4M

Forestry Grade 11 and 12, University/ College Preparation

This course emphasizes the advanced principles and skills related to forestry management. Students will focus on understanding the principles of forest management, forest ecology and forest regeneration as well as urban forestry.

THS3M/4M

**Horticulture Management & Science
Grade 11 and 12, University/
College Preparation**

This course focuses on the advanced principles and skills of horticultural management and science needed for optimum plant care required by the horticultural industry.

THD3M/4M

**Landscaping Architecture
Grade 11 and 12, University/
College Preparation**

This course emphasizes the development of advanced skills and knowledge related to design and construction applications in the landscape industry. The students will focus on landscape design, surveying and construction detailing as well as planting systems.

THG3E/4E

**Agriculture
Grade 11 and 12, Workplace**

This course emphasizes the development of skills as they relate to agriculture. Students will focus on animal husbandry and plant production and the concepts behind increased productivity and maintenance methods.

THF3E/4E

**Floristry
Grade 11 and 12, Workplace**

This course emphasizes the development of skills related to the floristry industry. Students will focus on design concepts, marketing and floriculture.

THO3E/4E

**Forestry
Grade 11 and 12, Workplace**

This course emphasizes the development of skills related to forestry and arboriculture. Students will focus on pruning techniques, tree identification

Technological Education

and environmental factors that influence tree systems

THH3E/4E

**Horticulture
Grade 11 and 12, Workplace**

This course emphasizes the advanced practical horticultural skills and knowledge required to work with plants for successful employment in horticulture. Students will focus on plant science and production and greenhouse systems.

THL3E/4E

**Landscape Construction & Maintenance
Grade 11 and 12, Workplace**

This course emphasizes the development of advanced skills and knowledge relating to landscape construction, maintenance and the turf industries. Students will learn plan reading along with landscape construction and the maintenance of residential and commercial landscapes.

HAIRSTYLING AND AESTHETICS

TXJ201

**Hairstyling and Aesthetics,
Grade 10, Open**

This course presents hairstyling, make-up, and nail care techniques from a salon/spa perspective. Through a variety of school and community-based activities, students learn fundamental skills in hairstyling, giving manicures and facials and providing hair/scalp analyses, and treatments. Students also consider related environmental and societal issues and explore secondary and postsecondary pathways leading to careers in the field of hairstyling and aesthetics.

Prerequisite: None

TXJ3E1

**Hairstyling and Aesthetics,
Grade 11, Workplace Preparation**

This course enables students to develop knowledge and skills in cosmetology and offers a variety of

applications that will equip students to provide services for a diverse clientele. Students identify trends in the hairstyling and aesthetics industry, learn about related health and safety laws, and expand their communication and interpersonal skills through interactions with peers and clients. Students consider environmental and societal issues related to the industry and acquire a more detailed knowledge of apprenticeships and direct entry work positions.

Prerequisite: None

TXJ4E1

**Hairstyling and Aesthetics,
Grade 12, Workplace Preparation**

This course enables students to develop increased proficiency in a wide range of hairstyling and aesthetics services. Working in a salon/spa team environment, students strengthen their fundamental cosmetology skills and develop an understanding of common business practices and strategies in the salon/spa industry. Students expand their understanding of environmental and societal issues and their knowledge of postsecondary destinations in the hairstyling and aesthetics industry.

Prerequisite: Hairstyling and Aesthetics, Grade 11, Workplace Preparation

EMPHASIS OPTIONS IN HAIRSTYLING AND AESTHETICS

TXA3E/4E

**Aesthetics
Grade 11 and 12, Workplace**

This course will place emphasis on the development of aesthetic skills such as spa treatments, skincare, nailcare, make up techniques.

TXH3E/4E

**Hairstyling
Grade 11 and 12, Workplace**

This course will place emphasis on the development of hairstyling skills such as haircutting, haircolouring, and hair texturizing.

Technological Education



HEALTH CARE

TPJ2O1

Health Care, Grade 10, Open

This course introduces students to personal health promotion, child and adolescent health concerns, and a variety of medical services, treatments, and technologies. Students will become familiar with various instruments and equipment and will learn about human anatomy, organs, and body chemistry, as well as the effects that lifestyle choices can have on personal well-being. They will plan recreational activities for youth, perform a dietary analysis, and evaluate health care practices. Students will develop an awareness of environmental and societal issues related to health care and will explore secondary and post-secondary pathways leading to careers in the field.

Prerequisite: None

TPJ3C1

Health Care, Grade 11, College Preparation

This course focuses on the development of knowledge and skills that will benefit students planning a career in the health care field. Students will learn about human anatomy and physiology, homeostasis, vital signs, disease prevention and treatment, how lifestyle choices affect health and well-being, and conventional and complementary methods of disease prevention and treatment. Students will develop an awareness of health and safety issues, environmental and societal issues related to health care, and career opportunities in the field.

Prerequisite: None

TPJ3M1

Health Care, Grade 11, University/College Preparation

This course focuses on the development of knowledge and skills that will benefit students planning a career in the health care field. Students will learn about human anatomy and physiology,

homeostasis, vital signs, disease prevention and treatment, how lifestyle choices affect health and well-being, and conventional and complementary methods of disease prevention and treatment. Students will develop an awareness of workers' health and safety issues, environmental and societal issues related to health care, and career opportunities in the field.

Prerequisite: None

TPJ4C1

Health Care, Grade 12, College Preparation

This course focuses on the development of clinical skills needed to assess general health status. Students will learn about accepted health care practices and about how to perform various basic procedures, using appropriate instruments and equipment. They will learn about the human immune system, pathology, and disease prevention and treatment. Students will also expand their awareness of workers' health and safety issues, environmental and societal issues related to health care, and post-secondary destinations in the field.

Prerequisite: Health Care, Grade 11, College Preparation

TPJ4M1

Health Care, Grade 12, University/College Preparation

This course focuses on the development of clinical skills needed to assess general health status. Students will learn about accepted health care practices and about how to perform various procedures, using appropriate instruments and equipment. They will learn about the human immune system, pathology, and disease prevention and treatment. Students will also expand their awareness of workers' health and safety issues, environmental and societal issues related to health care, and post-secondary destinations in the field.

Prerequisite: Health Care, Grade 11, University/College Preparation

TOJ4C1

Child Development and Gerontology, Grade 12, College Preparation

This course enables students to examine the stages of child development and the aging process. Students will study the processes of disease and factors contributing to health and well-being in early and later life, and will develop skills required to meet the needs of children and older adults (care skills). Students will also learn about legislation governing the care of children and older adults; evaluate social and recreational activities, programs, and services for improving quality of life; and develop an awareness of health and safety issues, environmental and social issues, and career opportunities related to child care and gerontology.

Prerequisite: None

TPJ4E1

Health Care: Support Services, Grade 12, Workplace Preparation

This course enables students to develop the basic skills needed for careers in a range of health care support services. Students will practise and apply a variety of clinical procedures and infection control skills as they learn about principles of infection control, service excellence, and the nature of the health care industry. Students will also investigate workers' health and safety issues, environmental and societal issues related to health care, and career opportunities in the field.

Prerequisite: None

NOTE

*The recommended
preparation for all Grade 12
Emphasis Options is the
preceding Grade 11 course.*

EMPHASIS OPTIONS IN HEALTH CARE

TPD3M/4M

Dental Services Grade 11 and 12 University/ College Preparation

This course focuses on the development of skills and technical knowledge that will assist students planning a career in the dental field. Students will learn basic chairside procedures, providing client care, infection control and safety protocols, human biology and microbiology as well as oral health and prevention of dental disease. Students will develop an understanding of the basic principles of clinical dental radiography including the safe and effective use of x-rays in dental practice.

TPL3M/4M

Laboratory Services Grade 11 and 12 University/ College Preparation

The course enables student to acquire skills and develop competence in a variety of medical office procedures and lab techniques. Students will learn about human anatomy and physiology, clinical chemistry, hematology, cytology, microbiology, immunology and histology. Safe laboratory practices will be emphasized along with the safe handling and operation of equipment and its maintenance.

TPM3M/4M

Nursing/Medical Services Grade 11 and 12 University/ College Preparation

This course enables students to acquire knowledge of nursing and related medical careers. Students will learn about human anatomy and physiology, nutrition, the lifespan development, disease process, pathology and therapeutics. Students will gain skills in

Technological Education

health assessment with consideration given to the physical, psychosocial, cultural and spiritual needs of the healthy individual. This course will focus on the development of caring, communication and critical thinking skills with well individuals of varying age groups.

TPP3M/4M

Pharmacy Services Grade 11 and 12 University/ College Preparation

This course enables students to acquire knowledge of the fundamentals of pharmacy legislation, pharmaceutical practice, drug distribution systems, pharmaceutical calculations, purchasing and inventory controls. Students will learn about medical preparations, their adverse effects and reactions along with the various drug classifications. Effective communication skills relating to customer service will also be practised.

TPT3M/4M

Therapy Services Grade 11 and 12 University/ College Preparation

This course introduces students to the various therapy service areas within the health care field. Students will learn about human anatomy and physiology, human development from conception to death focusing on physical, cognitive, social and personality growth throughout the lifespan. Students will develop communication skills and safe working practices required by therapists as part of a health care team working with clients.

TOC4C

Child Development Grade 12, College Preparation

This course focuses on the stages of child development in order to respond to the changing needs of infants, toddlers, preschoolers and school age children. Students will develop an awareness of the critical relationship between health, nutrition and safety

and develop the knowledge and skills required for creating high-quality environments that maximize children's well-being and development. Specific information on diseases and common childhood afflictions, meal planning, children and medication and cultural diversity will be explored. Students will learn information on policy, advocacy and legislation that guides the professional practice for working with children.

TOG4C

Gerontology Grade 12, College Preparation

This course will foster an understanding of aging issues within and across different contexts: social, psychological, physiological, health care, public policy, economic and cultural. Students will learn about the stages of adult development and aging and the various issues ranging from the individual's experiences of the aging process to the societal complexities of an aging population.

HOSPITALITY AND TOURISM

TFJ2O

Hospitality and Tourism, Grade 10, Open

This course provides students with opportunities to explore different areas of hospitality and tourism, as reflected in the various sectors of the tourism industry, with an emphasis on food service. Students will study culinary techniques of food handling and preparation, health and safety standards, the use of tools and equipment, the origins of foods, and event planning, and will learn about tourism attractions across Ontario. Students will develop an awareness of related environmental and societal issues and will explore secondary and postsecondary pathways leading to careers in the tourism industry.

Prerequisite: None

Technological Education

TFJ3E1

Hospitality and Tourism, Grade 11, Workplace Preparation

This course enables students to acquire knowledge and skills related to the food and beverage services sector of the tourism industry. Students will learn how to prepare, present, and serve food using a variety of tools and equipment and will develop an understanding of the fundamentals of providing high quality service to ensure customer satisfaction and the components of running a successful event or activity. Students will develop an awareness of health and safety practices, environmental and societal issues, and career opportunities in the food and beverage services sector.

Prerequisite: None

TFJ3C1

Hospitality and Tourism, Grade 11, College Preparation

This course enables students to develop or expand knowledge and skills related to hospitality and tourism, as reflected in the various sectors of the tourism industry. Students will learn about preparing and presenting food, evaluating facilities, controlling inventory, and marketing and managing events and activities, and will investigate customer service principles and the cultural and economic forces that drive tourism trends. Students will develop an awareness of health and safety standards, environmental and societal issues, and career opportunities in the tourism industry.

Prerequisite: None

TFJ4E1

Hospitality and Tourism, Grade 12, Workplace Preparation

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.

Prerequisite: Hospitality and Tourism, Grade 11, Workplace Preparation

TFJ4C1

Hospitality and Tourism, Grade 12, College Preparation

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.

Prerequisite: Hospitality and Tourism, Grade 11, College Preparation

NOTE

The recommended preparation for all Grade 12 Emphasis Options is the preceding Grade 11 course.

EMPHASIS OPTIONS IN HOSPITALITY AND TOURISM

TFN3C/4C

Applied Nutrition Grade 11 and 12, College Preparation

This course enables students to acquire the knowledge about nutrition and the practical skills to apply this knowledge in a variety of food service applications.

TFR3C/4C

Culinary Arts & Management Grade 11 and 12, College Preparation

This course enables students to acquire advanced cooking skills, along with the knowledge and skills needed to manage a variety of commercial food services and businesses.

TFT3C/4C

Tourism and Travel Planning Grade 11 and 12, College Preparation

This course provides students with opportunities to analyze the characteristics and standards of the tourism industry, determine the factors that promote its success, and investigate principles and procedures that contribute to high-quality customer service. Students will also assess facilities and activities that attract tourists, and study communication and customer service techniques. In addition to exploring career opportunities, students will analyze the relationship between tourism and the economy and propose ways to enhance the performance of the industry.

Recommended Preparation: Hospitality and Tourism, Grade 11, Workplace Preparation

TFB3E/4E

Baking Grade 11 and 12, Workplace

These courses provide students with an in-depth knowledge of the baking industry. Skills in dessert preparation, decoration, breads, rolls, pies, cakes, pastries, fillings, puddings and icings, shop glossary, nutrition, and a study of raw products are covered in this course.

TFC3E/4E

Cooking

Grade 11 and 12, Workplace

These courses focus on all facets of kitchen operation. Receiving and food storage are emphasized. Students prepare soups, stocks, and sauces and are taught how to cook pasta, rice, vegetables, and a variety of international dishes. Good cleaning practices and work habits are stressed.

TFE3E/4E

Event Planning

Grade 11 and 12, Workplace

This course focuses on the skills and knowledge required to plan minor and major events. Students will learn project management skills, time management, budgeting and team management.

MANUFACTURING TECHNOLOGY

TMJ201

Manufacturing Technology, Grade 10, Open

This course introduces students to the manufacturing industry by giving them an opportunity to design and fabricate products using a variety of processes, tools, and equipment. Students will learn about technical drawing, properties and preparation of materials, and manufacturing techniques. Student projects may include a robotic challenge, a design challenge, or a fabrication project involving processes such as machining, welding, vacuum forming, or injection moulding. Students will develop an awareness of environmental and societal issues related to manufacturing and will learn about secondary and postsecondary pathways leading to careers in the industry.

Prerequisite: None

Technological Education

TMJ3E1

Manufacturing Technology, Grade 11, Workplace Preparation

This hands-on, project-based course is designed for students planning to enter an occupation or apprenticeship in manufacturing directly after graduation. Students will work on a variety of manufacturing projects, developing knowledge and skills in design, fabrication, and problem solving and using tools and equipment such as engine lathes, milling machines, and welding machines. In addition, students may have the opportunity to acquire industry standard certification and training. Students will develop an awareness of environmental and societal issues related to manufacturing and will learn about secondary school pathways that lead to careers in the industry.

Prerequisite: None

TMJ3C1

Manufacturing Technology, Grade 11, College Preparation

This course enables students to develop knowledge and skills through hands-on, project based learning. Students will acquire design, fabrication, and problem-solving skills while using tools and equipment such as lathes, mills, welders, computer-aided machines, robots, and control systems. Students may have opportunities to obtain industry-standard certification and training. Students will develop an awareness of environmental and societal issues related to manufacturing and will learn about pathways leading to careers in the industry.

Prerequisite: None

TMJ3M1

Manufacturing Engineering Technology, Grade 11, University/College Preparation

This course enables students to develop knowledge and skills related to design, process planning, control systems, and quality assurance. Students will use a broad range of tools and equipment and will combine modern manufacturing techniques

and processes with computer-aided manufacturing as they develop critical decision-making, problem-solving, and project-management skills. Students will develop an awareness of environmental and societal issues related to manufacturing and will learn about pathways leading to careers in the industry.

Prerequisite: None

TMJ4E1

Manufacturing Technology, Grade 12, Workplace Preparation

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.

Prerequisite: Manufacturing Technology, Grade 11, Workplace Preparation

TMJ4C1

Manufacturing Technology, Grade 12, College Preparation

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.

Prerequisite: Manufacturing Technology, Grade 11, College Preparation

Technological Education



TMJ4M1

Manufacturing Engineering Technology, Grade 12, University/College Preparation

This course enables students to further develop knowledge and skills related to design, process planning, control systems, project management, quality assurance, and business operations. Students will use a broad range of tools and equipment, enhance their skills in computer-aided design, and collaborate in managing a project. Students will critically analyse and solve complex problems involved in manufacturing products. Students will expand their awareness of environmental and societal issues and of career opportunities in the manufacturing industry.

Prerequisite: *Manufacturing Engineering Technology, Grade 11, University/College Preparation*

EMPHASIS OPTIONS IN MANUFACTURING ENGINEERING TECHNOLOGY

TMM3M/4M

Mechanical Engineering Grade 11 and 12 College/University Preparation

This course is designed to prepare students for a University Pathway destination in Mechanical Engineering. Focus will be on the design process, CNC robotics, flexible manufacturing PLC programming and general engineering concepts.

TMR3M/4M

Robotics & Control Systems Grade 11 and 12 College/University Preparation

This course focuses on the robots used in today's manufacturing process. Students will design and build robots as well as program robots using PLC microcontrollers.

NOTE

The recommended preparation for all Grade 12 Emphasis Options is the preceding Grade 11 course.

EMPHASIS OPTIONS IN MANUFACTURING TECHNOLOGY

TMC3C/4C

Computer Aided Manufacturing Grade 11 and 12 College Preparation

This course enables students to further develop knowledge and skills related to the various software used to create tool paths for CNC equipment. Students will become familiar with the relationship between CAD and CAM software.

TMI3C/4C

Industrial Maintenance Grade 11 and 12 College Preparation

This course prepares students interested in becoming a Millwright apprentice. Students will be working with a variety of trade related programs, such as welding, electrical and general machine/equipment repair.

TMP3C/4C

Precision Machining Grade 11 and 12 College Preparation

This is a hands on course that develops skills and knowledge in the field of tool and die. Students will work with a variety of CNC equipment as well as manually operated equipment to fabricate machined parts.

TMT3C/4C

Robotics and Control Technician Grade 11 and 12 College Preparation

This course is designed to give students a better understanding of the robotics used in today's manufacturing sector.

Students will learn preventive maintenance and repair of industrial robots.

TMY3C/4C

Welding Technician Grade 11 and 12 College Preparation

In these courses, students study expansion and contraction of metals, controlling distortion, basic joint designs, metal identification, edge preparation and welding rod selection.

Workplace

TMO3E/4E

Machine Operator Grade 11 and 12, Workplace

This course introduces the student to the operations of automated machines and equipment. The focus is on safe work practices around automated equipment and proper maintenance of the surrounding environment.

TMS3E/4E

Sheet Metal Grade 11 and 12, Workplace

These courses include a study of heating and air conditioning; welding using oxyacetylene or electric arc; metallurgy, including the manufacture of steel; advantages and disadvantages of ferrous and non-ferrous metals; pattern development by parallel line and triangulation.

TMW3E/4E

Welder/Fitter Grade 11 and 12, Workplace

In these courses, students study expansion and contraction of metals, controlling distortion, basic joint designs, metal identification, edge preparation and welding rod selection.

TECHNOLOGICAL DESIGN

TDJ201

Technological Design, Grade 10, Open

This course provides students with opportunities to apply a design process to meet a variety of technological challenges. Students will research projects, create designs, build models and/or prototypes, and assess products and/or processes using appropriate tools, techniques, and strategies. Student projects may include designs for homes, vehicles, bridges, robotic arms, clothing, or other products. Students will develop an awareness of environmental and societal issues related to technological design, and learn about secondary and postsecondary education and training leading to careers in the field.

Prerequisite: None

TDJ301

Technological Design and the Environment, Grade 11, Open

This course enables students to apply a systematic process for researching, designing, building, and assessing solutions to address specific human and environmental challenges. Through their work on various projects, students will explore broad themes that may include aspects of industrial design, mechanical design, architectural design, control system design, and/or apparel design. Students will develop an awareness of environmental and societal issues related to technological design, and will learn about secondary and postsecondary pathways leading to careers in the field.

Prerequisite: None

TDJ3M1

Technological Design, Grade 11, University/College

This course examines how technological design is influenced by human, environmental, financial, and material requirements and resources. Students will research, design, build, and assess solutions that meet specific human needs, using working drawings and other communication methods to present their design ideas. They will develop an awareness of environmental, societal, and cultural issues related to technological design, and will explore career opportunities in the field, as well as the college and/or university program requirements for them.

Prerequisite: None

TDJ401

Technological Design in the Twenty-first Century, Grade 12, Open

This course focuses on the relationship between society and technological development. Students will use appropriate tools, techniques, and strategies to research, design, build, and assess prototypes for products and/or processes that respond to society's changing needs. Students will describe how social factors, including culture, media, politics, religion, and environmental concerns, influence technological design. Students will also learn about professional practices in the field, and will research postsecondary pathways leading to careers related to technological design.

Prerequisite: None

TDJ4M1

Technological Design, Grade 12, University/College

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.

Prerequisite: Technological Design, Grade 11, University/College Preparation

NOTE

The recommended preparation for all Grade 12 Emphasis Options is the preceding Grade 11 course.

EMPHASIS OPTIONS IN TECHNOLOGICAL DESIGN

TDP3M/4M

Apparel & Textile Design, Grade 11 and 12, University/College Preparation

This course enables students to develop knowledge in the area of Apparel & Textile Design. Focus for the course is on construction and manufacturing of textiles as well as the connection to design and fashion as it relates to clothing.

TDA3M/4M

Architectural Design, Grade 11 and 12, University/College Preparation

These courses cover many aspects of architectural technology from foundations through to finishing. Environmental factors are considered when examining residential and industrial architecture. Computer Aided Drafting and Design software will be introduced and used as a tool by students to develop solutions to design problems.

Technological Education



TDV3M/4M

Interior Design Grade 11 and 12, University/ College Preparation

This course enables students to develop knowledge in the area of Interior Design. The course will focus on ergonomics, layout, technological design and the connection between 2D and 3D space. Software will be used to support curriculum expectations.

TDM3M/4M

Mechanical & Industrial Design Grade 11 and 12, University/ College Preparation

These courses prepare students to produce industrial and technical drawings. Geometric construction will be used to introduce the students to motion and form development. Various forms of designing techniques and computer-aided drafting and design are also pursued.

TDR3M

Robotics and Control System Design Grade 11 and 12, University/ College Preparation

This course provides students with opportunities to apply the principles of technological design to challenges in communications, manufacturing, electronics, transportation, architecture, industrial and consumer products, health and safety equipment, and environmental services. Students will identify user needs, estimate labour and material costs, analyze material characteristics, and illustrate design solutions, using traditional and computer-based methods. They will also acquire the basic design skills required for post-secondary studies in engineering manufacturing, architecture, and construction. For specific focus options please see below.

Recommended Preparation:
Technological Design, Grade 10, Open

TDR4M

Robotics and Control System Design Grade 11 and 12, University/ College Preparation

This course provides students with opportunities to solve problems in design through the use of technical drawings, model building, testing, and marketing. Students will research, design, and test solutions for residential or commercial architecture, industrial engineering, and manufacturing. They will also examine the educational requirements of a technical design-related career in engineering, architecture, or industrial design. For specific focus options please see below.

Prerequisite: *Technological Design, Grade 11, University/College Preparation*

TRANSPORTATION TECHNOLOGY

TTJ201

Transportation Technology, Grade 10, Open

This course introduces students to the service and maintenance of vehicles, aircraft, and/or watercraft. Students will develop knowledge and skills related to the construction and operation of vehicle/craft systems and learn maintenance and repair techniques. Student projects may include the construction of a self-propelled vehicle or craft, engine service, tire/wheel service, electrical/battery service, and proper body care. Students will develop an awareness of related environmental and societal issues and will explore secondary and postsecondary pathways leading to careers in the transportation industry.

Prerequisite: *None*

TTJ301

Transportation Technology: Vehicle Ownership, Grade 11, Open

This general interest course enables students to become familiar with the options and features of various vehicles, issues of registration, and the legal requirements affecting vehicle owners. Students will also learn about vehicle financing and insurance, vehicle maintenance, emergency procedures, and the responsibilities of being a vehicle owner. Students will develop an awareness of environmental and societal issues related to vehicle ownership and use, and will explore career opportunities in the transportation industry.

Prerequisite: *None*

TTJ3C1

Transportation Technology, Grade 11, College Preparation

This course enables students to develop technical knowledge and skills as they study, test, service, and repair engine, electrical, suspension, brake, and steering systems on vehicles, aircraft, and/or watercraft. Students will develop communication and teamwork skills through practical tasks, using a variety of tools and equipment. Students will develop an awareness of environmental and societal issues related to transportation and will learn about apprenticeship and college programs leading to careers in the transportation industry.

Prerequisite: *None*

TTJ4E1

Transportation Technology: Vehicle Maintenance, Grade 12, Workplace Preparation

This course introduces students to the servicing, repair, and maintenance of vehicles through practical applications.

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Technological Education

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.

Prerequisite: *None*

TTJ4C1

Transportation Technology, Grade 12, College Preparation

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.

Prerequisite: *Transportation Technology, College Preparation, Grade 11*

EMPHASIS OPTIONS IN TRANSPORTATION TECHNOLOGY

TTB3C/4C

Auto Body Grade 11 and 12 College Preparation

These courses emphasize safety principles and practices; it covers the practice of manual skills needed by the student to work independently at welding, restoring and contour, and preparing for paint.

TTA3C/4C

Auto Service Grade 11 and 12 College Preparation

This course enables students to further develop their skills, knowledge and practical understanding of automobiles and the auto technical. The program focuses on the systems that make up our modern cars, and how to repair and maintain these systems.

TTH3C/4C

Heavy Duty & Agricultural Equipment Grade 11 and 12 College Preparation

This course focuses on the service, maintenance and repair of the large equipment used in the agriculture industry.

TTL3C/4C

Light Aircraft Grade 11 and 12 College Preparation

This course enables students to acquire knowledge and skills required for the aircraft / aerospace industry. This course will focus on the service, maintenance and repair of small non-commercial aircraft.

TTS3C/4C

Small Engine & Recreational Grade 11 and 12 College Preparation

These courses cover four-stroke and two-stroke cycles, fuel systems, ignition systems, cooling systems, and starter units.

TTT3C/4C

Truck and Coach Grade 11 and 12 College Preparation

This course enables students to further develop technical knowledge and skills related to an apprenticeship in truck and coach. Students learn how to work safely to service and repair trucks and busses related to the transportation sector.

NOTE

The recommended preparation for all Grade 12 Emphasis Options is the preceding Grade 11 course.