

CONCENTRATED OYAP




Concentrated OYAP students have the opportunity to earn secondary school credits and credit for the first level of Academic Apprenticeship Training concurrently. These programs require a minimum of 4 in-school credits + 2 co-op credits in grade 11, 12 or 12+.


These courses usually cost between \$2,000 and \$6,000 when taken at community colleges and private vocational schools. Concentrated OYAP programs are offered at designated schools throughout the region. Students must be prepared if necessary to attend a school that offers the Concentrated OYAP program in grade 11, 12 or 12+ . Purchases are required for the texts and certifications that the student receives during the course. The course will do the following:


- prepare for academic success in the apprenticeship courses
- earn advanced academic standing in the first apprenticeship course usually taught at a local community college
- **receive special safety and first aid training & certification**

Please see the School to Career guidance counsellor in your school for more information or go to www.schooltocareer.ca to obtain more information.

To apply for the OYAP programs below, you can go to www.onsorts.ca. Information can also be obtained by talking directly with OYAP instructors – Ms. Dileo, Mr. Jarvie and Mr. Rose

 Programs	DESCRIPTION	PROGRAM PLANNING	
		SEMESTER 1 START	SEMESTER 2 START
Auto Body & Automotive Painter OYAP	Auto Body & Automotive Painter OYAP is a program specifically designed to help students make a smooth transition into their post-secondary education Auto Body Repairer, Auto Body & Collision Damage Repairer and Automotive painter apprenticeship programs.	Program Location: Robert Bateman 4 auto body credits + coop in Sem 2	
Chef Training / Baker OYAP	Chef/Cook or Patisserie/Baker OYAP is a program specifically designed to help students make a smooth transition into their post-secondary education Chef/Cook, Patisserie or Baker apprenticeship. It is also excellent preparation for students wishing to enter a Chef Training or Culinary Arts diploma program at a community college.	Program Location: Robert Bateman 4 hospitality credits+ coop in semester 2	
Cabinetmaking/ Carpentry OYAP	Carpentry / Cabinet Making OYAP is a program specifically designed to help students make a smooth transition into their post-secondary education Carpenter or Cabinet Maker apprenticeship. It also prepares students for framing or similar Carpentry or Cabinet Making programs at the college level.	Program Location: M.M. Robinson (Carpentry only) 2 part program 2 construction credits +1 coop in each semester	Program Location: Georgetown District 4 credits + 2 summer coop

	DESCRIPTION	PROGRAM PLANNING	
		SEMESTER 1 START	SEMESTER 2 START
Programs			
Child and Youth Worker OYAP	Earn credits towards apprenticeship, secondary and college. Students are signed as apprentices and earn Mohawk College CYW credits.		Program Location: Bishop P. F. Reding 4 credit coop + college credits
Early Childhood Educator OYAP	Designed to help students make a smooth transition into their post-secondary education Early Childhood Education apprenticeship. Students are signed as apprentices and will earn three Seneca College ECE credits.		Program Location: Bishop P. F. Reding 4 credit coop + college credits
Electrical OYAP	Electrical OYAP is a program specifically designed to help students make a smooth transition into their post-secondary education Electrician apprenticeship. It also prepares students for similar Electrical programs at the college level. <i>(Prerequisite: senior construction class and physics course)</i>	Program Location: Bishop P.F. Reding, Milton 4 credits + 2 summer coop OR→	Program Location: Bishop P.F. Reding, Milton 4 credits + 2 summer coop
Hairstylist OYAP	Hairstylist OYAP is a program specifically designed to help students make a smooth transition into their post-secondary education Hairstylist apprenticeship. They have an opportunity to write an exemption exam for Hairstylist. It is also excellent preparation for students wishing to study aesthetics at college.	<ul style="list-style-type: none"> ➤ MM Robinson, Notre Dame, Robert Bateman ➤ Abbey Park, St. Thomas Aquinas, White Oaks ➤ Bishop P. F. Reding, E.C. Drury, Georgetown Check with guidance to see which semester they are offered.	
HVAC OYAP	This Heating, Ventilation, Air Conditioning program is designed to prepare students for a career in the HVAC industry.	Program Location: M.M. Robinson H.S., Burlington 2 part program 2 in-school HVAC credits each semester and minimum of 2 coop credits	
Information Technology Technician OYAP	Students can specialize after this course in hardware, help-desk or networking. It is also excellent preparation for students wishing to enter Information Technology Technician programs at a college. Students are signed as apprentices and will work online with Canadore College earning credits.	Program Location: St. Thomas Aquinas 2 part program 3 credits each semester + college credits	

	DESCRIPTION	PROGRAM PLANNING	
Programs		SEMESTER 1 START	SEMESTER 2 START
Manufacturing OYAP (General Machinist, Tool & Die, Millwright)	Manufacturing OYAP is a program specifically designed to help students make a smooth transition into their post-secondary education General Machinist, Tool & Die, or Millwright apprenticeship. It is also excellent preparation for many other industrial sector apprenticeships as well as similar college and university programs.	Program Locations: M.M. Robinson 2 part program 3 credits each semester + coop	Program Locations: White Oaks 2 part program 3 credits each semester + coop
Transportation OYAP	Help students make a smooth transition into their post-secondary education Automotive and or Truck and Coach Service Technician apprenticeship. It is also excellent preparation for most other Motive Power sector apprenticeships.	Program Location: ➤ Georgetown District ➤ M.M. Robinson, Burlington 2 part program begins in semester 1 with 2 credit transportation each semester + minimum 2 credit coop	Program Locations: ➤ White Oaks 2 part program begins in semester 2 with 2 credit transportation each semester + minimum 2 credit coop
Welding OYAP	Welding OYAP is a program specifically designed to help students make a smooth transition into their post-secondary education Welder / Welder Fitter apprenticeship. This also provides excellent preparation for the Manufacturing OYAP program or Welding Technician programs at college.	Program Location: Loyola 4 manufacturing credits + coop in semester 2	

TECHNOLOGICAL EDUCATION

Grade Nine

Integrated Technologies *Open Level TIJ10A, TIJ10B, TIJ10C, TXJ10D*

This course is an introduction to the technical shops, and computer labs. Students will design, develop and build products or services as well as prepare for further technological studies. Students will be introduced to the elements of technological design and a variety of tools and software to solve problems, complete projects, and strengthen their math, science and communication skills. Students will select from 1 of 4 'theme-packages'. Students will rotate through a variety of shops in packages A, B.C. Package D will be exclusively in cosmetology lab.

<i>Package</i>	<i>Area of Emphasis</i>	<i>Sample Projects/ Services</i>
<i>TIJ10A</i> <i>(Emphasis on hands on learning with introduction to design principles)</i>	<i>Transportation Technology</i> <i>Manufacturing Technology</i> <i>Construction</i>	<i>Design and construct a pinball machine</i> <i>Construct and fly a rocket and/or CO₂ car</i> <i>Dismantle a car</i>
<i>TIJ10B</i> <i>(A more theoretical engineering approach using Principles of Mathematics and Science)</i>	<i>Manufacturing Technology</i> <i>Design Technology</i> <i>Computer Engineering</i>	<i>Create and fly a rocket (study aerodynamic forces)</i> <i>Construct an electronic rocket launcher</i> <i>Design and construct a rom-bot</i> <i>CAD/CAM design and manufacture of jewellery and 3D puzzles</i>
<i>TIJ10C</i> <i>(Emphasis on Design with some hands on activities)</i>	<i>Design Technology</i> <i>Communication Technology</i>	<i>Design a dream house</i> <i>Create a stop-action animation video</i> <i>Make a radio commercial</i>
<i>TXJ10D</i> <i>(Exploring Hairstyling and Aesthetics)</i>	<i>Cosmetology Lab</i>	<i>An exploratory course that introduces students to concepts and skills related to hairstyling and aesthetics, including hair, nail, and skincare 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.</i>

Manufacturing Technology

Essential Program

TMJ109

This is a small group Technology course for students in the Essential Program and replaces French. Students will work on projects that will include design, planning and construction with various materials.

Please note: A machine/computer maintenance/repair fee of \$5.00 will be charged for every technology course taken in Grade 10, 11 and 12

Grade 10

Communications Technology

Grade 10, Communications Technology (Open) TGJ 20

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

Computer Technology

Grade 10, Computer and Information Science (Open) TIK 201

This course introduces students to computer science concepts. Students will learn about the stages in software design; the fundamental programming constructs of sequence, selection, and repetition; the functions of internal and external computer components; the relationship among networks, operating systems, and application software and their uses; and how programming languages evolve. Students will also develop an awareness of computer-related careers.

Grade 10, Computer Technology (Open) TEJ20

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 postsecondary pathways to careers in computer technology.

Prerequisite: None

Construction Technology

Grade 10, Construction Technology (Open) TCJ20W

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 postsecondary pathways leading to careers in the industry.

Prerequisite: None

Grade 10, Electrical Construction (Open) TCJ20E

Construction with emphasis on Electrical Construction

This is a great hands-on course where students learn about, among other things, residential wiring by constructing circuits on wooden frames made to simulate a cross-section of a real wall!! Students also learn about different tools and how to use them properly. Other projects include making a bottle lamp and a Receptacle tester which they can take home. An introduction to electronics is also taught through the making of an amplifier and/or other interesting circuits. Most students who have taken this course in the past have said they enjoyed it. Talk to the electricity teacher if you have any questions

Prerequisite: None

Hairstyling and Aesthetics

Grade 10, Hairstyling and Aesthetics

(Open)

TXJ2O

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

Manufacturing Technology

Grade 10, Manufacturing Technology

(Emphasis Metal Fabrication/Welding)

(Open)

TMJ2OU

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

Grade 10, Manufacturing Engineering Technology (Open)

TMJ2OM

(Emphasis on Machining and Computer assisted technology)

This project-based course introduces students to the scope of the manufacturing industry, the various components used in the design of products, the industrial tools and equipment used, and methods of manufacturing, including assembly-line production. Students will learn about technical drawing; preparation processes; manufacturing techniques; power, electronic, and quality control systems; careers in the manufacturing field; and the role of entrepreneurs in Canadian society.

Prerequisite: None

Technological Design

Grade 10, Technological Design

(Open)

TDJ2O

This course requires students to design and develop new and innovative products. Students will learn how to identify product requirements, what materials are best suited for their designs, how products are manufactured and how to tell if their products will work. Various ways to communicate ideas will be explored including technical drawing and model making. Students will use both manual drafting techniques as well as cutting edge 3D computer modelling tools to explore their design ideas. Possible projects include scale models designed in 3D and manufactured on a computer controlled milling machine, small house design and participation in a national design competition. Additional areas explored will include architecture and graphic design. This course is well suited to anyone interested in engineering, architecture, interior design or a manufacturing career and is an excellent primer for any of the Grade 11 Technological Design or Manufacturing courses.

Prerequisite: None

Transportation Technology

Grade 10, Transportation Technology (Automotive) (Open)

TTJ2OA

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

Grade 10, Transportation Technology (Small Engines) (Open)

TTJ2OD

Emphasis on Small Engines

This course requires students to build projects and to learn service procedures related to different modes of transportation. Students will learn about support systems for transporting people and products; measurement systems and methods; the analysis, design, and construction of a system to convert and make practical use of energy; communication skills; and transportation-related careers.

Prerequisite: None

Grade 11

Communications Technology

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

TGJ3O

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

Grade 11, Communications Technology (University/College)

TGJ3M

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

Grade 11, Communications Technology – TV, Video, Movie (University/College)

TGV3M

This course emphasizes television, movie and video production. Students will develop knowledge and skills as they design and produce various projects, both live and recorded. These areas may include TV, video, and movie production, both dramatic and documentary; audio production; and broadcast journalism. Students will explore many facets of production including scriptwriting, storyboarding, cinematography, lighting, sound, editing, DVD authoring, as well as acting for film and a study of the various genres of film and television. 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

Grade 11, Communications Technology – Print and Graphic Communication (University/College) TGG3M (Formerly part of Tech Design TDJ3EP)

Do you love cartoons and animation? Students will complete a series of animated sequences by exploring the basic principles of the animation process. They will learn basic character design and how to set a character in motion using traditional techniques as well as computer animation software. The basic principles of graphic design will be developed with a focus on creativity and the use of computer aided design software. Typical projects include corporate identities and desktop CD calendars. Students may produce a personal portfolio of design studies and finished projects. This course is well suited to anyone interested in pursuing graphic design or animation at the college level, or those who want to exercise their creative side.

Prerequisite: None

Computer Technology

Grade 11, Computer Engineering Technology (University/College)

TEJ3M

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

Grade 11, Computer & Information Science (University)

ICS 3U1

This course helps students examine computer science concepts. Students will outline stages in software development, define standard control and data structures, identify on- and off-line resources, explain the functions of basic computer components, and develop programming and problem-solving skills by using operating systems and implementing defined practices. As well as identifying careers in computer science, students will develop an understanding of the ethical use of computers and the impact of emergent technologies on society.

Recommended: A good standing in MPM1D1 or MPM2D1 and ENG1D1 or ENG2D1

Prerequisite: TIK2O1

Grade 11, Computer Technology (Workplace)

TEJ3E

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

Grade 11, Computer Technology – Electronics (University/College)

TEL3M

Electronic technology: Digital/Analog

Ever wondered how some of the electronic devices you are using work? Interested in constructing some interesting circuits! Then this hands-on project-based course is for you where both digital and analog circuits will be explored! Through the many circuits constructed in this class, students will not only have fun but also learn about many discrete components, industry standards and regulations as well as the impact that electronics technology has had on society. This is a locally developed course still offered at only a handful of schools in Ontario. See Mr. Lynds for more info.

Prerequisite: TEJ2O

Construction Technology

Grade 11, Construction Engineering Technology (College)

TCJ3C

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

Grade 11, Construction Technology (Workplace)

TCJ3E

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

Grade 11, Custom Woodworking**(Workplace)****TWJ3E**

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

Prerequisite: None**Grade 11, Electrical Construction****(Workplace)****TCE3E**

Construction Technology with emphasis on Electrical Construction

Not sure what you want to do after high school? Students in this class, among other things, wire an actual structure found only in room W123 following a floorplan wiring diagram done by them! Many aspects of residential wiring are learned through this hands-on activity. Students will also learn about motors by actually making one that works and can take home (or they can choose to do the “Smoke Test”). As well, students learn a bit about electronics by constructing a circuit such as the “Light Chaser”. Industry standards and codes will also be covered as well as health and safety issues, explore careers and opportunities in the trade, impact of electrical technology on society and the impact on the environment. Students interested in a coop or an apprenticeship should consider taking this course. Need more information? See the electrical teacher. **Prerequisite:** TCJ2OE

Hairstyling and Aesthetics**Grade 11, Hairstyling and Aesthetics****(Workplace)****TXJ3E**

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**Manufacturing Technology****Grade 11, Manufacturing Technology****(College)****TMJ3C**

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**Grade 11, Manufacturing Engineering Technology****(University/College)****TMJ3M**

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

Grade 11, Manufacturing Technology (Workplace) TMJ3E

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

Technological Design

Grade 11, Technological Design and the Environment (Architecture) (Open) TDJ3O

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

Grade 11, Technological Design (Architecture) (University/College) TDA3M

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 postsecondary studies in engineering, manufacturing, architecture, and construction. **Prerequisite:** None

Grade 11, Technological Design (Interior Decorating) (University/College) TDV3M

This course will introduce students to the principles and elements of design in the painting and decorating and interior design and decorating fields. Students will develop problem solving and design skills as well as practical skills through the completion of projects focusing on residential, space planning, colour psychology and commercial painting and decorating. They will also become aware of consumer, business and environmental issues in the development and marketing of products and services and explore the educational requirements of painting and decorating careers.

Prerequisite: None

Grade 11, Technological Design (Mechanical/Industrial Design) (University/College) TDM3M

This course examines the design, engineering and manufacture of the products we use every day. Students will research, design, build and assess products that meet specific human needs. Modern 3D computer modeling as well as traditional drawing and rendering techniques will be used. Students will have the opportunity to create models using Rapid Prototyping techniques and Computer Aided Manufacturing equipment. They will develop an awareness of environmental, societal, and cultural issues related to design, and will explore career opportunities in the field, as well as the college and/or university program requirements for them. This course is a great choice for students looking towards a career in engineering, industrial design, product design or manufacturing/machining.

Prerequisite: None

Transportation Technology

Choose ONE of the following Transportation Technology Courses

Grade 11, Transportation Technology - Automotive (College) TTJ3C1 (One Credit)

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

Grade 11, Transportation Technology - Automotive (College)**TTJ3C2 (Two Credit)**

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**Grade 11, Transportation Technology – Small Engines (College)****TTS3C**

This course examines the diverse types of land and marine vehicles and their individual systems found within industries. Students will acquire related trade knowledge and skills by identifying, troubleshooting, repairing, and testing systems as it pertains to industry standards and government regulations. In addition to developing employability and technical skills, they will explore the broad range of career opportunities within this sector. The expectations of this course will be met by emphasizing recreational and power equipment related to the small engine industry.

Prerequisite: None

Grade 12

Communication Technology

Grade 12, Communications Technology (University/College)**TGJ4M**

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**Grade 12, Communications Technology – Print and Graphic Design (University/College)****TGG4M****(Formerly Tech Design TDJ4EP)**

This course provides students with the opportunity to apply the principles and elements of design to the challenges of graphic design. Students will develop problem solving and design skills through the analysis and creation of graphics using computer design software. Examples of projects include, posters, dynamic web pages, menu and restaurant identities, postcards, product packaging and personal biography pages. Among others, subjects such as unity, rhythm, balance, emphasis, gestalt, creative use of typography and designing for print vs. the web will be explored. Students will become aware of graphic design careers and how to produce a professional portfolio of their work. This course is an excellent choice for anyone interested in pursuing design at the college level, or for anyone wishing to exercise their creative muscles. **Prerequisite:** TDJ3EP

Computer Technology

Grade 12, Computer Science**(University)****ICS4U**

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. **Prerequisite:** ICS3U

Grade 12, Computer Engineering Technology (University/College)**TEJ4M**

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

Grade 12, Computer Technology**(Workplace)****TEJ4E**

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

Grade 12, Computer Technology – Electronics**(University/College)****TEL4M**

This course is a continuation of the TGJ3MP but the circuits are quite different ! The circuits are larger and more complex but they are much more interesting. Students in this class construct (among others) a Digital Combination Lock as well as a Robotics circuit, both circuits require three breadboards each! A more in-depth approach to theory of discrete components and the use of test equipment is taken. This is a locally developed course still offered at only a handful of schools in Ontario. See Mr. Lynds for more info.

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

Construction Technology**Grade 12, Construction Engineering Technology (College)****TCJ4C**

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.

Prerequisite: Construction Engineering Technology, Grade 11, College Preparation

Grade 12, Construction Technology**(Workplace)****TCJ4E**

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

Grade 12, Custom Woodworking**(Workplace)****TWJ4E**

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

Grade 12, Electrical Construction Technology (Workplace) TCE4E

Construction Technology with emphasis on Electrical Technology

If you enjoyed the TCJ3ET course then you should like this one. This course continues with residential circuits, some that have not been covered in grade 11, at a more independent level where all circuits you do on your own. Basic understanding of pneumatics is covered as well as PLC (Programmable Logic Control) programming. Pneumatics and PLC's are used quite extensively in industrial applications such as robotics. Students will also be constructing an electronic circuit such as burglar alarm to gain a more thorough understanding of this area. Students interested in an apprenticeship should consider taking this course. See the electrical teacher for more information.

Prerequisite: TCJ3ET

Hairstyling and Aesthetics

Grade 12, Hairstyling and Aesthetics (Workplace) TXJ4E

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

Manufacturing Technology

Grade 12, Manufacturing Technology (College/University) TMJ4M

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 analyze 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 Technology, Grade 11, College Preparation

Grade 12, Manufacturing Technology (College) TMJ4C

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

Grade 12, Manufacturing Technology (Workplace) TMJ4E

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

Technological Design

Grade 12, Technological Design in the Twenty-first Century (Architecture) (Open) TDJ4O

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

Grade 12, Technological Design - Architecture (University/College) TDA4M

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

Grade 12, Technological Design – Interior Design (University/College) TDV4M

Learn about colour's fundamental impact on design. Students will gain an understanding of the interior design process from analysis to synthesis. The process of designing involves the study of colour psychology, traffic patterns, interior finishes, as well as fulfilling client needs by developing two and three dimensional presentation drawings for a residential design project. The students will study the functional, psychological and visual impacts of lighting, fibre sources, fabric construction, colouring and furniture finishes. Students will produce a personal portfolio of design studies and finished projects.

Prerequisite: TDJ3E

Transportation Technology

Choose ONE of the following Transportation Technology Courses

Grade 12, Transportation Technology - Automotive (College) TTJ4C1 (One credit)

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

Grade 12, Transportation Technology - Automotive (College) TTJ4C2 (Two credit)

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

Grade 12, Transportation Technology – Small Engines (College) TTS4C

This is a practical course for students considering using their mechanical skills to earn a living. In depth fundamentals relating to engine, drive train and chassis are covered for small engines, motorcycles, all-terrain vehicles, snowmobiles and personal watercraft.

Prerequisite: TTJ3EP