

Grimsby District Secondary School

Technological Education

Communications

Communications Technology

TGJ3M1

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.

CREDIT: 1

TYPE: University/College

GRADE: 11

Communications Technology

TGJ4M1

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.

CREDIT: 1

TYPE: University/College

GRADE: 12

PREREQUISITE: TGJ3M1 - Communications Technology

Computer Technology

Computer Engineering Technology

TEJ3M1

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.

CREDIT: 1

TYPE: University/College

GRADE: 11

Computer Engineering Technology

TEJ4M1

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.

CREDIT: 1

TYPE: University/College

GRADE: 12

PREREQUISITE: TEJ3M1 - Computer Engineering Technology

Construction

Construction Technology

TCJ201

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.

CREDIT: 1

TYPE: Open

GRADE: 10

Construction Engineering Technology

TCJ3C1

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.

CREDIT: 1

TYPE: College

GRADE: 11

Construction Engineering Technology

TCJ4C1

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.

CREDIT: 1

TYPE: College

GRADE: 12

PREREQUISITE: TCJ3C1 - Construction Engineering Technology

Design

Technological Design

TDJ2O1

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.

CREDIT: 1

TYPE: Open

GRADE: 10

Technological Design

TDJ3M1

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.

CREDIT: 1

TYPE: University/College

GRADE: 11

Technological Design

TDJ4M1

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.

CREDIT: 1

TYPE: University/College

GRADE: 12

PREREQUISITE: TDJ3M1 - Technological Design

Exploring Technology

Exploring Technologies

TIJ101

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.

CREDIT: 1

TYPE: Open

GRADE: 9

Healthcare

Health Care

TPJ3C1

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.

CREDIT: 1

TYPE: College

GRADE: 11

Health Care

TPJ3M1

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.

CREDIT: 1

TYPE: University/College

GRADE: 11

Health Care

TPJ4C

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 postsecondary destinations in the field.

CREDIT: 1

TYPE: College

GRADE: 12

PREREQUISITE: TPJ3C1 - Health Care

Health Care

TPJ4M1

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 postsecondary destinations in the field.

CREDIT: 1

TYPE: University/College

GRADE: 12

PREREQUISITE: TPJ3M1 - Health Care

Manufacturing

Manufacturing Technology

TMJ201

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.

CREDIT: 1

TYPE: Open

GRADE: 10

Manufacturing Technology

TMJ3C1

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.

CREDIT: 1

TYPE: College

GRADE: 11

Manufacturing Engineering Technology

TMJ3M1

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.

CREDIT: 1

TYPE: University/College

GRADE: 11

Manufacturing Technology: Welding

TMW3E1

This course allows students to develop knowledge and skills in welding processes. Areas of study will include various skills such as Mig welding, Stick welding, and torch cutting techniques. Also studied are fabrication and forming processes and blueprint reading it applies to the fabrication and welding industry. Students will develop an awareness of environmental and societal issues related to welding and will learn about pathways leading to careers in the industry.

CREDIT: 1

TYPE: Workplace

GRADE: 11

Manufacturing Technology

TMJ4C1

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.

CREDIT: 1

TYPE: College

GRADE: 12

PREREQUISITE: TMJ3C1 - Manufacturing Technology

Manufacturing Engineering Technology

TMJ4M1

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.

CREDIT: 1

TYPE: University/College

GRADE: 12

PREREQUISITE: TMJ3M1 - Manufacturing Engineering Technology

Manufacturing Technology: Welding

TMW4E1

This course allows students to continue developing their knowledge and skills in welding processes. The continuation of skills in Mig and Tig welding allows students to develop skills that will be used in the fabricating industry. In addition Plasma cutting and advanced fabrication techniques are studied. Students will expand their awareness of environmental and societal issues of career opportunities in the welding industry.

CREDIT: 1

TYPE: Workplace

GRADE: 12

PREREQUISITE: TMW3E1 - Manufacturing Technology: Welding

Transportation

Transportation Technology

TTJ2O1

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.

CREDIT: 1

TYPE: Open

GRADE: 10

Transportation Technology

TTJ3C1

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.

CREDIT: 1

TYPE: College

GRADE: 11

Transportation Technology: Vehicle Ownership

TTJ3O1

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.

CREDIT: 1

TYPE: Open

GRADE: 11

Transportation Technology

TTJ4C1

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.

CREDIT: 1

TYPE: College

GRADE: 12

PREREQUISITE: TTJ3C1 - Transportation Technology