

# WESTERN TECHNICAL - COMMERCIAL SCHOOL COURSE OUTLINE



<b>COURSE TITLE:</b>	Exploring Technologies	<b>CODE:</b>	TIJ101
<b>SUBJECT AREA:</b>	Tech	<b>RESOURCES:</b>	www.mfranzen.ca
<b>TEACHER NAME:</b>	Mr. Franzen	<b>DATE:</b>	Feb 2018
<b>PREREQUISITE:</b>	None (Open)	<b>COURSE COST MATERIAL FEE:</b>	None

## COURSE DESCRIPTION:

This course enables students to further explore and develop technological knowledge and skills introduced in the elementary science, technology, and Design programs. Students will be given the opportunity to develop solutions to various design challenges, fabrication of models or prototypes of those solutions, 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. Focus will be on project-driven, hands-on, supporting future related technology courses here at Western.

**COURSE DESTINATION:** Preparation for related courses such as: MANUFACTURING, COMPUTERS, ENGINEERING, COMMUNICATIONS, CONSTRUCTION, TECHNICAL DESIGN, TRANSPORTATION, and ROBOTICS

## COURSE UNITS:

Unit	Description	Length	Evaluation Strategies
1	CAREERS/SAFETY: Organization- routines, computers, and journals, Safety - room awareness, and procedures Careers - poster (school course areas and pathways)	3 Weeks	Journal, quiz/testing, feedback map and written assignments, poster, presentation, and file saving
2	DESIGN PROCESS - SPICE: Faulty towers (design, sketching, prototyping), Logo design - Illustrator colour & black/white, Project box - pattern making and marketing	2 Weeks	Journal, written assignments, calculations, idea generation, sketches, and finished project builds
3	MATERIALS, MACHINES, TOOLS, and PROCESS: Acubend project - acrylic plastics, Key ring holder - wood, Key ring accessory - metal	5 Weeks	Journal, quiz/testing, observation, idea generation, sketching, CAD DWGs, finished project builds
4	PROJECT RESEARCH, DESIGN, and BUILD: Bridge/Tower, Mag lev, Co2 dragster	7 Weeks	Journal, observation, process, ideas, sketching, CAD, research, projects
5	WEB PORTFOLIO: Showcase your work, projects, understanding, process, learning and present	1 Week	Web page, written feedback, pictures, and presentation

**OVERALL EXPECTATIONS:** By the end of the course students will...

in TECHNOLOGY FUNDAMENTALS:

- A1. demonstrate an understanding of the fundamental concepts and skills required in the planning and development of a product or service, including the use of a design process and/or other problem-solving processes and techniques;
- A2. demonstrate the ability to use a variety of appropriate methods to communicate ideas and solutions;
- A3. evaluate products or services in relation to specifications, user requirements, and operating conditions.

in TECHNOLOGY SKILLS:

- B1. use problem-solving processes and project-management strategies in the planning and fabrication of a product or delivery of a service;
- B2. fabricate products or deliver services, using a variety of resources.

in TECHNOLOGY, THE ENVIRONMENT, and SOCIETY:

- C1. demonstrate an awareness of the effects of various technologies on the environment;
- C2. demonstrate an awareness of how various technologies affect society, as well as how society influences technological developments.

in PROFESSIONAL PRACTICE and CAREER OPPORTUNITIES:

- D1. follow safe practices and procedures when using materials, tools, and equipment;
- D2. identify careers in various technological fields, and describe the educational requirements for them.

## CLASSROOM EXPECTATIONS

- Come to class on time and be prepared and willing to actively participate in every lesson.
- Ask the teacher for extra help if needed and treat others with respect and courtesy.
- Bring a 3-ring binder or equivalent with paper, pen, pencil, ruler, calculator, and minimum 2 GB flash memory stick.
- Distractions such as phones or MP3 players not to be used in class and internet use not to be abused.
- Take the initiative, be a team player, co-operative with peers, complete homework, and make your best effort.

## ATTENDANCE MISSED TESTS AND EVALUATIONS

- Bring a note from parents the day after an absence to explain the absence.
- Be aware that a mark of zero will be assigned to students who miss presentations, tests or assignments without a valid explanation. It is the student's responsibility to make arrangements, ahead of time, for any evaluations that are missed. If a student misses an evaluation for an unforeseen reason such as illness or family emergency, the student must bring a note signed by a parent or guardian and be prepared to write/make-up the evaluation immediately upon return to school.

## ACADEMIC INTEGRITY

- Plagiarism and/or copying will result in a mark of **zero** for everyone involved. Further action may be taken including suspension from school. Teachers will clearly define and discuss consequences of plagiarism with students at the beginning of each semester.

## LATE ASSIGNMENTS

- All assignments must be handed in to the teacher on the due date. Late marks will be deducted from assignments handed in past the due date but prior to the cut off date. A mark of zero will be given to the student if the assignment is handed in after the cut-off date.

## MISSED EXAMINATIONS

- Students are required to write all scheduled examinations. A student who misses any examination due to illness must present a medical note, stating that the doctor was aware that a medical reason prevented the student from writing the exam.

## TEACHING/ASSESSMENT/EVALUATION STRATEGIES

**Learning Activities:** Demonstrations, presentations, illustrations, tutorials, hands-on activities, computers, practical projects

**Culminating Activities:** Final practical project and portfolio presentation

## EVALUATION OF STUDENT ACHIEVEMENT

Student achievement is measured relative to curriculum expectations across four weighted Achievement Categories (Knowledge/Understanding, Thinking/Inquiry, Communication, and Applications).

**Term Work:** 70% (Knowledge/Understanding, Thinking/Inquiry, Communication, and Applications)

**Culminating Activities:** 30% Final practical project(s) and digital portfolio presentation

**Learning Skills:** including: Responsibility, Organization, Independent Work, Collaboration, Initiative, and Self-Regulation are evaluated on each Report Card as: **E** (excellent); **G** (good); **S** (satisfactory); or **N** (needs improvement).

WESTERN TECHNICAL-COMMERCIAL SCHOOL  
125 Evelyn Crescent, Toronto, Ontario M6P 3E3  
Telephone: 416-393-0500 - Department Extension: 20065  
For class journal, content, marks and resouces: [www.mfranzen.ca](http://www.mfranzen.ca),  
Best way to contact, is through e-mail: [Michael.Franzen@tdsb.on.ca](mailto:Michael.Franzen@tdsb.on.ca)

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**Teacher's Signature**

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**Student's Signature**

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**Parent's Signature**

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Student's Name Printed

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