

WESTERN TECHNICAL - COMMERCIAL SCHOOL

COURSE OUTLINE



COURSE TITLE: Construction Technology

CODE: TCJ3/4E1

SUBJECT AREA: Tech

RESOURCES: mfranzen.ca

TEACHER NAME: Mr. Franzen

DATE: Sept 2015

PREREQUISITE: None

**COURSE COST
MATERIAL FEE:** None

COURSE DESCRIPTION:

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. Students will focus on Electrical and how it relates to the other trades.

COURSE DESTINATION: CONSTRUCTION, TECHNOLOGY DESIGN, TRANSPORTATION, MANUFACTURING, ROBOTICS

COURSE UNITS:

Unit	Description	Length	Evaluation Strategies
1	Introduction to construction and general safety	2 Weeks	Procedures, routines, quiz, practical work, written assignments
2	Technical drawings, building codes and design	3 Weeks	Test, practical work, written assignments
3	Trade work - masonry, carpentry, electrical, plumbing, HVAC	3 Weeks	Quiz, practical work, written assignments, presentation
4	Building construction projects related to the trades	10 Weeks	Test, practical work, written assignments

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

- apply the design process to develop solutions, products, processes, or services in response to challenges or problems in construction technology;
 - describe the properties and application of building materials, and of construction techniques and processes;
 - describe the different technologies, materials, tools, and equipment applicable to construction technology;
 - identify building codes, regulations, and standards applicable to construction, including those for electrical, mechanical, and structural systems.
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- apply the design process to a variety of construction projects;
 - demonstrate an ability to use resources such as technical data, reports, charts, tables, and building codes, regulations, and standards;
 - demonstrate a general understanding of construction systems in terms of loads and stresses, structural members (shape, size, and placement), and the strength of the materials used for the foundation, floor, wall-framing, and roof systems found in residential and light construction projects;
 - demonstrate appropriate technical skills involving the use of construction tools, materials, and equipment;
 - apply mathematical and estimation skills in a variety of construction projects.
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- explain the effects of technological change in the construction industry on society and on the environment;
 - apply appropriate health and safety legislation; general shop and site safety rules; and rules specific to the use of materials, tools, and equipment;
 - describe careers in construction technology, identifying the skills, education, and training required for each;
 - identify and describe the employability skills required and the need for lifelong learning in the construction industry.

CLASSROOM EXPECTATIONS

- Come to class on time and be prepared and willing to actively participate in every lesson.
- Treat others with respect and courtesy.
- Ask the teacher for extra help if needed.
- Take the initiative, be a team player, co-operative with peers, complete homework, and make your best effort.
- A focus on student project-driven teams, learning and innovating to solve challenging problems and come up with working solutions, while gaining new knowledge, skills, experiences, and understanding of this field area.
- Bring a 3-ring binder with paper, pen, pencil, ruler, calculator, and minimum 1 GB flash memory stick.
- Hand all work in, to Instructor with last initial, first name, date, and a topic/title whether in paper or electronic format.

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: Written exam and project work

EVALUATION OF STUDENT ACHIEVEMENT

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

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

Culminating Activities: 30% Written exam and project work

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
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Best way to contact is through my E-mail: Michael.Franzen@tdsb.on.ca

Teacher's Signature

Student's Signature

Parent's Signature