

Construction Fundamentals - TCJ20

Course Information & Evaluation

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

<p>Overall Expectations</p> <p>Fundamentals</p> <p>A1. describe the components and systems of buildings, the properties of various building materials, and the processes in which those materials are used;</p> <p>A2. demonstrate an understanding of the safe and correct use of construction tools, equipment, and techniques;</p> <p>A3. use correct terminology to describe building components and construction materials, tools, equipment, and processes.</p> <p>Design, Layout, and Planning Skills</p> <p>B1. design construction projects, individually or in small groups, applying a design process to plan and develop the projects and other problem-solving processes to address various related problems and challenges;</p> <p>B2. use drawings to represent design ideas and solutions to technological challenges, and interpret drawings accurately when working on construction projects;</p> <p>B3. apply the mathematical skills required in the planning and building of construction projects.</p> <p>Fabrication, Assembly, and Finishing Skills</p> <p>C1. use tools, equipment, and techniques correctly and safely when preparing materials for a project;</p> <p>C2. use fabrication and assembly techniques safely, accurately, and in the correct sequence;</p> <p>C3. prepare surfaces and apply finishing products, trim, and hardware correctly and safely.</p> <p>Technology, the Environment, and Society</p> <p>D1. demonstrate an understanding of ways in which the construction industry affects the environment;</p> <p>D2. describe ways in which the construction industry affects society.</p> <p>Professional Practice & Careers</p> <p>E1. identify and follow health and safety regulations, standards, and procedures related to the construction industry;</p> <p>E2. identify career opportunities in the construction industry, and describe the training required for these careers.</p>	<p>Strands/Units Topics</p> <table border="1"> <tr> <td>1. Shop Procedure and Safety</td> <td>6. Site Planning and Blueprint Layout</td> </tr> <tr> <td>2. Power Tools/Machine Uses and Safety</td> <td>7. Identification of Housing Systems</td> </tr> <tr> <td>3. Project Planning and Cost Estimating</td> <td>8. Identifying Construction Techniques</td> </tr> <tr> <td>4. Cabinet Joint Techniques</td> <td>9. Basic Electrical Wiring and Plumbing Techniques</td> </tr> <tr> <td>5. Finishing Techniques</td> <td>10. Intro to CAD and CNC Router</td> </tr> <tr> <td></td> <td>11. Summative (x2)</td> </tr> </table> <p>Course Text and Reference Resources</p> <p>Online resources, and Technical resources</p> <p>Assessment & Evaluation Policy</p> <p>Refer to the attached SWL Assessment and Evaluation Policy April 2011</p> <p>Attendance Policy</p> <p>Students are responsible for catching up on class notes and completing any assignments or tasks involving equipment for which they were absent. <i>It is up to the students to ask the instructor what they missed when they return.</i> Parents will be contacted for any student who skips class. After three such skips, the student will be referred to the Vice-Principal.</p> <p>70% Formative Evaluation</p> <p>Student evaluation is based on the Overall Expectation found in the Ontario Curriculum using various forms, such as, but, not limited to, quizzes, tests, assignments, projects, presentations, safety practices, and activities.</p> <p>30% Summative Evaluation</p> <p>Each student will complete <u>two</u> summative projects representing 30% of their mark.</p> <p>Certain forms of these summative evaluations (exams, final tests, performance based tasks, etc.) are time sensitive. This means they must be completed at and within a specific time. Students must be present for these summative evaluations. Any absence will result in a mark of zero, unless validated by an official certificate. (ex. Medical Certificate). Students and parents will be informed well in advance of summative evaluation dates.</p>	1. Shop Procedure and Safety	6. Site Planning and Blueprint Layout	2. Power Tools/Machine Uses and Safety	7. Identification of Housing Systems	3. Project Planning and Cost Estimating	8. Identifying Construction Techniques	4. Cabinet Joint Techniques	9. Basic Electrical Wiring and Plumbing Techniques	5. Finishing Techniques	10. Intro to CAD and CNC Router		11. Summative (x2)
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<p>Classroom Expectations</p> <p>1. Students are expected to be willing and active participants in all course activities. This includes completing all assignments both on time and with sufficient effort, and honoring all of their commitments.</p> <p>2. Students will contribute to a positive learning environment by: • practicing safe work habits at all times • being respectful to others and respecting their property • treating all equipment with care and ensuring proper knowledge of its operation • reporting unsafe or hazardous situations to the instructor • reporting software or equipment problems to the instructor • cleaning up their workspace and putting everything away before they leave the class* Electronic storage devices, headphones and open toed shoes cannot be used in the shop areas * No food or drink is permitted in any of the equipment areas.</p>													