

## Construction Fundamentals – TCJ3/4C (4 credits)

### Course Information & Evaluation

The SHSM Construction program at Sir Wilfrid Laurier is a competency based program where students will have the opportunity for hands on training. The students will be involved in all aspects of the construction of a new house from the initial design through to the end product. These students will have the opportunity to use skills in construction including carpentry, electricity, dry walling, plumbing and roofing. This course will provide students with an introduction to residential construction, key building materials, housing terminology and building code identification. Regulations and standards applicable to building construction will be a focus in the course. Upon completion of the course, students will have identified the employability skills and educational needs required for a career in many areas of construction.

*PREREQUISITE: Course using construction tools([http://www.ocdsb.ca/programs/sec/SpecialHighSkillsDocs/SHSM\\_Construction.pdf](http://www.ocdsb.ca/programs/sec/SpecialHighSkillsDocs/SHSM_Construction.pdf))*

<p><b>Overall Expectations</b></p> <p><b>Fundamentals</b></p> <p>A1. demonstrate an understanding of natural and manufactured materials, construction processes, and building components;</p> <p>A2. demonstrate an understanding of building codes, regulations, and standards that govern residential and light commercial construction projects;</p> <p>A3. demonstrate an understanding of the systems in residential and light commercial buildings;</p> <p>A4. demonstrate an understanding of design considerations for residential and light commercial buildings;</p> <p>A5. use construction terminology correctly.</p> <p><b>Design, Layout, and Planning Skills</b></p> <p>B1. apply a design process, other problem-solving techniques, and related concepts and principles, as appropriate, to plan construction projects and develop solutions for construction problems and challenges;</p> <p>B2. create and interpret drawings of residential and light commercial construction projects;</p> <p>B3. determine, use, and communicate accurate technical data for construction projects;</p> <p>B4. plan systems for residential and/or light commercial buildings;</p> <p>B5. apply the mathematical skills required in designing, laying out, and preparing estimates for residential and light commercial construction projects.</p> <p><b>Fabrication, Assembly, and Finishing Skills</b></p> <p>C1. demonstrate appropriate technical skills, including the safe use of construction tools, equipment, and materials;</p> <p>C2. demonstrate safe and accurate building techniques;</p> <p>C3. apply various finishes to complete residential and light commercial construction projects.</p> <p><b>Technology, the Environment, and Society</b></p> <p>D1. identify and evaluate measures that can be taken to conserve resources on construction projects;</p> <p>D2. explain how the construction industry and society affect each other.</p> <p><b>Professional Practice &amp; Careers</b></p> <p>E1. demonstrate an understanding of and comply with health and safety regulations and practices specific to the construction industry;</p> <p>E2. demonstrate an understanding of careers in the construction industry and the education, training, and workplace skills required for these careers.</p>	<p><b>Strands/Units Topics</b></p> <table border="1" style="width: 100%;"> <tr> <td style="width: 50%;">           1. Shop Procedure and Safety            2. Power Tools/Machine Uses and Safety            3. Surveying            4. Blueprint Reading         </td> <td style="width: 50%;">           5. Building Codes and Regulations            6. Residential Construction and Safety            7. Purchasing a Home            8. Careers in the Industry            9. Summative (x2)         </td> </tr> </table> <p><b>Course Text and Reference Resources</b></p> <p>Carpentry, First Canadian Edition. Naught, M. Vogt, F. Online resources, and Technical resources</p> <p><b>Assessment &amp; Evaluation Policy</b></p> <p>Refer to the attached SWL Assessment and Evaluation Policy April 2011</p> <p><b>Attendance Policy</b></p> <p>Students are responsible for catching up on class notes and completing any assignments or tasks involving equipment for which they were absent. <b><i>It is up to the students to ask the instructor what they missed when they return.</i></b> Parents will be contacted for any student who skips class. After three such skips, the student will be referred to the Vice-Principal. To many missed classes will result in credit loss.</p> <p><b>70% Formative Evaluation</b></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><b>30% Summative Evaluation</b></p> <p>Each student will complete <u>two</u> summative projects representing 30% of their mark. 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 <u>must</u> 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> <p><b>Other information:</b></p> <ol style="list-style-type: none"> <li>Sir Wilfrid Laurier as a host school is working in partnership with Minto Developments and the Ottawa-Carleton Home Builders Association.</li> <li>Students will have the opportunity to make direct contact with local trades people.</li> <li>Students will have the opportunity to register with the Ontario Youth Apprenticeship Program (O.Y.A.P).</li> <li>Students will be required to purchase their own safety boots, hardhats and tool kit at an approximate cost of \$150.00 They will receive a rebate up to approximately \$150 from O.Y.A.P.</li> <li>Transportation to and from the work site each day is the responsibility of each student.</li> </ol>	1. Shop Procedure and Safety 2. Power Tools/Machine Uses and Safety 3. Surveying 4. Blueprint Reading	5. Building Codes and Regulations 6. Residential Construction and Safety 7. 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<p><b>Classroom Expectations</b></p> <ol style="list-style-type: none"> <li>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.</li> <li>Students will contribute to a positive learning environment by:           <ul style="list-style-type: none"> <li>• practicing safe work habits at all times</li> <li>• being respectful to others and respecting their property</li> <li>• treating all equipment with care and ensuring proper knowledge of its operation</li> <li>• reporting unsafe or hazardous situations to the instructor</li> <li>• reporting equipment problems to the instructor</li> <li>• cleaning up their workspace and putting everything away before they leaving*</li> </ul>           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.         </li> </ol>			