

**COURSE FAB2020: PRINT READING****Level:** Intermediate**Theme:** Materials and Structures**Prerequisite:** None**Description:** Students develop basic skills in reading and interpreting working drawings to prepare a bill of materials and sequence of operations.**Parameters:** Access to appropriate print resources and to instruction from an individual with specialized training in print reading.**Curriculum and Assessment Standards**

General Outcomes	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> <li>• identify and describe the principal components of a print</li> <li>• demonstrate basic print reading skills</li> </ul> <ul style="list-style-type: none"> <li>• demonstrate basic competencies.</li> </ul>	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> <li>• a written or oral response that identifies the correct use of lines, symbols, dimensions and notes on a working drawing</li> <li>• the accurate identification of materials, sizes and fabrication process given a working drawing of a machine part, weld, structure or system.</li> </ul> <p><i>Assessment Tool</i>  <i>Response Assessment: Print Reading Applications, FAB2020-1</i></p> <p><i>Standard</i>  <i>Response rating of 2</i></p> <ul style="list-style-type: none"> <li>• observations of individual effort and interpersonal interaction during the learning process.</li> </ul> <p><i>Assessment Tool</i>  <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>20</p> <p>80</p> <p>Integrated throughout</p>

**COURSE FAB2020: PRINT READING (continued)**

Concept	Specific Outcomes	Notes
<p>Orientation</p> <ul style="list-style-type: none"> <li>• Types of Drawings</li> <li>• Lines</li> <li>• Dimensions</li> <li>• Symbols</li> <li>• Fasteners</li> </ul>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• describe the types of drawings that are used to visualize an object pictorially and orthographically</li> <li>• identify and describe the types of lines commonly found on a drawing; e.g.:               <ul style="list-style-type: none"> <li>– object</li> <li>– hidden</li> <li>– centre line</li> <li>– dimension</li> </ul> </li> <li>• research dimensioning systems used to identify:               <ul style="list-style-type: none"> <li>– linear dimensions</li> <li>– angular dimensions</li> <li>– limits, fits and tolerance</li> </ul> </li> <li>• identify the symbols used to describe:               <ul style="list-style-type: none"> <li>– types of materials</li> <li>– structural shapes</li> <li>– seams and joints</li> <li>– fabrication processes</li> </ul> </li> <li>• read and interpret symbols denoting weld types and structural shapes</li> <li>• identify the types of threaded fasteners and methods of representation; e.g.:               <ul style="list-style-type: none"> <li>– detailed</li> <li>– schematic</li> </ul> </li> <li>• identify the types of non-threaded fasteners and methods of representation; e.g.:               <ul style="list-style-type: none"> <li>– detailed</li> <li>– symbols.</li> </ul> </li> </ul>	<p>This course can be taught independently or by integrating it with other courses in welding, sheet metal or machining.</p> <p>Examine symbols used on electrical, plumbing, heating, machining and welding drawings.</p>
<p>Planning and Management</p>	<ul style="list-style-type: none"> <li>• explain how prints are used to create a:               <ul style="list-style-type: none"> <li>– bill of materials</li> <li>– cutting list</li> <li>– schedule of operations.</li> </ul> </li> </ul>	

**COURSE FAB2020: PRINT READING (continued)**

Concept	Specific Outcomes	Notes
<p>Implementation</p> <ul style="list-style-type: none"> <li>• Print Reading</li> </ul>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> <li>• match pictorial and orthographic drawings that have:               <ul style="list-style-type: none"> <li>– a surface parallel to the viewing plane</li> <li>– hidden edges or surfaces</li> <li>– inclined and oblique surfaces</li> <li>– curved surfaces and holes</li> </ul> </li> <li>• read and interpret multiview prints to determine object sizes, shapes and fabrication specifications</li> <li>• read and interpret the size, type and location of threaded and non-threaded fasteners</li> <li>• prepare a list of materials and sequence of machine/tool operations from a given print.</li> </ul>	
<p>Assessment</p> <ul style="list-style-type: none"> <li>• Quality Control</li> <li>• Career Preparation</li> </ul>	<ul style="list-style-type: none"> <li>• outline the importance of accurate prints and print reading skills to ensure high standards of quality and productivity</li> <li>• prepare a record of completed activities within a portfolio.</li> </ul>	

