

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

**ACADEMIC AFFAIRS**

Course Number: MET-100 Department: Mechanical Engineering  
Technology  
Course Title: Essentials for Manufacturing Technicians Semester: Fall Year: 2016

**Objectives/Competencies**

<b>Course Objective</b>	<b>Competencies</b>
1. Demonstrate an intermediate level of knowledge of engineering drawings.	<ul style="list-style-type: none"><li>• Line conventions pertaining to print interpretation.</li><li>• Title blocks &amp; parts lists.</li><li>• Geometric terms and conventions.</li><li>• Multiview drawings</li><li>• Sections views</li><li>• Auxiliary views</li><li>• Screw thread representation</li><li>• Dimensioning</li><li>• Tolerancing</li><li>• Machining specifications &amp; drawing notes.</li><li>• Surface Texture Symbols</li><li>• Drawing revision systems</li><li>• Detail and assembly drawings</li><li>• Welding prints</li></ul>

Course Objective	Competencies
<p>2. Demonstrate the ability to inspect machined parts by using engineering drawings to determine inspection points.</p> <p>3. Demonstrate the ability solve shop math problems</p> <p>4. Demonstrate a fundamental understanding of computer hardware and software including creating excel spread sheets to solve shop math problems</p> <p>5. Create a working resume and develop interviewing skills.</p>	<ul style="list-style-type: none"> <li>• Interpret an engineering drawing for dimensional accuracy.</li> <li>• Use basic measurement devices such as rulers</li> <li>• Use traditional measuring devices such as dial calipers and micrometers.</li>   <li>• Use Fractions</li> <li>• Perform adding and subtracting of negative numbers.</li> <li>• Solve basic algebra equations</li> <li>• Solve basic trigonometry problems.</li>   <li>• Demonstrate a knowledge of computer hardware basics: (input, output, processing, and storage)</li> <li>• Demonstrate a knowledge of computer software basics: (systems, applications, and productivity)</li> <li>• Use Excel to solve machining formulas</li>   <li>• Demonstrate Resume writing skills such as Career Objective, Skills gained through education, Skills gained through work experience, references</li> <li>• Demonstrate interviewing skills such as proper interview attire, researching a company, typical interview questions.</li> </ul>