

**Program Outcome Guide**

*\*Organizational unit that exists to assist learners in achieving specific learning outcomes.*

<b>Program: AAS Mechanical Engineering Technology</b>	<b>Date: July 15, 2014</b>
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<b>Planning Team Members:</b> Margaret Spivey, Adam Bridendolph	<b>Program Purpose:</b> To prepare students for an entry level position in the field of mechanical engineering technology

<b>Program Prerequisites</b> <i>What must the student be able to do before engaging in work?</i>	<b>Courses</b> <i>What learning experiences (courses) are necessary to prepare the student?</i>	<b>Capstone Assessment Tasks</b> <i>What can students do in this program to show evidence of the intended outcomes?</i>	<b>Intended Outcomes</b> <i>What will students be able to do "out there" as a result of this program?</i>
<ul style="list-style-type: none"> <li>• Pass basic reading and mathematics tests</li> <li>• Know how to use a computer</li> <li>• Know how to navigate within the computer interface</li> <li>• Know how to find and save files</li> <li>• Know what a mechanical engineer/technician does</li> <li>• Have a basic understanding of engineering design</li> <li>• Have a strong attention to detail</li> </ul>	EGT 101 – Computerized Spreadsheets for Engineers	<p>Student will be able to provide a CAD portfolio that demonstrates the following:</p> <ul style="list-style-type: none"> <li>• Skill in using the software and computer.</li> <li>• Student will be able to take an engineering design problem from concept through finished product.</li> <li>• Student will understand and be able to communicate in the language that computer-aided design drafters use to speak with one another.</li> <li>• Students will be able to create a resume, a logo, and a variety of architectural and mechanical drawings.</li> </ul> <p>Student will be able to provide an engineering workbook created using spreadsheet software to solve a real-world engineering problem. This workbook will contain professional formatting, various user-defined and built-in functions, macros, formulas, tables, charts, and custom buttons necessary to solve a common engineering problem.</p> <p>Student will be able to provide various handwritten and electronic engineering calculations developed using a professional GFSA (Given-Find-Solution-Answer) format that is commonly used in the engineering industry.</p> <p>Student will be able to provide a prototype of a mechanical part or assembly that he/she designed using 3D CAD software.</p> <p>Student will be able to provide a mechanical part that he/she machined using CNC programming.</p>	<ul style="list-style-type: none"> <li>• Students will be able to apply for an entry level position at an engineering firm or manufacturing facility</li> <li>• Students will be able to transfer to an applied engineering technology/manufacturing baccalaureate degree major</li> <li>• Students will have all the skills necessary to function as a contributing member of an engineering team.</li> <li>• Students will be able to apply current knowledge and practices to solve specific technical problems.</li> <li>• Students will be able to create, modify, and apply current industry standards to CAD drawings.</li> <li>• Students will be able to design, troubleshoot, and maintain basic mechanical systems.</li> <li>• Students will be able to develop, run, and troubleshoot basic CNC programs.</li> </ul>
	EGT 136 – Mechanics		
	EGT 231 – Strength of Materials		
	EGT 234 – Machine Design		
	CAD 152 – Computer-Aided Design I		
	CAD 153 – Computer-Aided Design II		
	EGT 234 – Fluid Power		
	INT 110 – Fundamentals of Electricity		
	EGT 150 – Introduction to CNC Programming		
	INT 113 – Instrumentation and Process Control I		