

Trades Technologies - Program Learning Outcomes

	Program Learning Outcomes	Student Learning Outcomes	Measure of Assessment and Criteria for Success
1.	Students will demonstrate the ability to apply basic welding and cutting principles to effectively use welding equipment in residential and light commercial applications.	<ul style="list-style-type: none"> • Students will demonstrate the ability to oxy-fuel and plasma-arc cut metals of varying thickness • Students will demonstrate the ability to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes. • Students will demonstrate the ability to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions. • Students will demonstrate the ability to perform GTAW fillet and groove welds with various electrodes and filler materials. 	<p>80% of advanced welding students will score a “B” or higher on comprehensive welding projects.</p> <p>90% of employers will indicate satisfaction with the technical skills of welding graduates.</p>
2.	Students will demonstrate knowledge of the basic skills necessary for installing and servicing residential and light commercial heating and air conditioning systems.	<ul style="list-style-type: none"> • Students will demonstrate the ability to identify refrigeration systems and components, explain the refrigeration process, and use the tools and instrumentation of the trade. • Students will be able to explain the basic oil, gas, and electrical heating systems and describe the major components of a heating system. • Students will demonstrate the ability to use psychometrics, manufacturer specifications, and test instruments to determine proper system operation. • Students will demonstrate the ability to perform routine preventive maintenance tasks, maintain records, and assist in routine HVAC repairs. 	<p>80% of advanced electrical students will score a “B” or higher on comprehensive wiring projects.</p> <p>90% of employers will indicate satisfaction with the technical skills of electrical graduates.</p>

3.	Students will demonstrate knowledge of the basic skills necessary for installing and maintaining residential and light commercial electrical/electronic systems.	<ul style="list-style-type: none"> • Students will demonstrate the ability to construct, verify, and analyze simple DC/AC circuits. • Students will demonstrate the ability to properly install conduits, wiring, and electrical distribution equipment associated with basic electrical installation. • Students will demonstrate the ability to properly select, connect, and troubleshoot motors and control circuits. 	<p>80% of advanced AHR students will score a “B” or higher on comprehensive HVAC installation and maintenance projects.</p> <p>90% of employers will indicate satisfaction with the technical skills of AHR graduates.</p>
4.	Students will demonstrate knowledge of the basic carpentry skills necessary to plan and construct light residential projects.	<ul style="list-style-type: none"> • Students will demonstrate the ability to identify hand and power tools, common building materials, and basic construction methods. • Students will demonstrate the ability to safely layout light building projects. • Students will demonstrate the ability to perform basic framing skills with supervision. • Students will demonstrate the ability to safely install various interior trim and finishes in a residential building with supervision. 	<p>80% of students in advanced carpentry courses will earn a “B” or higher on final course grades.</p> <p>90% of employers will indicate satisfaction with the technical skills of Carpentry graduates.</p>