

## RTTT Career and Technical Education STEM Program Descriptions

<b>Program Title</b>	Automation and Production Technology								
<b>CTE Courses and Descriptions</b>	<p><b><u>Automation and Production Technology 1</u></b> - This course includes instruction in the fundamentals of automation, manufacturing, and engineering technologies. Students will demonstrate a proficiency in the use of various mechanisms such as levers and linkages, power transmission systems, pulley systems and gear drives, and v-belt and chain drives.</p> <p><b><u>Automation and Production Technology 2</u></b> - This course includes instruction in the fundamentals of automation, manufacturing, and engineering technologies. Students will demonstrate proficiency in the ability to read and accurately interpret blueprints and schematics, in the use of quality assurance methods and quality control concepts, and demonstrate an understanding of thermal technology.</p> <p><b><u>Automation and Production Technology 3</u></b> - This course includes instruction in the fundamentals of automation, manufacturing, and engineering technologies. Students will demonstrate proficiency in generating and interpreting computer-aided drawings, using measurement tools, instruments and testing devices, demonstrate an understanding of AC/DC electrical and electrical control, and an understanding of fluid power.</p> <p><b><u>Automation and Production Technology 4</u></b> - This course includes instruction in the fundamentals of automation, manufacturing, and engineering technologies. Students will demonstrate proficiency in computer aided manufacturing and flexible manufacturing planning and control, computer control and robotics, and demonstrate the ability to properly identify, organize, plan, allocate resources, document and produce a mass-produced product.</p>								
<b>Integrated Core Course(s)</b>	Geometry								
<b>Teacher Certification(s)</b>	AUTO PROD 7G ENG 7 G ELECTRONIC @7 G I ART-TEC 1 @2								
<b>Industry Certification(s)</b>	Certified Production Technician (Manufacturing Skills Standards Council – MSSC)								
<b>Number of Articulated Credits</b>	15								
<b>Implementation Costs</b>	<p>Start-up of Automation and Production Technology Program (24 Students):</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Equipment</td> <td style="text-align: right;">\$223,277.00</td> </tr> <tr> <td>General Lab Equipment/Furnishings</td> <td style="text-align: right;">91,356.00</td> </tr> <tr> <td>Consumables</td> <td style="text-align: right;">1,500.00</td> </tr> <tr> <td><b>TOTAL</b></td> <td style="text-align: right;"><b>\$316,133.00</b></td> </tr> </table>	Equipment	\$223,277.00	General Lab Equipment/Furnishings	91,356.00	Consumables	1,500.00	<b>TOTAL</b>	<b>\$316,133.00</b>
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<b>Recommended Feeder Program/Course(s)</b>	None								