

# Blueprint for Instruction and Assessment

## Automation and Robotics

48.0500.20



Domain	Related Standards	Instructional Time
<b>Domain 1</b> Mechanical Properties	<b>STANDARD 2.0</b> PERFORM ELECTRICAL AND ELECTRONIC TASKS <b>STANDARD 3.0</b> ANALYZE HYDRAULIC AND PNEUMATIC SYSTEMS <b>STANDARD 5.0</b> DESCRIBE THE OPERATION AND USE OF VARIOUS FORMS OR ELECTRICAL MOTORS <b>STANDARD 6.0</b> PERFORM MECHANICAL SYSTEMS LINKAGES TASKS	40-50%
<b>Domain 2</b> Automation and Programming	<b>STANDARD 4.0</b> ANALYZE PROGRAMMABLE LOGIC CONTROLLER (PLC) SYSTEMS <b>STANDARD 10.0</b> APPLY SENSOR SOLUTIONS <b>STANDARD 13.0</b> DEMONSTRATE SAFE AND PROPER USE OF ELECTRONIC AND OTHER LABORATORY EQUIPMENT, TOOLS, AND MATERIALS	25-30%
<b>Domain 3</b> Industrial Applications	<b>STANDARD 7.0</b> PERFORM DRAFTING TASKS <b>STANDARD 8.0</b> IDENTIFY INDUSTRIAL ROBOT TYPES AND THE TASKS THEY PERFORM <b>STANDARD 9.0</b> EXAMINE DATA COMMUNICATION METHODOLOGIES <b>STANDARD 11.0</b> DESCRIBE COMMON MANUFACTURING PROCESSES IN AUTOMATION	25-30%
<b>Domain 4</b> Innovation	<b>STANDARD 1.0</b> EXAMINE THE IMPACT OF NEW TECHNOLOGIES ON AUTOMATION AND ROBOTICS <b>STANDARD 12.0</b> DEVELOP ROBOTICS APPLICATION SYSTEMS	5-10%

Content domains are bodies of knowledge, skills, or abilities to be taught and assessed. They illustrate the relationship among technical standards, instructional time, and student success on the Technical Skills Assessment. This blueprint corresponds with the technical standards endorsed on January 27, 2021.

