

ROBOTICS II ARTICULATION

Pierce County Careers Connection Dual Credit Articulation Agreement

Upon completion of a full year of high school or equivalent to the following competencies:

□	MEASUREMENT TRON 114
	-Using industry-relevant equipment and to industry standards of time and accuracy, measure electrical voltage, current and resistance.
	-Using industry-relevant equipment and to industry standards of time and accuracy, determine the dimensions of a physical object.
	-Independently and safely select and handle precision measurement tools in the course of work, identifying problems with tool selection, set-up and handling and knowing how/when to escalate.
	-Using industry standards of time and accuracy, convert measurement data between systems of units.
	PRINT READING AND DOCUMENTATION TRON 127
	-To industry standards of time and accuracy compare and contrast the types of lines used in technical drawings.
	-Given an object, create a three-view sketch to industry standards of time and detail.
	-To industry standards of time and accuracy, transfer measurement parameters from the measurement device to drawing of the object.
	-Interpret common GD&T specifications on drawings such as to tolerancing symbols, tolerance zones, modifiers and limitations. Understands part requirements and is able to interpret GD&T specs including simultaneous requirements and multiple single-segment tolerances.
	-Produce a documentation package for an assembly in a lab, to industry specs of time, accuracy and presentation.
	INDUSTRIAL ROBOTICS I TRON 211
	-Using industry-relevant equipment and to industry standards of time and accuracy,, interface a PLC in order to automate a mechatronic process.

	-Using industry-relevant equipment and to industry standards of time and accuracy, utilize a PLC to manage pneumatic energy.
	-Using industry-relevant equipment and to industry standards of time and accuracy, fully document a PLC program.
	-To industry standards, fully document a program to include header information and comments relating to the functionality and interfacing.
	INTRODUCTION TO CNC MACHING TRON 217
	-To industry standards of safety, timeliness and accuracy, attach a node to an IP network.
	-To industry standards of safety, timeliness and accuracy, determine connectivity between node and server.
	-Discuss methods used to convert mechanical drawing data into a CNC program.
	-Compare the advantages and techniques of additive versus subtractive manufacturing.
	-Identify basic techniques, concerns and tools that would be used with steel material, including the ability to interpret markings on steel pieces.
	-Identify basic polymer and composite processing techniques, including storage and handling considerations.
	-Identify basic techniques, concerns and tools that would be used with aluminum materials, including the ability to interpret markings on aluminum pieces.

A student earning a “C” grade or better may earn college credit at the following college:

<u>College</u>	<u>Course</u>	<u>Credits</u>
Bates Technical College	TRON 114	4
	TRON 127	4
	TRON 211	5
	TRON 217	3