Indiana CTE Next Level Programs of Study

Principles of Industry 4.0 - Smart Manufacturing (2025)

Industry 4.0	1	Identify the components of the Industrial Internet of Things (IIoT). 7220.D1.1
	2	Recognize that IIoT is the building block for Smart Manufacturing and Digital Integration. 7220.D1.2
	3	Recognize how equipment monitoring plays a major role in predictive maintenance, lean manufacturing, and quality. 7220.D1.3
	4	Demonstrate how Industry 4.0 concepts are changing the manufacturing world. 7220.D1.4
	5	Execute basic setup, adjustment & operation of automated machines that may include CNC, robotics, 3D Printers, laser engraving, etc. 7220.D1.5
	6	Discuss multiple aspects of industrial prints/drawings that are used in manufacturing. 7220.D1.6
	7	Demonstrate an understanding of technical math, US customary, metric system, and metrology. 7220.D1.7
	8	Recall content pertaining to General Industrial Safety to successfully obtain the OSHA 10 Hour General Industry Certification. 7220.D1.8
	9	Recall fundamental content to meet/exceed the cut-score for the SACA (Smart Automation Certification Alliance) C-101 Certified Industry 4.0 Associate - Basic Operations - Silver Certification. 7220.D1.9
	10	Demonstrate skills to obtain the SACA C-101 Certified Industry 4.0 Associate - Basic Operations - Gold Certification at 100% of skill standard. 7220.D1.10
Career Navigation	1	Explore career opportunities related to the program of study and understand how they relate to the global economy and marketplace. 7220.D2.1
	2	Understand the specialized skills needed for different career opportunities related to the program of study. 7220.D2.2
		Examine licensing, certification, and credentialing requirements for different career opportunities related to the program of study. 7220.D2.3

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	4	**Identify a career goal and develop an action plan, including opportunities available while in high school, for obtaining the specialized skills and credentials needed for a career related to the program of study.** 7220.D2.4
Leadership and Employability Skills	1	**Demonstrate professionalism by meeting expectations of promptness, attendance, being prepared, completing tasks, and following safety procedures.** 7220.D3.1
	2	**Demonstrate the skills needed to successfully collaborate within teams, departments, and organizations.** 7220.D3.2
	3	**Demonstrate an awareness and understanding of responsible, ethical, and professional networking.** 7220.D3.3
	4	**Examine personal, wellness, and stress management strategies.** 7220.D3.4
College and Career Readiness Skills	1	**Demonstrate computer literacy skills and basic computer functions.** 7220.D4.1
	2	**Communicate clearly, effectively, and with reason through speaking, writing, using visuals, and active listening in formal and informal settings.** 7220.D4.2
	3	**Demonstrate decision-making and problem-solving skills using critical thinking and relevant math and data knowledge.** 7220.D4.3
	4	**Demonstrate research, study skills, and self-learning strategies needed to be successful in a career pathway.** 7220.D4.4