

Scope and Sequence Welding & Metal Fabrication

Academic Subjects – Career success and postsecondary education success require the same level of college prep coursework. The Pennsylvania Department of Education’s (PDE) focus is to ensure that every student is prepared for college and a career. Academic courses such as applied math or general science cannot be listed on the program’s scope and sequence. PDE’s goal is to have all students perform at the competent or advanced level on the PSSA, and earn the Pennsylvania Skills Certificate on the end-of-program assessment.

	SECONDARY				POSTSECONDARY based on PENN COLLEGE OF TECHNOLOGY			
	Ninth Grade	Tenth Grade	Eleventh Grade	Twelfth Grade	Semester One	Semester Two	Semester Three	Semester Four
Technical Units		Welding safety and Oxyacetylene welding and Cutting Shield Metal Arc Welding Hand and Power Tools Plasma Arc Cutting Job Seeking/Keeping Skills	Shield Metal Arc Welding Gas Metal Arc & Flux Core Arc Welding Hard Surfacing w/Shield Metal Arc Blueprint Reading Air Carbon Arc Gouging Basic Layout & Construction OSHA- Occupational Health and Safety Job Seeking/Keeping Skills	Gas Tungsten Arc Welding Pipe Welding Metallurgy Work Based Learning Skills		CSC 110: Intro to Info Technology QAL 237: Nondestructive Testing I WEL 120: Gas Metal Arc I WEL 124: Gas Metal Arc II WEL 123: Gas Tungsten Arc I WEL 129: Gas Tungsten Arc II	QAL 247: Nondestructive Testing II WEL 210: Flux- Cored and Sub Arc I WEL 213: Gas Gungsten Arc III WEL 214: Flux- Cored and Sub Arc II WEL 219: Gas Tungsten Arc IV WEL 240: Basic CNC Programming	WEL 230: Shielded Metal Arc III WEL 234: Shielded Metal Arc V WEL 247: Welding Design WEL 233: Shielded Metal Arc IV/Pipe Welding WEL 239: Shielded Metal Arc VI/Pipe Welding WEL 248: Robotic Welding
English	College Prep English I	College Prep English II	College Prep English III	College Prep English IV	ENL 111: English Comp I	ENL 201: Technical & Professional Communication		
Math	Algebra I	Algebra II	Geometry	College Prep Math (recommended)	MTH 124: Technical Algebra			

					& Trig I MTH 180: College Algebra and Trig I			
Science	Biology	Chemistry	Physics					
Humanities	Civics	American History	World Studies					ECO 111: Principles of Macroeconomics
Other Required Courses/ Electives	Foreign Language I (recommended)	Foreign Language II (recommended)			EDT 107: Blueprint Reading	FIT: Elective: Fitness		