



## Metal Fabrication

### Available Certifications:

OSHA Certification

ABC Core Registration

NCSZ Lift Truck Operator

### Complete Task List:

Task Number	Description	Hours	Level
<i>*Local Task List</i>			
VA100	ORIENTATION		
VA101	Identify School rules & layout. (Handbook pg. 9).		
VA102	Identify Shop rules & layout.		
VA103	Examine the History of sheet metal and metalworking (SM0401).		
VA104	Identify employment opportunities (SM04101).		
VA200	SAFETY		
VA201	Practice fire safety (CO0101).		
VA202	Practice personal safety (CO0101).		
VA300	HAND TOOLS		
VA301	Use common hand tools (CO0103).		
VA302	Use specialty metal fabrication tools (SM04107).		
VA303	Use of drafting and layout tools (SM04202).		
VA400	HAND HELD POWER TOOLS		
VA401	Operate and maintain common hand held power tools.		
VA402	Operate and maintain specialty metalworking power tools.		
VA500	MACHINES AND EQUIPMENT		
VA501	Perform operations on/with various sheet metal fabricating equipment.		
VA600	SHEET METAL MATHEMATICS		
VA601	Use linear measurement (CO0102).		
VA602	Use applied basic mathematics (fractions, decimals, addition, subtraction, division, multiplication. (SM04105).		
VA603	Use angular measurement (SM04105).		
VA604	Use perimeter formula (SM04105).		
VA605	Use area measurement (SM04105).		
VA606	Use volume measurement (SM04105).		
VA607	Use applied trigonometry.		
VA608	Use applied geometry (SM04105).		
VA700	BLUEPRINTS		
VA701	Visualize pattern layout.		
VA702	Interpret drawings.		
VA703	Understand orthographic projects.		
VA704	Understand isometric drawings.		
VA705	Read industrial drawings.		
VA706	Read construction blueprints (CO0105).		
VA707	Architectural drawings (CO0105).		
VA708	Mechanical drawings.		

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VA709	Interpret scale drawings (CO0105).		
VA710	Show drawings & sketching.		
VA711	Demonstrate an understanding of basic welding blueprint reading		
VA800	SHEET METAL PATTERN DRAFTING		
VA801	Identify and use drafting equipment.		
VA802	Use simple or straight layout (SM04202).		
VA803	Use geometric constructions (SM04105).		
VA804	Use parallel line layout (SM04302).		
VA805	Use radial line development (SM04202).		
VA806	Use triangulation (SM04202).		
VA807	Use computer aided drafting techniques (CAD) (CO0105).		
VA808	Use VICON cutting system pattern development (CO0105).		
VA900	PROJECT LAYOUT AND FABRICATION		
VA901	Layout and Fabricate a 6x6x2 box with tabs.		
VA902	Layout and Fabricate box with tabs of student generated dimensions.		
VA903	Layout and Fabricate Tool tray w/handle.		
VA904	Layout and Fabricate Box w/sliding lid.		
VA905	Layout and Fabricate Door mounted trash can.		
VA906	Layout and Fabricate Small book ends.		
VA907	Layout and Fabricate Napkin holder.		
VA1000	WELDING APPLICATIONS		
VA1001	OFC - Assemble an OFC outfit, light to produce a neutral flame, shut down the outfit.		
VA1002	OFC - Produce a 90 * straight cut on mild steel		
VA1003	OFC - Produce a 90* straight cut on mild steel using a guide		
VA1004	OFC - Produce a 30* bevel cut on mild steel		
VA1005	OFC - Produce a circular hole cut on mild steel		
VA1006	OFC - Layout a pattern on mild steel and cut to specifications using various thicknesses.		
VA1007	OAW - Use OAW outfit to produce an outside corner joint no filler on mild steel		
VA1008	OAW - Produce a T-joint F1 position on mild steel		
VA1009	OAW - Produce a Butt-joint G1 position on mild steel		
VA1010	OAW - Produce a lap-joint F2 position on mild steel.		
VA1011	SMAW - Start and restart an arc, flat position on mild steel plate		
VA1012	SMAW - Produce a pad weld, flat, E7018		
VA1013	SMAW - Produce a pad weld, flat E6011		
VA1100	INSTALLATION OF MECHANICAL SYSTEMS		
VA1101	Install rectangular duct systems		
VA1102	Install round / spiral duct system		
VA1104	Install spouting - gutters & down spouts		
VA1105	Install metal roofing & flashing system		

<b>Task Number</b>	<b>Description</b>	<b>Hours</b>	<b>Level</b>
VA1106	Understanding structural steel components.		
VA1200	PROFESSIONAL DEVELOPMENT		
VA1201	Complete NCCER / ABC Core Curriculum		
VA1202	Complete NCCER / ABC Sheet Metal Level 1 Curriculum		
VA1203	Complete OSHA 10 Hour Card (CareerSafe) General Industry or Construction		
VA1204	Complete National Safety Council (NSC) Lift Truck Operator Certification		
VA1205	Complete Hilti gun powder actuated tool certification		
VA1206	Develop a resume		
VA1207	Develop a cover letter		
VA1208	Acquire three letters of recommendation		
VA1209	Cooperative Education / Advanced Placement Internship		
VA3513	13.2.11.A- Apply effective speaking and listening skills used in a job interview.		
VA3514	13.2.11.B- Apply research skills in searching for a job. (CareerLink, O-NET, Networking, Newspapers, Professional Associations, Resource Books (OOH), etc.		
VA3515	13.2.11.C-Develop and assemble, for career portfolio placement, career acquisition documents, such as, but not limited to: job application, letter of appreciation, Cover Letter, Resume, Post-Secondary Application, etc.		
VA3516	13.2.11.E- Demonstrate, in the career acquisition process, the application of essential workplace skills/knowledge, such as, but not limited to: Communication, Health and Safety, Resilience, Integrity, Problem Solving, Teamwork and Communication.		
VA3517	13.3.11.A- Evaluate personal attitudes and work habits that support career retention and advancement, with focus on Resilience, Integrity, Problem Solving, Communication, Teamwork.		
VA3518	13.3.11.B-Evaluate team member roles and describe and illustrate active listening techniques: clarifying, encouraging, reflecting, restating, and summarizing.		
VA3519	13.3.11.C- Evaluate conflict resolution skills as they related to the workplace.: constructive criticism, group dynamics, managing leaderships, mediation, negotiation, problem solving.		
VA3520	13.3.11.D- Develop a personal budget based on career choice, such as but not limited to : fixed/variable expenses, gross pay, net pay, saving, taxes.		