

Capital High School to Helena College apprenticeship program:

## Sheet Metal Apprenticeship AAS

(Note: college coursework subject to change based on industry recommendations)

## BIG SKY PATHWAY PROPOSAL



### SUGGESTED HIGH SCHOOL COURSES

9th	Graduation Requirements Workforce/College Prep	English I, Algebra I, Earth Science, World Cultures, Phys Ed1, Fine Arts Elective	<b>Recommended CTE Cluster Foundation Course(s):</b> Industrial Tech, Basic Computer Skills
	<i>CTE and/or Electives</i>	Industrial Technology, Basic Computer Skills	<b>Recommended CTE Pathway Courses:</b> Industrial Tech, Welding I, Welding and Machining II, Welding and Machining III (Milling Operations)
10th	Graduation Requirements Workforce/College Prep	English 2, Geometry, Biology, PE/Health	
	<i>CTE and/or Electives</i>	Welding I, Drafting I, Carpentry/Cabinet Making I	<b>Other Recommended CTE Courses:</b> Computer Tech Skills Drafting I, Drafting II –Mechanical, CAD, Carpentry
11th	Graduation Requirements Workforce/College Prep	English 3, Algebra II, Chemistry, US History	
	<i>CTE and/or Electives</i>	Welding and Machining II; Drafting II	<b>Career &amp; Technical Student Organization(s):</b>  Skills USA
12th	Graduation Requirements Workforce/College Prep	English 4 and WRIT101 College Writing (DC) OR WRIT 121T Technical, M111T Technical Math (DC), Physics, US Government	
	<i>CTE and/or Electives</i>	Welding and Machining III - Certification Available – AWS 3G and 4G 3/8 Plate Test minimum; WLDG 112 Cutting; MCH234 Milling Operations Level I	

### ADVANCED LEARNING OPPORTUNITIES

High School to College/Career Linkages

**CTE Start courses:** CSTN 100 Fundamentals of Construction Technology (thru NCOTI exam)

**Dual Enrollment courses:** M111T Technical Mathematics; WRIT121T Technical Writing, WRIT101 College Writing; WLDG 112 Cutting Processes; MCH234 Milling Operations Level I

**Online courses:** Montana Digital Academy - <http://www.montanadigitalacademy.org/> HR 110T Career Dev and Human Relations

**Other:** Work-based Learning; Business Work Coop Job Shadow, and Student Shadow at Helena College, Certifications

### POSTSECONDARY PROGRAM OF STUDY (New 4-Semester Program Coming Soon)

	Math	English	Major	Other
Semester 1 Fall			SHML100 Safety & Health in Construction (3 credits) SHML 110 Sheet Metal Orientation (3 credits) CSTN 200 Rigging (3 credits)	On-the-Job Paid Training (40 hours)
Semester 2 Spring			SHML 120 Materials, Hand Tools, Fasteners (3 credits) Co-op (3 credits)	On-the-Job Paid Training (40 hours) <a href="#">HR110T - Career Development &amp; Human Relations</a>
Semester 3 Fall	M111T Technical Math		MCH 240 Metallurgy (2 cr) SHML160 Basic Ductwork Installation (3)	On-the-Job Training (40 hours)
Semester 4 Spring		WRIT 121T Technical Writing	SHML 170 Drafting & Layout Tools (3 cr) Co-op (3 credits)	On-the-Job Training (40 hours)
Semester 5 Fall			SHML 200 Blueprint Reading and Uniform Building Codes (3 credits) WLDG 131 Intro to Layout and Pattern Making (3 credits) SHML 210 Duct Liners and Insulation (3)	On-the-Job Training (40 hours)
Semester 6 Spring			WLDG 133 Soldering and Resistance Welding (4 credits) Co-op (3 credits)	On-the-Job Training (40 hours)
Semester 7 Fall			SHML 250 Stainless Steel Orientation (3) SHML 260 Sheet Metal Shop Practices (3) SHML 270 Advanced Layout & Fabrication Plasma Cutting (3 credits)	On-the-Job Training (40 hours)
Semester 8 Spring			SHML 280 Psychrometrics and Duct Sizing (3 credits) SHML 290 Architectural Sheet Metal (3) Co-op (3 credits)	On-the-Job Training (40 hours)

\* The Competency-Based Coursework uses online NCCER modules that result in stackable credentials upon successful completion of online tests and performances in the shop setting. High school students who have completed coursework in welding, construction, and other industrial arts courses should be able to demonstrate their skills and knowledge in the basic coursework quickly, spending less time with the online modules and onsite labs than would be indicated for inexperienced apprentices.

# In order to enroll in any apprenticeship program, students must first secure an employer sponsor. Sheet metal workers in Montana earn an average of \$42,100 per year and 30 additional workers are needed each year. Apprentices are paid during their work hours and must pay tuition for the coursework. However, some employers are willing to pay or subsidize college tuition and fees. Possible sponsors for this program include:

- Comfort Systems of Montana
- All Season Heating & AC
- Central Plumbing and Heating