Iowa SENSE Aligned Welding Curriculum	
General Course Info	
Course Number:	WEL 262
Discipline:	WEL – Welding
Course Title:	Thermal Cutting Processes I – Manual and Mechanized OxyFuel Cutting: SENSE 1
Short Title:	OFC-I Manual & Mech: SENSE 1
Course Description:	Focuses on proper safety, equipment setup and cutting techniques for manual and mechanized OxyFuel cutting on carbon steel. Students perform American Welding Society compliant cutting operations in the flat position. The student will also perform scarfing and gouging operations to remove base and weld metal in flat and horizontal positions on carbon steel. This course aligns to SENSE Level 1 Module 8 - Units 1 and 2, as well as Module 2 - Key Indicator 7 and Module 9 – Key Indicator 1.
Credit Hours:	2
Pre/ Co-requisites:	WEL 228 is a pre or co-requisite.
Course Competencies	
Course Competencies:	1. Evaluate cutting equipment, accessories and consumables to ensure proper safety and operations 2. Produce manual oxyfuel cuts on carbon steel 3. Produce mechanized oxyfuel cuts on carbon steel 4. Perform scarfing and gouging operations to remove base and weld metal on carbon steel 5. Evaluate cuts to ensure AWS D.1.1 standards are met
Course Sub-Competencies:	1.1 Perform safety inspections 1.2 Complete minor external repairs to oxyfuel cutting equipment 1.3 Set up manual oxyfuel equipment for cutting carbon steel 1.4 Set up mechanized oxyfuel equipment for cutting carbon steel 2.1 Complete straight, square edge cutting operations in the flat position with manual oxyfuel equipment 2.2 Complete shape, square edge cutting operations in the flat position with manual oxyfuel equipment 2.3 Complete straight, bevel edge cutting operations in the flat position with manual oxyfuel equipment 3.1 Complete straight, square edge cutting operations in the flat position with mechanized oxyfuel equipment 3.2 Complete straight, bevel edge cutting operations in the flat position with mechanized oxyfuel equipment 4.1 Remove base metal in the flat position with manual oxyfuel equipment 4.2 Remove base metal in the horizontal position with manual oxyfuel equipment 4.3 Remove weld metal in the flat position with manual oxyfuel equipment 4.4. Remove weld metal in the horizontal position with manual oxyfuel equipment 5.1 Analyze completed cuts 5.2 Adjust cutting technique 5.3 Analyze completed scarfing and gouging results 5.4 Adjust scarfing and gouging technique
Assessment of Student Learning	
SENSE Assessment:	1. Written Test Score 75% minimum 2. Visual Inspection Passed
Recommended 3rd Party Certification:	N/A

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