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| **WLD-110\_2013FA** | **Cutting Processes** | **WLD-110** |

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| CIS Course ID | S23303 |
| Effective Term | Fall 2013 |
| End Term |  |

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| Class | 1 | Lab | 3 | Clinical | 0 | Work | 0 | Credit | 2 |

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| This course introduces oxy-fuel and plasma-arc cutting systems. Topics include safety, proper equipment setup, and operation of oxy-fuel and plasma-arc cutting equipment with emphasis on straight line, curve and bevel cutting. Upon completion, students should be able to oxy-fuel and plasma-arc cut metals of varying thickness. |

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| Competencies |
| Student Learning Outcomes 1.Identify the parts and functions of an oxy-acetylene cutting torch. 2.Identify the parts and functions of various cutting equipment. 3.List the safety practices of using oxy-fuel, plasma-arc, and other cutting equipment. 4.Set-up and adjust cutting equipment. 5.Use an oxy-acetylene outfit, plasma cutting equipment, and other equipment to: a.Cut a straight marked line on various thickness steel plate. b.Cut various shapes out of carbon steel plate. c.Cut carbon steel plate to a bevel and pipe. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **WLD-115\_2013FA** | **SMAW (Stick) Plate** | **WLD-115** |

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| CIS Course ID | S23304 |
| Effective Term | Fall 2013 |
| End Term |  |

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| Class | 2 | Lab | 9 | Clinical | 0 | Work | 0 | Credit | 5 |

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| This course introduces the shielded metal arc (stick) welding process. Emphasis is placed on padding, fillet, and groove welds in various positions with SMAW electrodes. Upon completion, students should be able to perform SMAW fillet and groove welds on carbon plate with prescribed electrodes. |

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| Competencies |
| Student Learning Outcomes 1.Demonstrate SMAW electrode classification in compliance with AWS codes. 2.Perform a groove weld according to AWS D1.1.  3.Demonstrate safe and proper SMAW equipment setup, operation, and shut-down practices in accordance to manufacturer's recommendations. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **WLD-121\_2013FA** | **GMAW (MIG) FCAW/Plate** | **WLD-121** |

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| CIS Course ID | S23305 |
| Effective Term | Fall 2013 |
| End Term |  |

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| Class | 2 | Lab | 6 | Clinical | 0 | Work | 0 | Credit | 4 |

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| This course introduces metal arc welding and flux core arc welding processes. Topics include equipment setup and fillet and groove welds with emphasis on application of GMAW and FCAW electrodes on carbon steel plate. Upon completion, students should be able to perform fillet welds on carbon steel with prescribed electrodes in the flat, horizontal, and overhead positions. |

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| Competencies |
| Student Learning Outcomes 1.Demonstrate the use of GMAW electrode classification in compliance with AWS code for the selection of electrodes. 2.Demonstrate the use of FCAW electrode classification in compliance with AWS code for the selection of electrodes. 3. Perform a Fillet weld in accordance with AWS code. 4.Perform a groove weld in accordance with AWS code. 5.Demonstrate safe and proper GMAW equipment setup, operation, and shut-down practices in accordance to manufacturer's recommendations. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **WLD-141\_2013FA** | **Symbols & Specifications** | **WLD-141** |

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| CIS Course ID | S23307 |
| Effective Term | Fall 2013 |
| End Term |  |

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| Class | 2 | Lab | 2 | Clinical | 0 | Work | 0 | Credit | 3 |

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| This course introduces the basic symbols and specifications used in welding. Emphasis is placed on interpretation of lines, notes, welding symbols, and specifications. Upon completion, students should be able to read and interpret symbols and specifications commonly used in welding. |

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| Competencies |
| Student Learning Outcomes 1.Identify and read welding symbols. 2.Identify and explain various lines, notes, and specifications on a blueprint. 3.Identify the different types of lines on a blueprint. 4.Interpret destructive testing symbols and their methods. 5.Interpret non-destructive testing symbols and their methods. 6.Develop a working sketch. 7.Create a bill of materials from a blueprint. |

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| State Prerequisites | None |

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| State Corequisites | None |