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| **HYD-110\_2013FA** | **Hydraulics/Pneumatics I** | **HYD-110** |

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| CIS Course ID  | S23526 |
| Effective Term  | Fall 2013 |
| End Term  |  |

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

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| This course introduces the basic components and functions of hydraulic and pneumatic systems. Topics include standard symbols, pumps, control valves, control assemblies, actuators, FRL, maintenance procedures, and switching and control devices. Upon completion, students should be able to understand the operation of a fluid power system, including design, application, and troubleshooting. |

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| Competencies |
| Student Learning Outcomes1. Identify and demonstrate safe practices and procedures with tools, materials and industry accepted test equipment covered in the course.2. Demonstrate appropriate use of test equipment, evaluate circuit performance and apply appropriate troubleshooting techniques to fluid power systems.3. Identify components of fluid power systems using symbols and schematics.4. Assemble a fluid power system.5. Calculate and demonstrate the basic physics of fluid mechanics. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **ISC-112\_2013FA** | **Industrial Safety** | **ISC-112** |

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| CIS Course ID  | S23527 |
| Effective Term  | Fall 2013 |
| End Term  |  |

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

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| This course introduces the principles of industrial safety. Emphasis is placed on industrial safety and OSHA regulations. Upon completion, students should be able to demonstrate knowledge of a safe working environment and OSHA compliance. |

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| Competencies |
| Student Learning Outcomes1. Describe and identify safety practices required to perform various job-related activities.2. Describe the application of OSHA procedures and requirements for compliance. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **MEC-111\_2005SP** | **Machine Processes I** | **MEC-111** |

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| CIS Course ID  | S20654 |
| Effective Term  | Spring 2005 |
| End Term  |  |

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| Class  | 1 | Lab  | 4 | Clinical  | 0 | Work  | 0 | Credit  | 3 |

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| This course introduces shop safety, hand tools, machine processes, measuring instruments, and the operation of machine shop equipment. Topics include use and care of tools, safety, measuring tools, and the basic setup and operation of common machine tools. Upon completion, students should be able to manufacture simple parts to specified tolerance. |

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| State Prerequisites | None |

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| State Corequisites | None |
| **MNT-160\_2002FA** | **Industrial Fabrication** | **MNT-160** |

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| CIS Course ID  | S14234 |
| Effective Term  | Fall 2002 |
| End Term  |  |

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

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| This course covers the necessary techniques to fabricate and assemble basic items common in industrial environments. Emphasis is placed on students being able to create basic items such as frames, guards, supports, and other components commonly used in industry. Upon completion, students should be able to safely fabricate and assemble selected items within specifications. |

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| State Prerequisites | None |

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| State Corequisites | None |
| **WLD-112\_1997SU** | **Basic Welding Processes** | **WLD-112** |

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| CIS Course ID  | S10926 |
| Effective Term  | Summer 1997 |
| End Term  |  |

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

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| This course introduces basic welding and cutting. Emphasis is placed on beads applied with gases, mild steel fillers, and electrodes and the capillary action of solder. Upon completion, students should be able to set up welding and oxy-fuel equipment and perform welding, brazing, and soldering processes. |

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| State Prerequisites | None |

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| State Corequisites | None |