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| **ELC-111\_1997SU** | **Intro to Electricity** | **ELC-111** |

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| CIS Course ID | S11841 |
| Effective Term | Summer 1997 |
| End Term |  |

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

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| This course introduces the fundamental concepts of electricity and test equipment to non-electrical/electronics majors. Topics include basic DC and AC principles (voltage, resistance, current, impedance); components (resistors, inductors, and capacitors); power; and operation of test equipment. Upon completion, students should be able to construct and analyze simple DC and AC circuits using electrical test equipment. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **ELC-113\_2013FA** | **Residential Wiring** | **ELC-113** |

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| CIS Course ID | S23518 |
| 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 the care/usage of tools and materials used in residential electrical installations and the requirements of the National Electrical Code. Topics include NEC, electrical safety, and electrical print reading; planning, layout; and installation of electrical distribution equipment; lighting; overcurrent protection; conductors; branch circuits; and conduits. Upon completion, students should be able to properly install conduits, wiring, and electrical distribution equipment associated with residential electrical installations. |

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| Competencies |
| Student Learning Outcomes 1. 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 residential electrical circuits. 3. Draw, plan and interpret electrical plans and symbols used in residential applications 4. Identify, size, and install wiring and electrical distribution equipment and devices associated with residential electrical installations in accordance with the National Electrical Code. 5. Recognize and demonstrate appropriate use of tools and materials that are used in residential wiring. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **ELC-117\_2013FA** | **Motors and Controls** | **ELC-117** |

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| CIS Course ID | S23521 |
| 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 the fundamental concepts of motors and motor controls. Topics include ladder diagrams, pilot devices, contactors, motor starters, motors, and other control devices. Upon completion, students should be able to properly select, connect, and troubleshoot motors and control circuits. |

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| Competencies |
| Student Learning Outcomes 1. 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 control circuits. 3. Interpret and use ladder and wiring diagrams, symbols, and schematics. 4. Demonstrate and describe the use of relays, contactors, motor starters and pilot devices in electrical control circuits. 5. Describe principles and operations related to electrical control circuits. 6. Describe the concepts of rotating electrical machinery. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **ELC-118\_1997SU** | **National Electrical Code** | **ELC-118** |

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| CIS Course ID | S11926 |
| Effective Term | Summer 1997 |
| End Term |  |

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

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| This course covers the use of the current National Electrical Code. Topics include the NEC history, wiring methods, overcurrent protection, materials, and other related topics. Upon completion, students should be able to effectively use the NEC. |

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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 Outcomes 1. 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 |