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| **AHR-151\_1997SU** | **HVAC Duct Systems I** | **AHR-151** |

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| CIS Course ID | S14323 |
| 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 the techniques used to lay out and fabricate duct work commonly found in HVAC systems. Emphasis is placed on the skills required to fabricate duct work. Upon completion, students should be able to lay out and fabricate simple duct work. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **AHR-211\_2013FA** | **Residential System Design** | **AHR-211** |

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| CIS Course ID | S23445 |
| 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 principles and concepts of conventional residential heating and cooling system design. Topics include heating and cooling load estimating, basic psychrometrics, equipment selection, duct system selection, and system design. Upon completion, students should be able to design a basic residential heating and cooling system. |

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| Competencies |
| Student Learning Outcomes 1. Design and draw a duct system in accordance with the ACCA Manual D. 2. Apply appropriate HVACR codes to the design of residential HVACR systems. 3. Calculate heating and cooling loads for residential structures in accordance with ACCA Manual J. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **AHR-213\_2013FA** | **HVACR Building Code** | **AHR-213** |

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| CIS Course ID | S23447 |
| Effective Term | Fall 2013 |
| End Term |  |

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

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| This course covers the North Carolina codes that are applicable to the design and installation of HVACR systems. Topics include current North Carolina codes as applied to HVACR design, service, and installation. Upon completion, students should be able to demonstrate the correct usage of North Carolina codes that apply to specific areas of the HVACR trade. |

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| Competencies |
| Student Learning Outcomes 1. Apply the mechanical, gas, and energy code of North Carolina for designing, installing, maintaining and servicing HVACR systems. 2. Define terms and abbreviations using codes applicable to the HVACR trade. 3. Analyze information to conform to North Carolina mechanical, gas, and energy code. 4. Describe sources of authority and methods of enforcement. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **BPR-130\_2013FA** | **Print Reading-Construction** | **BPR-130** |

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| CIS Course ID | S23275 |
| Effective Term | Fall 2013 |
| End Term |  |

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

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| This course covers the interpretation of prints and specifications that are associated with design and construction projects. Topics include interpretation of documents for foundations, floor plans, elevations, and related topics. Upon completion, students should be able to read and interpret construction prints and documents. |

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| Competencies |
| Student Learning Outcomes 1.Identify the different symbols and line types in a set of working drawings. 2.Correctly measure lines to a specific scale using an architectural or engineering scale. 3.Demonstrate proficiency in interpreting construction prints in the form of floor plans, elevations, details, schedules, and specifications. 4.Convert fractional dimensions to decimal dimensions and decimal dimensions to fractional dimensions. 5.Describe and explain the difference between working drawings and construction drawings. |

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| State Prerequisites | None |

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| State Corequisites | None |

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| **WLD-113\_2009SU** | **Soldering and Brazing** | **WLD-113** |

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| CIS Course ID | S22464 |
| Effective Term | Summer 2009 |
| End Term |  |

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

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| This course covers procedures for cutting, soldering and brazing of pipe and tubing. Topics include safety, proper equipment setup, and operation of soldering and brazing equipment. Upon completion, students should be able to solder and braze pipe, tubing, and fittings in various positions. |

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| State Prerequisites | None |

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| State Corequisites | None |