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**Air Conditioning Technology – Heating, Ventilation, and Air**

**Conditioning Mechanic Diploma**

**Diploma**

**Program Coordinator: John Christiansen E-mail:** [**john.christiansen@kctcs.edu**](mailto:john.christiansen@kctcs.edu) **Phone: 859-246-6775**

**Program Website: https://bluegrass.kctcs.edu/education-training/program-finder/air-conditioning-technology.aspx**

**Student Name: Student ID:**

***Students must meet college readiness benchmarks as identified by the Council on Postsecondary Education or remedy the identified skill deficiencies.***

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| **First Semester** | **Credit**  **Hours** | **Term** | **Grade** | **Prerequisites** | **Notes** |
| ACR 100 Refrigeration Fundamentals | 3 |  |  | Coreq: ACR 101 |  |
| ACR 101 Refrigeration Fundamentals Lab | 2 |  |  | Coreq: ACR 100 |  |
| ACR 102 HVAC Electricity | 3 |  |  | Coreq: ACR 103 |  |
| ACR 103 HVAC Electricity Lab | 2 |  |  | Coreq: ACR 102 |  |
| CIT 105 Introduction to Computers OR Demonstration of Digital Literacy | 0 – 3 |  |  |  |  |
| **Total Semester Credit Hours** | **10 – 13** |  |  |  |

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| **Second Semester** | **Cr. Hrs.** | **Term** | **Grade** | **Prerequisites** | **Notes** |
| ACR 130 Electrical Components | 3 | Spring |  | ACR 102, Coreq: ACR 131 |  |
| ACR 131 Electrical Components Lab | 2 | Spring |  | ACR 102, Coreq: ACR 130 |  |
| ACR 170 Heat Load/Duct Design | 3 | Spring |  |  |  |
| ACR 260 Heating & Humidification | 3 | Spring |  | ACR 102+103, Coreq: ACR 262 |  |
| ACR 262 Heating & Dehumidification Lab | 2 | Spring |  | ACR 102+103, Coreq: ACR 260 |  |
| **Total Semester Credit Hours** | **13** |  |  |  |

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| **Third Semester** | **Cr. Hrs.** | **Term** | **Grade** | **Prerequisites** | **Notes** |
| ACR 250 Cooling and Dehumidification | 3 | Fall |  | ACR 100+101, Coreq: ACR 251 |  |
| ACR 251 Cooling and Dehumidification Lab | 2 | Fall |  | ACR 100+101, Coreq: ACR 250 |  |
| ACR 270 Heat Pump Application | 3 | Fall |  | ACR 100+102, Coreq: ACR 271 |  |
| ACR 271 Heat Pump Application Lab | 2 | Fall |  | ACR 100+102, Coreq: ACR 270 |  |
| Technical Elective | 3 – 4 |  |  | ( | ACR 290 Journeyman Preparation is strongly recommended. |
| ACR 291 Special Problems OR ACR 298 Practicum | 1 – 2 |  |  |  |  |
| **Total Semester Credit Hours** | **14 – 16** |  |  |  |

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| **Fourth Semester** | **Cr. Hrs.** | **Term** | **Grade** | **Prerequisites** | **Notes** |
| Written Communication, Oral Communication, OR Heritage/Humanities course | 3 |  |  |  |  |
| Social/Behavioral Sciences, Natural Sciences, OR Quantitative Reasoning course | 3 |  |  |  |  |
| Technical Elective | 3 – 4 |  |  |  | See list on back. |
| Technical Elective | 3 – 4 |  |  |  | See list on back. |
| **Total Semester Credit Hours** | **12 – 14** |  |  |  |  |
| **Total Diploma Credit Hours** | **49 – 56** |  |  |  |  |

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| * **25% or more of Total Diploma Credit Hours must be earned at BCTC** * **Cumulative GPA must be 2.0 or higher** |

**Graduation Requirements:**

**Advisor Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Advisor Contact \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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| **Additional Information** |
| Students in the Air Conditioning Technology program must achieve a minimum grade of C in each technical course.  ACR 290 is strongly recommended as it prepares students to sit for the Journeyman Test. |

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| **Course Rotation Schedule** | | | |
|  | **Fall** | **Spring** | **Summer** |
| ACR 100 and ACR 101 | X | X |  |
| ACR 102 and ACR 103 | X | X |  |
| ACR 130 and ACR 131 |  | X |  |
| ACR 170 |  | X | X |
| ACR 250 and ACR 251 | X |  | X |
| ACR 260 and ACR 262 |  | X |  |
| ACR 270 and ACR 271 | X |  |  |
| ACR 290 | X | X | X |

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| **Course** | **Credit Hours** | **Prerequisites** |
| ACR 291 Special Problems | 1 |  |
| ACR 299 Cooperative Education | 2 |  |
| BAS 160 Introduction to Business | 3 |  |
| BRX 110 Basic Blueprint Reading for Machinist | 2 |  |
| BRX 112 Blueprint Reading for Machinist | 4 |  |
| BRX 220 Blueprint Reading for Construction | 3 |  |
| EET 250 National Electric Code | 4 | (EET 154 & 155 & 252 & 243) or (EET 254 & 255) |
| EET 252 Electrical Construction II | 2 |  |
| EET 264/265 Rotating Machinery / Lab | 2 / 2 |  |
| EET 270/271 Electrical Motor Controls I / Lab | 2 / 2 |  |
| EET 272/273 Electrical Motor Controls II / Lab | 2 / 2 | EET 270 |
| EET 276/277 Programmable Logic Controllers / Lab | 2 / 2 |  |
| EET 298 Practicum | 1-8 |  |
| ELT 210 Devices I | 3 |  |
| ELT 295 Independent Problems | 1 – 2 |  |
| FPX 100/101 Fluid Power / Lab | 3 / 2 |  |
| WLD 100/101 Oxy-Fuel Systems / Lab | 2 / 2 |  |
| WLD 120/121 Shielded Metal Arc Welding / Fillet Lab | 2 / 2 |  |
| Other courses approved by the Air Conditioning Technology Program Coordinator | 1 – 8 |  |

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| **Embedded Credentials** | | | |
| **Credential** | **Title** | **Requirements** | **Total Credit Hours** | |
| Certificate | Environmental Control System Servicer | ACR 100, ACR 101, ACR 102, ACR 103, ACR 130, ACR 131, ACR 250, ACR 251, ACR 260, ACR 262 | 25 | |
| Certificate | Environmental System Repair Helper | ACR 100, ACR 101, ACR 102, ACR 103 | 10 | |

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| * **25% or more of Total Certificate Credit Hours must be earned at BCTC** * **Grade of C or higher in each course required for certificate** |

**Certificate Requirements:**