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**Computer Aided Drafting and Design**

**Diploma**

**Program Coordinator: William M. (Mike) Franklin E-mail:** [**william.franklin@kctcs.edu**](mailto:william.franklin@kctcs.edu) **Phone: 859-246-6771**

**Program Website:** [**https://bluegrass.kctcs.edu/education-training/program-finder/computer-aided-drafting-design.aspx**](https://bluegrass.kctcs.edu/education-training/program-finder/computer-aided-drafting-design.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** | **Prereqs/** | **Notes** | |
| CAD 100Introduction to Computer Aided Design | 3 |  |  |  |  | |
| CAD 102 Drafting Fundamentals | 4 |  |  |  |  | |
| Technical Elective | 3 |  |  |  | SMT 110 Principles of Surveying recommended | |
| Technical Elective | 1 – 3 |  |  |  |  | |
| Social/Behavioral Sciences, Natural Sciences, OR Quantitative Reasoning course | 3 |  |  |  | MAT 116 Technical Mathematics recommended | |
| **Total Semester Credit Hours** | **14 – 16** |  |  |  | |

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| **Second Semester** | **Cr. Hrs.** | **Term** | **Grade** | **Prerequisites** | **Notes** | |
| CAD 112 Engineering Graphics | 4 |  |  | CAD 102 | CET 150 Civil Engineering Graphics can be substituted if CAD 112 is not offered. | |
| CAD 201 Parametric Modeling | 4 |  |  |  |  | |
| Technical Elective | 4 |  |  |  | CAD 120 Introduction to Architecture recommended | |
| Technical Elective | 1 – 4 |  |  |  | CAD 293 Special Problems recommended | |
| Written Communication, Oral Communication, OR Heritage/Humanities course | 3 |  |  |  | ENG 101 Writing I recommended | |
| **Total Semester Credit Hours** | **16 – 19** |  |  |  | |

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| **Third Semester** | **Cr. Hrs.** | **Term** | **Grade** | **Prerequisites** | **Notes** |
| CAD 200 Intermediate Computer Aided Design | 4 |  |  | CAD 100 |  |
| Technical Elective | 1 – 4 |  |  |  | CET 295 Independent Problems recommended |
| Technical Electives | 4 – 13 |  |  |  | Technical Electives must total 22 credit hours |
| CAD 298 Practicum OR  CAD 299 Cooperative Education | 1 – 3 |  |  | Approval of Program Coordinator |  |
| **Total Semester Credit Hours** | **13 – 19** |  |  |  |
| **Total Diploma Credit Hours** | **48 – 50** |  |  |  |  |

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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** |
| A grade of C or higher in each technical and mathematics course along with a 2.0 cumulative GPA is required to continue in the program. |

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| **Technical Electives** | | |
| **Course** | **Cr. Hrs.** | **Prerequisites** |
| CAD 108 Introduction to Surveying | 3 |  |
| CAD 120 Introduction to Architecture | 4 | CAD 100 |
| CAD 150 Programming in CAD | 4 | CAD 100 |
| CAD 212 Industrial Drafting Processes | 4 | CAD 100 |
| CAD 216 Building Information Modeling | 4 |  |
| CAD 222 Mechanical Design | 4 | CAD 100 |
| CAD 220 Architectural Design | 4 | CAD 120 |
| CAD 230 Construction Techniques | 4 | CAD 120 |
| CAD 240 Advanced Dimensioning and Measurement | 4 | CAD 100 |
| CAD 252 Commercial Detailing | 4 | CAD 120 |
| CAD 262 Working Drawings | 4 | CAD 120 |
| CAD 292 Industrial Applications | 4 | Approval of Instructor |
| CAD 293 Special Problems | 1 – 4 | Approval of Program Coordinator |
| DPT 100 Introduction to 3D Printing Technology | 3 |  |
| DPT 102 3D Printing Technology Fundamentals | 3 | Demonstration of Digital Literacy |
| ACH 110 Survey of the Architectural Profession | 1 |  |
| ACH 160 Building Materials and Construction I | 3 |  |
| ACH 291 Construction Management | 3 | ACH 150, ACH 160 and ACH 161 |
| BRX 120 Basic Blueprint Reading | 3 |  |
| BRX 220 Blueprint Reading for Construction | 3 |  |
| Other courses (such as courses with prefixes ACH, BRX, CAR, SMT, and PLW) approved by the Computer Aided Drafting and Design Coordinator | 1 – 22 |  |

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| **Embedded Credentials** | | | |
| Credential | Title | Requirements | Total Credit Hours | |
| Certificate | 3D Modeler | CAD 100, CAD 200, CAD 201, 5–7 hours of Technical Electives | 16 – 18 | |

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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:**