

COMPUTER-AIDED DRAFTING & DESIGN/SURVEYING



WHAT IS COMPUTER-AIDED DRAFTING & DESIGN / SURVEYING?

Computer-Aided Drafters are technical specialists with broad-based skills for architectural, civil, mechanical, and manufacturing fields. In this program, the students are taught manual drafting techniques and 2D/3D CAD. Specific skills taught include, but are not limited to, lettering, geometric construction, orthographic projections, dimensioning and tolerance, and related technical processes. These skills are required to transform specifications and instructions of architects, designers, and engineers into complete and precise drawings. The drafter is a skilled technician with a thorough understanding of the graphic language and is an indispensable contributor to the engineering design team. Construction workers use technical drawings and plans that drafters prepare to build structures such as office buildings and houses. Surveyors depend on drafters to design and update civil maps, such as property survey maps, road construction design, and mining maps. Surveying Technicians can work either in the drafting office or in the field, operating equipment on a surveying crew. Students perform routine topographical, boundary, and other mapping/surveying projects, as well as Global Positioning System (GPS) surveys. Students establish essential data, keep notes, develop preliminary sketches, and prepare working drawings, profile and section maps, volume calculations, and topographic maps. Students use computer mapping and coordinate geometry software to accomplish these tasks.

Students use two- and three-dimensional modeling with conventional methods of graphic communication to solve basic design-related problems. Students will be exposed to both theory and lab projects as they learn to create a variety of drawings.

JOB OUTLOOK

Through the combination of CADD and Surveying courses, students can obtain skills to be employed with a diversity of career opportunities in engineering, architecture, manufacturing, surveying, mining engineering, and land management.

#GO2HCTC

One Community College Drive | Hazard, KY 41701 | (606) 436-5721 | hazard.kctcs.edu



KCTCS is an equal educational and employment opportunity institution.

KENTUCKY COMMUNITY AND TECHNICAL COLLEGE SYSTEM

COMPUTER-AIDED DRAFTING & DESIGN/SURVEYING

CREDENTIAL OPPORTUNITIES

COMPUTER-AIDED DRAFTING & DESIGN/SURVEYING PROGRAM

GRADUATION REQUIREMENTS *(Subject to change)*

DIPLOMA

Technical Core	Credits
Digital Literacy.....	0-3
CAD 100 Intro to Computer-Aided Design OR	3
CAD 103 CAD Fundamentals.....	(4)
CAD 102 Drafting Fundamentals.....	4
CAD 112 Engineering Graphics.....	4
CAD 200 Intermediate CAD.....	4
CAD 201 Parametric Modeling.....	4
Subtotal	(19-23)

General Education

Area 1 – Writing/Accessing Information, Oral Communications, Humanities / Heritage.....	3
Area 2 – Mathematics (MAT 105 excluded).....	3
Subtotal	(6)

Note: Digital Literacy must be demonstrated either by competency exam or by completing a computer literacy course.

Choose 19 credits from the Technical Electives list (Refer to elective list in KCTCS catalog)	19
Subtotal	(19)
Total Credits	44-48

CERTIFICATES

- Computer-Assisted Drafter
- Civil Drafter
- Detailer
- Drafter Assistant
- 3D Modeler
- Surveying Technician I
- Surveying Technician II

SURVEYING AND MAPPING COURSES

- SMT 110 Principles of Surveying
- SMT 130 Land Surveying Graphics
- SMT 160 Construction Surveying
- SMT 220 Surveying Lab
- SMT 250 Mine Surveying
- SMT 280 Introduction to GIS/GPS

ASSOCIATE OF APPLIED SCIENCE - GENERAL OCCUPATIONAL/TECHNICAL STUDIES

Credit earned through certificate and diploma program completion is applicable toward the degree when consistent with the objectives of the student's individual plan of study.

Listing of graduation requirements for all credentials may be found in the KCTCS catalog.

Contact Information:

Terri (Shelly) Sturgill, Program
Coordinator

Phone: (606) 487-3115

Email: Tbelcher0001@kctcs.edu

Rev. 9/22/2017

One Community College Drive | Hazard, KY 41701 | (606) 436-5721 | hazard.kctcs.edu

#GO2HCTC



Community & Technical College
HIGHER EDUCATION BEGINS HERE

KCTCS is an equal educational and employment opportunity institution.