

CLASS SYLLABUS Boone Career & Technical Center

Conventional/Computer Aided Drafting

Instructor: Donald Paitsel

Textbooks

Technical Drawing

Mastering AutoCAD

Architecture Drawing and Design

Autodesk Revit - Architecture

Mastering Inventor

Program Outline

First year, First semester Fundamentals of Drafting WVEIS 1729

Safety

Career Prep

Leadership Development

Customer and Personal Service

Literacy and Numeracy

Drafting Tools and Equipment

Basic Geometric Construction

Drafting Techniques

Sketching

Introduction to Computer Aided Drafting (CAD) WVEIS 1718

Computer Aided Drafting and Design

Orthographic Projection

Dimensioning Skills

First year, Second semester Drafting Techniques WVEIS 1727

Sectional Views

Auxiliary Views

Pictorial Views

Pattern Development

Working Drawings

Computer Aided Drafting (CAD) WVEIS 1728

Second year, First semester – Mechanical Drafting WVEIS 1725

Abbreviations, terms, identification

Advanced Dimensioning

Threads and Fasteners

Gears and Cams

Basic Welding – symbols, identification, terminology

Basic Tolerancing – GD&T

Working Drawings

Basic Solid Modeling

Piping Systems Drafting WVEIS 1722

Second year, Second Semester – Architectural Drafting WVEIS 1721 Civil Drafting WVEIS 1723

Site layouts – identification and terminology

Architectural Styles, identification and terminology

Estimations – specifications and calculations

Definitions and building materials

Building codes and governing bodies

Architectural sketching

Foundation plans – identification and terminology

Floor Plans – room relationships

Framing – identification and terminology

Dimensioning and Annotation Schedules

– window, doors, etc.

Elevations and Section Layouts

Residential Utilities

Note: This is a 1080 hour course. Students need to take the four required courses in order to be certified. Students must take the Fundamental and Techniques courses first, then they can choose to take the Mechanical or Architectural course in any order they wish. This usually depends on the concentration they choose to represent the school in the Skills USA competition. Students need to make this decision and let the counselor know when having their senior schedule done. Attendance and working well with others is crucial, see attached sheet for details. Students will be given several forms to be signed by parent/guardians and the student. Students will be given 100 points for their first grade of the year if they return all forms signed and dated. Please carefully look over all forms and feel free to call me if you have any questions about anything. Any time after 2:00pm is a good time to call. Thank you in advance for letting me play a role in the life of your child and I assure you they will be treated with care and respect.

Attendance: Boone Career Attendance Policy

Grading: Boone County Schools Grading Scale

90-100 = A

89-80 = B

79-70 = C

69-60 = D

59-0 = F

Computer Aided Design and Drafting

Imagine

Designing, drawing, and making products of the future.

Bring your creativity, new ideas, and inventions to reality.

Computer Aided Design and Drafting

Computer Aided Design and Drafting graduates work in many different areas of engineering and manufacturing. In the CADD program at BCTC students design and manufacture prototypes for real world applications. In this class students learn 2D and 3D computer modeling. Using a team centered, problem solving approach students can develop the skills needed to be successful in today's work environment.

Work Skills

Are you a team player and a good communicator?

Are you creative, but also possess technical aptitude?

Are you detail oriented, able to multi-task? Do

you work well with others? Can you see the big

picture and remain flexible? Do you enjoy

learning new technologies and applying creativity

and logic to solve problems?

What does it take?

Has the ability to visualize what a 2-dimensional drawing will look like in 3-dimensions and vice versa.

Good math ability, especially geometry.

Good communication ability's (is able to read, understand and follow written directions and can express oneself verbally).

Is a detail-oriented person.

Can organize ideas to determine what needs to be done, step by step, to complete the job correctly.

Has the perseverance to stay on multi-step task to completion.

Enjoys working with computers and is capable of becoming highly computer proficient.

Has the ability to work cooperatively as part of a team, including engineers, other drafters, machinists, quality control personnel, etc.

Work Environment Considerations

CADD technicians are professional people working in a specialized environment as communicators and must exhibit good English and speaking skills. They must have the ability to adapt to changing circumstances; be able to coordinate projects with other staff; are deadline driven; and be able to work in a demanding environment.

What Will I Learn

During the 2-year program, students will learn how to think outside the box. They will learn the many responsibilities of designers who are employed in engineering and architectural offices across the nation. Students will learn 2D and 3D modeling using industry standard software. They will also become familiar with ethical industry practices, common business practices in information technology, and working as part of a team.

What Will I Do

Learn the Fundamentals and Techniques of Drafting during the first year. The student will become familiar with all the tools of the trade and learn how to use them. Then the student will focus on a Mechanical and Architectural specialization during the second year. The Architectural student will have a complete set of construction drawings and the Mechanical student will have prototypes or solid models of their projects at the end of the course.

Career Pathway Entry Level

School	Certificates	Careers
BCTC	Certificate of completion	CAD operator
	ADDA (AD) Apprentice Drafter	CAD operator
	ADDA (CD) Certified Drafter	CAD operator
	ADDA CDD) Certified Design Drafter	CADD operator

These certificates can be obtained in either Architectural or Mechanical specializations.

These certificates reflect comprehension of the subject, possibly effecting the starting salary.

Technical Level (Associates degrees) Suggestions

Bridgemont Community and Technical College – offering a 2 year Associate degree program related to CAD.

Fairmont State College – offering a 2 year Architectural Engineering Technology.

Professional Level (4-year or higher)

WVU Tech – offering several engineering courses.

Marshall University – offering several engineering courses.

Fairmont State College – offering a 4-year Architectural degree.

Contact Information: Donald

Paitsel

Boone Career Center

(304) 369-4585

Parent signature and date_____

Student signature and date_____

Title IX ADA 504 Notice

Boone Career & Technical Center (BCTC) does not discriminate on the basis of race, color, religion, national origin, gender, sexual orientation, disability, age, or marital status in any of its policies, procedures or practices as required by Title IX, Section 504, and ADA regulations. For inquiries concerning Title IX, please contact the BCS Safe Schools Director Anthony Tagliente at 304-369-8276 or ataglient@k12.wv.us. For inquiries concerning 504/ADA, please contact the Director of Exceptional Children Mary Knapp, at 304-369-8245 or mknapp@k12.wv.us. Inquiries may also be submitted in writing to the following Director's at Boone County Schools 69 Avenue B Madison, WV 25130.