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
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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.