Walker Career Center

Architectural Drafting & Design I

DOE# 5640

Course Description and Outline

Gives students a basic understanding of the detailing skills commonly used by drafting technicians. Areas of study include: lettering, sketching, proper use of equipment, geometric constructions with emphasis on orthographic (multi-view) drawings that are dimensioned and noted to ANSI standards. This course includes the creation and interpretation of construction documents. Methods of geometric construction, three dimensional drawing techniques, and sketching will be presented as well as elementary aspects of residential design and site work. Areas of emphasis will include print reading and drawing. This course also provides students with a basic understanding of the features and considerations associated with the operation of a computer-aided design (CAD) system. Students will gain valuable hands-on experience with Auto CAD. They will be expected to complete several projects relating to command topics. Topics include: 2D drawing commands, coordinate systems, editing commands, paper and model space, inquiry commands, layers, plotting, text, and basic dimensioning.

Teacher Information and Student Supports

Name: Kevin Gogel
Email: kgogel@warren.k12.in.us
Phone: 317-532-6187

Course Supplies

- Classroom Textbook Set
- PC Desktop provided

Additional Supports

- Individual help by appointment when necessary

Journey of a Graduate Skills/Standards

Critical Thinking

- Students apply and adapt the design process to challenges found in architectural drafting scenarios.
- Students integrate architectural concepts to produce industry standard drawings.
- Students select specific commands to develop drawings to meet industry standards.
- Students synthesize architectural knowledge to design and create solutions.

Communication

- Identify and utilize the design process
- Recognize that budget constraints and customer needs are part of the design process
- Interpret demographics in a given area and relate it to the design process
- Identify and use multiple input methods to select commands on the CAD system
- Identify and demonstrate proper use of drafting equipment
- Show familiarity with conventional drafting standards
- Identify pictorial, isometric, and orthographic drawing types
- Explain coordinate systems
- Identify and utilize drafting symbols
- Sketch proportionately and recognizably a given object
- Read construction documents

Resilience

- Demonstrate competence in the use of CAD software through assignments
- Demonstrate advanced design sketching
- Demonstrate vertical Gothic lettering to quality standards
- Demonstrate acceptable line work and construction techniques
- Interpret roof framing and calculations. Interpret schedules

- Interpret and apply required codes, standards, specifications, and cross-referencing
- Interpret residential planning and bubble diagrams. Interpret scaled detailed drawings
- Understand how to make a drawing to-scale

Collaboration

- Share how to retrieve and use help commands
- Together navigate through and identify various parts of the CAD environment

Content Knowledge

- Research architectural drafting careers
- Find architectural drafting opportunities offered by a technical school or college
- Determine architectural drafting occupation wages/salaries
- Correctly use word processing and CAD file exporting commands when completing assignments
- Use and interpret sectioning techniques involving numerous line types
- Use various architectural and construction terminology correctly
- Develop elevations. Develop and draw a floor plan
- Draw a foundation plan. Draw a site plan
- Read an architectural scale
- Modify drawing elements using editing commands
- Draw wall sections
- Complete assignments using specific software commands and processes

Citizenship

- Students evaluate architectural careers to prepare for future training and employment opportunities
- Research architectural drafting job outlook information

Grade Calculation

MSD Warren Township Scale

Grade	Percentage
A	92.5 - 100
A-	89.5 - 92.4
B+	86.5 - 89.4
B	82.5 - 86.4
B-	79.5 - 82.4
C+	76.5 - 79.4
C	72.5 - 76.4
C-	69.5 - 72.4
D+	66.5 - 69.4
D	62.5 - 66.4
D-	59.5 - 62.4
F	Below 59.5

Credits/Pathways

CORE 40 Diploma

Course fulfills two credits of the elective requirement for the Core 40 diploma.

Academic/Technical Honors Diploma

Has potential to fulfill academic/technical honors diploma. - see counselor

CTE Graduation Pathway

CTE Concentrator A: Civil Construction Fundamentals
CTE Concentrator B: Advanced Civil Construction
Pathway Capstone: Civil Construction Capstone

Grading Policies

Semester Grade

Your semester grade will be calculated in the following way:

90% Assessments (Tests & Quizzes) Projects, Labs, Homework and other assignments
10% Final Exam
All Assessments will be assigned points, grades will be calculated on total points.

Synergy Grades

Grades posted in Synergy reflect the students' academic performance in the course.

Types of Assignments and Assessments

Assignments

Assignments will include classwork**, homework**, lab projects. These items are the opportunities for students to practice the concepts learned in class.

Labs

Projects will be assigned throughout the year, with ample time to complete. Some projects are individual and some are small groups. Students must

Assessments

Tests/projects cover Indiana State Standards, and there will be
Quizzes may be given throughout a unit. There may or may not be a quiz for each unit.