

### Unit 3: Geometric Construction

15  
Days

Student will understand geometric form terminology and will construct basic geometric forms using drafting & CAD equipment.



### Unit 4: Measurement

5 Days

Students will read and measure with an architect's scale, engineer's scale and metric scale. They will be able to identify a 1/4", 1/8", 1/16" and a 1/32" ruler while also identifying decimal equivalents. Reducing fractions and solving improper fractions will also be further refined.



### Unit 5: Orthographic Views

15  
Days

Students will be able to visualize planes of projection and draw the three traditional views (top, front and right side) of an object. Lineweight and line type will be explored.



## Unit 6: Sketching

5 Days

The student will be able to sketch ideas to improve graphic communications and as a means of helping to visualize an object. Students will also be able to keep sketches in perspective.



## Unit 7: Isometric Drawing

10 Days

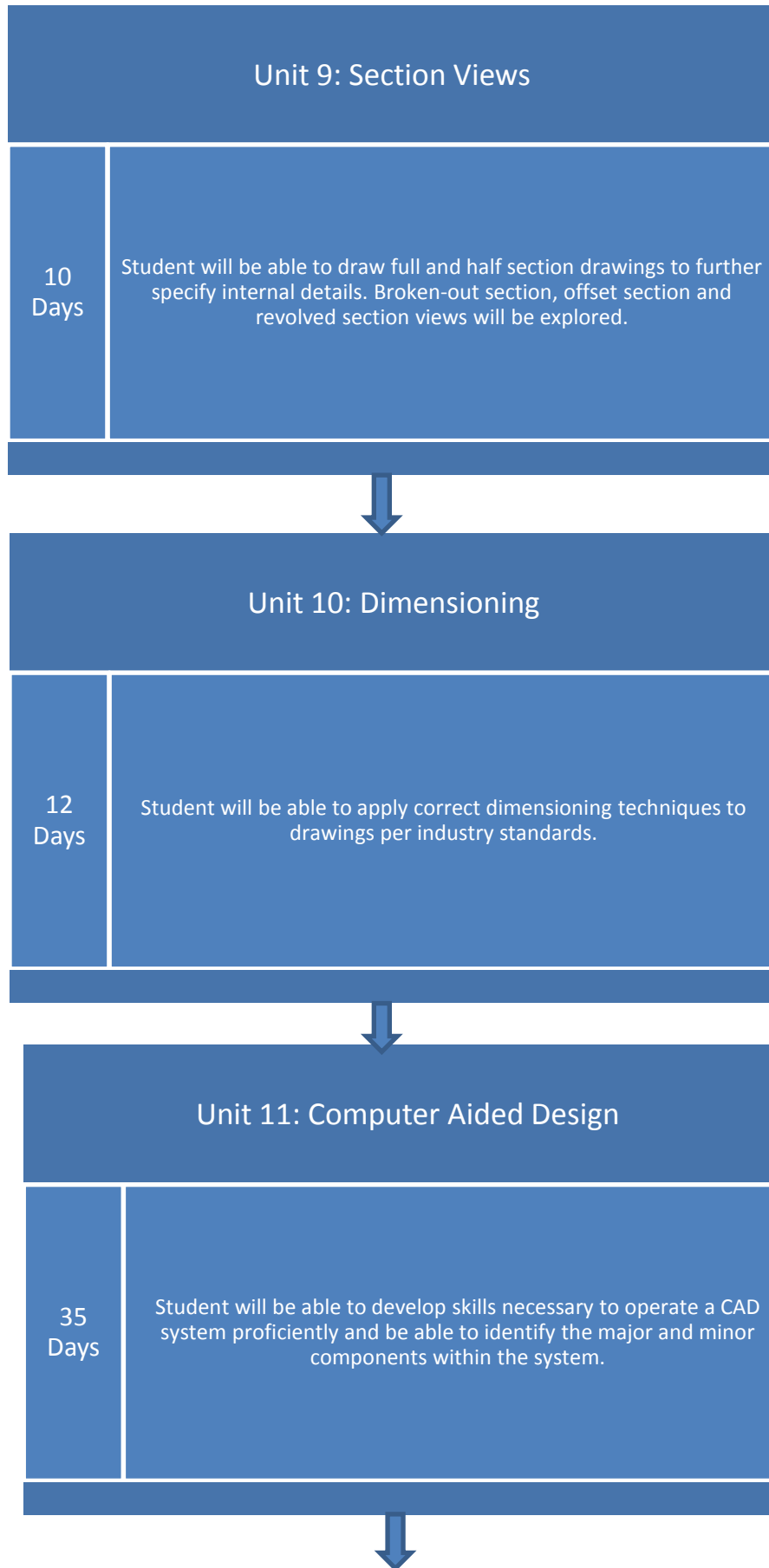
Student will be able to block in an isometric drawing framework and be able to draw non isometric lines. Student will be able to construct isometric circles and be able to draw isometric radii.



## Unit 8: Oblique Views

5 Days

Student will be able to draw a cavalier drawing and be able to draw circles and curves on oblique drawings. Also, student will be able to draw inclined surfaces on oblique drawings.



## Unit 12: Precision Measurement

5 Days

Student will be able to read a micrometer and be able to measure within 1/1000 of an inch. Student will also have an understanding of the various types of precision measuring tools and will learn the proper use and care of each type.



## Unit 13: Geometric Tolerance

5 Days

The student will be able to place limit dimensions on working drawings and will recognize geometric tolerance symbols. Also, students will be able to dimension a working drawing from tolerance symbols.



## Unit 14: Fasteners

5 Days

The student will be able to draw American Standard internal and external thread symbols. Student will be able to draw Metric Standard internal and external thread symbols and be able to recognize various types of fasteners used in industry.



## Unit 15: Developments

5 Days

Students will be able to recognize the basic geometric shapes.  
Students will be able to find true length lines. Students will be able to draw patterns using radial line and triangulation method.  
Students will be able to draw patterns using a CAD system.



## Unit 16: Working Drawing

10 Days

Students will be able to prepare detailed assembly drawings using CAD to further refine their skills.



## Unit 17: Architectural CAD

15 Days

Students will be able to read an architectural drawing and be able to design and build a small structure to meet specific objectives.  
Students will be able to draw a floor plan using Architectural CAD software.