

# CADD—CCTE STANDARDS

## HIGH SCHOOL

### MATERIALS AND PROCESSES

- Describe objects as geometric entities.
- Describe and demonstrate the process of using a mechanical or electronic caliper accurately as required by the design intent.
- Describe and demonstrate the use of graphic communication skills through sketching.
- Send and access information through a network.
- Express a design of an object as a 3D model.
- Export and import images/files in a variety of file formats.
- Evaluate the choice and placement of dimensions, notes, and annotations to clearly communicate design intent.
- Revise a design and update finished drawings appropriately.
- Identify the following basic geometric elements: line, circle, rectangle, sphere, and cube.
- Describe and apply the following basic geometric concepts to building 3D models: tangent and parallel concentric.

### IDENTIFYING HARDWARE AND OPERATING SYSTEMS

- Identify and describe various types of hardware and software.
- Identify and describe the purpose of operating system components.
- Define and apply computer terminology.

### USING HARDWARE AND OPERATING SYSTEMS

- View file names on a storage device.
- Store, copy, move, and retrieve information to/from various drives.
- Rename and backup files.

### INTERPRETING AND READING BLUEPRINTS

- Interpret basic views and dimensions in a working drawing.
- Identify geometric tolerance symbols.
- Interpret drawings, pictures, and symbols.

### CREATING AND MANIPULATING MECHANICAL DRAWING INFORMATION

- Explain the Cartesian Coordinate System.
- Describe the process for setting and editing drawing elements.
- Create and edit line types, colors, and layers/levels.
- Create and edit basic geometry.
- Place and edit text and fonts.
- Create orthographic, isometric, section, and auxiliary views.
- Place and edit dimensions.
- Generate a 2-D multiview drawing.
- Generate a pictorial drawing.
- Scale and print a hard copy to an output device.
- Explain the use and need for scaled drawings.

### DRAWING AND DESIGNING ASSEMBLIES

- Create an assembly in 3-D geometry.
- Create an exploded view of a 3-D assembly.
- Using a 3-D Model
- Create and edit construction planes through reference geometry.
- Create a 2-D drawing from a 3-D model.
- Create a 3-D model from a 2-D drawing.