(3) The student demonstrates the use of CADD tools for basic drawing and plotting. The student is expected to:

(A) draw objects using the line tool;

(i) draw objects using the line tool

(B) draw circles, arcs, ellipses, and elliptical arcs;

(i) draw circles

(ii) draw arcs

(iii) draw ellipses

(iv) draw elliptical arcs

(C) draw polylines, rectangles, donuts, and filled circles;

(i) draw polylines

(ii) draw rectangles

(iii) draw donuts

(iv) draw filled circles

(D) draw true spline curves;

(i) draw true spline curves

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(K) construct geometric figures of lines, splines, circles, and arcs;

(i) construct geometric figures of lines

(ii) construct geometric figures of splines

(iii) construct geometric figures of circles

(iv) construct geometric figures of arcs

(L) create and edit text using appropriate style and size to annotate drawings;

(i) create text using appropriate style to annotate drawings

(ii) create text using appropriate size to annotate drawings

(T) trim and extend objects;

(i) trim objects

(ii) extend objects

(U) break and join objects;

(i) break objects

(ii) join objects

(V) change object properties; and

(i) change object properties

(W) create hatching and manipulate properties such as calculating the area of an enclosed shape.

(i) create hatching properties

(ii) create manipulate properties

(4) The student demonstrates the use of CADD tools display and viewpoints. The student is expected to:

(A) create multiple viewpoints in the drawing window;

(i) create multiple viewpoints in the drawing window

(B) select appropriate object snaps for various drawing tasks;

(i) select appropriate object snaps for various drawing tasks

(C) create orthographic drawings;

(i) create orthographic drawings

(D) analyze challenges and identify solutions for design problems;

(i) analyze challenges for design problems

(ii) identify solutions for design problems

(E) investigate the use of space, scale, and environmental features to create three-dimensional form or the illusion of depth and form;

(i) investigate the use of space to create three-dimensional form or the illusion of depth

(ii) investigate the use of space to create three-dimensional form or the illusion of form

(iii) investigate the use of scale to create three-dimensional form or the illusion of depth

(iv) investigate the use of scale to create three-dimensional form or the illusion of form

(v) investigate the use of environmental features to create three-

(G) select proper drawing scale, views, and layout;

(i) select proper drawing scale

(ii) select proper drawing views

(iii) select proper drawing layout

(H) create drawings containing horizontal and vertical surfaces;

(i) create drawings containing horizontal surfaces

(ii) create drawings containing vertical surfaces

(I) create drawings containing circles and arcs;

(i) create drawings containing circles

(ii) create drawings containing arcs

(J) create removed details and conventional breaks using sectional drawing techniques;

(i) create removed details using sectional drawing techniques

(ii) create conventional breaks using sectional drawing techniques

(K) create assembly drawings;

(i) create assembly drawings

(L) create detail drawings; and

(i) create detail drawings

(M) create technical drawings and title blocks associated with the different CAD drawings.

(i) create technical drawings associated with the different CAD drawings

(ii) create title blocks associated with the different CAD drawings

(5) The student demonstrates the use of software tools to properly create text within a CADD drawing. The student is expected to:

(A) use proper text standards for technical drawings;

(i) use proper text standards for technical drawings

(B) calculate drawing scale and text height using a scale ratio;

(i) calculate drawing scale using a scale ratio

(ii) calculate text height using a scale ratio

(C) apply text styles to enhance readability of drawings;

(i) apply text styles to enhance readability of drawings

(D) demonstrate the use of tools to create multi-line text objects and single-line text;

(i) demonstrate the use of tools to create multi-line text objects

(ii) demonstrate the use of tools to create single-line text

(B) demonstrate the use of Quick Properties and the Properties palette to access CADD tools; and

(i) demonstrate the use of Quick Properties to access CADD tools

(ii) demonstrate the use of the Properties palette to access CADD tools

(C) create selections by using the Quick Select dialog box.

(i) create selections by using the Quick Select dialog box

(8) The student demonstrates the use of scale and dimension standards and practices. The student is expected to:

(A) apply standard dimensioning rules;

(i) apply standard dimensioning rules

(B) draw scales and dimensions;

(i) draw scales

(ii) draw dimensions

(C) create, edit, and manage dimension styles;

(i) create dimension styles

(ii) edit dimension styles

(iii) manage dimension styles

(D) add linear and angular dimensions to a drawing;

(i) add linear dimensions to a drawing

(ii) add angular dimensions to a drawing

(E) draw datum and chain dimensions;

(i) draw datum dimensions

(ii) draw chain dimensions

(F) dimension circles and arcs;

(i) dimension circles

(ii) dimension arcs

(G) control the appearance 17 ƀD 17 S2.13oiylng;

(9) The student creates and demonstrates standard blocks using tool palettes. The student is expected to:

(A) create and save text information blocks;

(i) create text information blocks

(ii) save text information blocks

(B) insert blocks into a drawing;

(i) insert blocks into a drawing

(C) edit and update a block in a drawing;

(i) edit a block in a drawing

(ii) update a block in a drawing

(D) create blocks as a drawing file;

(i) create blocks as a drawing file

(E) construct and use a symbol library of blocks; and

(i) construct a symbol library of blocks

(ii) use a symbol library of blocks

(F) purge unused items from a drawing.

(i) purge unused items from a drawing

(10) The student prepares surface developments. The student is expected to:

(A) prepare developments of prisms, cylinders, cones, and pyramids;

(i) prepare developments of prisms

(ii) prepare developments of cylinders

(iii) prepare developments of cones

(iv) prepare developments of pyramids

(B) prepare developments of a transition piece; and

(i) prepare developments of a transition piece

(C) prepare drawings involving intersecting pieces.

(i) prepare drawings involving intersecting pieces

(11) The student designs and prepares basic architectural drawings. The student is expected to:

(A) solve design problems to gain new perspectives;

(i) solve design problems to gain new perspectives

(B) apply critical-thinking and problem-solving skills to develop creative solutions for design problems;

(i) apply critical-thinking to develop creative solutions for design problems

(ii) apply problem-solving skills to develop creative solutions for design problems

(C) draw a site plan;