South Carolina CTE

Architectural Design 1 & 2: Grades 9, 10, 11, 12

Adopted 2011

Performing Work Safety Practices	1. Apply safety policies and procedures.
	2. Maintain a clean, orderly, safe work area.
	3. Operate a fire extinguisher.
Demonstrating Freehand Sketching Skills	1. Sketch straight lines.
	2. Sketch circles and arcs.
	3. Sketch curved lines.
	4. Sketch multi-view drawings.
	5. Sketch pictorial drawings.
	6. Draw freehand technical lettering.
	7. Indicate overall dimensions.
Demonstrating Basic Design Techniques (Standard and Metric)	1. Select proper drawing equipment to complement the design media.
	2. Measure using standard scales/measuring devices.
	3. Draw straight lines and angles.
	4. Draw circles and arcs.
	5. Draw irregular curved lines.
	6. Demonstrate proper use, care, and adjustment of design equipment.
	7. Draw line symbols using alphabet of lines.
	8. Draw geometric figures using straight and curved lines.
	Draw borderlines and title block.

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	10. Perform drawing setup to applicable standards (e.g., setting layers, line type, and width).
	11. Identify and use view and display commands (e.g., zoom, pan, viewports, and rotation).
	12. Format, enter, and edit text on a drawing.
	13. Edit, copy, and manipulate drawing entities (e.g., properties, stretch, trimming, and scaling).
Demonstrating Preliminary Freehand Layout Skills	1. Sketch preliminary floor plans.
	2. Sketch preliminary elevation views.
	3. Sketch preliminary sections.
	4. Hand-letter drawings (letters and numbers).
Demonstrating Architectural Design Skills	1. Draw floor plans.
	2. Draw foundation plans.
	3. Set and control dimensioning styles.
	4. Dimension various types of architectural plans and details.
	5. Prepare a window, door, and finish schedule.
	6. Draw exterior elevations.
	7. Draw interior elevations.
	8. Draw roof plans.
	9. Draw related architectural plans (e.g., mechanical, electrical, or civil).
	10. Draw foundation sections.
	11. Draw floor sections.
	12. Draw wall sections.
	13. Draw stair sections.
	14. Dimension section drawings.
	Locate section views on drawings.
	Create a site plan.

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	17. **Apply standard building codes to architectural plans.**
	18. **Prepare presentation drawings.**
Computer Literacy	**Hardware**
	1. Identify hardware components of a CAD computer system.
	Operating System
	2. Format disks and copy, delete, rename, save, and back up files and folders.
	3. Identify, create, and use folders and directory structures.
	4. Identify various file formats (e.g., .wmf, .bmp, and .jpeg).
	5. Import and export data files between formats (e.g., IGES and DXF).
	6. Use software help features.
Demonstrating CAD-Specific Skills	1. **Use the graphical user interface.**
	2. **Create, retrieve, edit, and use symbol libraries.**
	3. **Use inquiry commands to extract drawing data (list distance and area).**
	4. **Control entity properties.**
	5. **Plot/Print drawing to appropriate scale.**
Demonstrating Basic Skills to Produce 3-D Drawings	1. **Create 3-D architectural drawings.**
	2. **Create 3-D architectural renderings.**