CTE Frameworks - Drafting Equipment List



## Recommended Equipment

### Safety Equipment

* Safety Glasses and Gloves
* First Aid Kit

### Classroom Technology

* Computers - High-performance desktop or laptop computers with at least:
  + Intel i5/i7 or equivalent processor
  + 8-16 GB RAM (preferably 16 GB for 3D modeling software)
  + Dedicated graphics card (NVIDIA or AMD, with 2 GB VRAM or more)
  + 500 GB SSD or larger for fast storage and sufficient space
  + 21” or larger monitors for detailed drafting work
* Printers/Plotters:
  + Large-Format Printer/Plotter: For printing architectural and engineering drawings on larger paper sizes (e.g., 24x36 inches)
  + Standard Laser Printer: For general printing needs
  + 3D Printers (Optional): For creating physical models from CAD designs, useful for teaching rapid prototyping and model validation.
  + Scanners
* Whiteboards/Smartboards
* Projector or Large Screen Display
* Input Devices:
* Mouse with Scroll Wheel: Essential for navigating drafting software
* Graphics Tablets (Optional): Useful for more freeform design and sketching
* 3D SpaceMouse (Optional): For easier navigation in 3D space, especially in complex models.

### Drafting and Design Software

* AutoCAD: Industry-standard for 2D and 3D drafting.
* Revit: For Building Information Modeling (BIM), especially in architectural courses.
* SketchUp: User-friendly software for 3D modeling, suitable for beginners.
* Rhino (with Grasshopper): For advanced 3D modeling and parametric design.
* SolidWorks or Inventor: For mechanical drafting and design.
* TinkerCAD or similar: For introducing basic CAD concepts to beginners.

### Office Software:

* Microsoft Office Suite (Word, Excel, PowerPoint): For documentation, reporting, and presentations.
* Google Workspace: For collaborative work and cloud-based assignments.

### Furniture and Workspace Setup:

* Drafting Tables: Adjustable drafting tables with drafting lamps for hand-drafting work, if you plan to include traditional drafting techniques.
* Comfortable Chairs: Ergonomically designed chairs to support long drafting sessions.
* Storage**:** Cabinets and drawers for storing drafting tools, paper, and student projects.

### Traditional Drafting Tools:

* Mechanical pencils, drawing pencils, erasers, and sharpeners
* rulers, triangles, compasses, protractors, calipers, and scales
* Drafting paper, vellum, and tracing paper
* French curves and templates for drawing specific shapes
* Erasable Sketching Pens/Sharpies
* X-ACTO Basic Knife
* Sketchpads
* Cutting pads
* Blueprint paper and Mylar: For traditional blueprint drawing.