Department of Architectural Technology

ARCH 1231 BUILDING TECHNOLOGY I

Coordinated Building Section and Elevation

Description: Building sections are critical drawings for understanding the relationship between space, structure, and building form. Structural configuration and thickness at exterior walls, floors, and roofs is a critical aspect of the information these drawings provide. The documentation of transparency between interior and exterior space as well as between interior spaces is another critical aspect of building sections. These drawings must be coordinated carefully with the plan, and developed with clear reference lines (structural grid lines and key elevation/level lines). Elevations are constructed using sections as underlays and sources of projection of critical elements in the correct position.

Assignment Context: This assignment builds on the knowledge and experience of careful documentation and coordinated drawing development. This assignment also offers documentation of masonry architectural elements.

Prerequisites: Understanding of orthographic projection and detailed observation of case study details.

Recommended Text:
Ching, Francis. Architecture Graphics. John Wiley and Sons, 2009.

Suggested Reference: See the City Tech Openlab for additional reference materials.

Plagiarism: Student work submitted must be original and developed individually. Tracing is not acceptable. All construction lines and notations during drawing construction are to remain visible at final submission. Drawings without construction lines (guidelines) will be downgrading significantly.

Assignment Specific Learning Outcomes / Assessment Method	
Learning Outcomes	**Assessment Methods**
Upon successful completion of this assignment the student shall be able to:	To evaluate the students' achievement of the learning objectives, the professor will do the following:
Develop coordinated, accurate, and consistent set of two -dimensional drawings documenting the building section and elevation	**Review** student drawing set for consistency, orthographic projection and coordination between drawings, and dimensional accuracy.
Understand the construction of building sections and elevations following drawing conventions and the critical application of reference lines	**Review** student drawing set submission for careful documentation and application of structural grid and elevation lines as well as line weights.

Grading Rubric **Student Name:**

	Approaching Benchmark	Benchmark	Approaching Capstone	Capstone
Lineweight Distinguishing elements especially cut lines (poche), grid lines, transparent elements, finishes	Lines are consistent thickness and quality, in the correct alignment	In addition, two line weights are distinguishable, including cut line	In addition, three or more line weights are distinguishable, including some finish textures	In addition, transparency is clear, centerlines, grid lines, dimension lines are shown w/ correct line type and line weight.
Drawing Organization and Accuracy Setting out of grid and the relationship of elements to the grid is accurate	Structural Grid is established	In addition, structural grid is dimensioned accurately and labeled correctly	In addition, major elements (walls, columns) are accurately placed in relation to the structural grid	In addition, all drawing elements are carefully located in relationship to centerlines and the structural grid
Construction / Guidelines Guidelines and constructions were utilized in the careful construction of each drawing	Guidelines are used for overall geometry of drawings	In addition, guidelines indicate orthographic projection for 3-d vignette construction.	In addition, guidelines indicate geometric center of spaces, perimeters of spaces, and grid locations of key elements	In addition, guidelines are accurate, working off of grid lines and centerlines to each major element and guiding alignments.
Drawing Conventions + Coordination Standard methods of drawing and documentation of key data and elements are utilized and coordinated	Drawings are properly scaled and provided with a title including course #, student name, professor name, semester + year	In addition, detail drawings are referenced to each other using cut lines and tags	In addition, drawings are organized on sheet to ensure proper projection from plan to elevation to section detail	In addition, drawings are consistent and coordinated and indicate clear understanding of drawing types and layers of information

Assignment Schedule: See syllabus

Deliverables:

1.	Plan (Partial)	Sheet Size: 24”x 36”	Scale: 1/8”=1’-0”
2.	Section (Partial)	Sheet Size: 24”x 36”	Scale: 1/8”=1’-0”
3.	Elevation (Partial)	Sheet Size: 24”x 36”	Scale: 1/8”=1’-0”

Mockup of Board: