ARCH A105: ARCHITECTURAL DRAWING AND DESIGN VISUALIZATION 1

Item	Value
Curriculum Committee Approval Date	12/08/2021
Top Code	020100 - Architecture and Architectural Technology
Units	2 Total Units
Hours	72 Total Hours (Lecture Hours 18; Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	Yes
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Standard Letter (S)
Associate Arts Local General Education (GE)	• Area 3 Arts and Humanities 3A Theory (OC1)
Associate Science Local General Education (GE)	• Area 3A Arts (OSC1)

Course Description

This introductory course in architectural visualization techniques will focus on how to communicate a three-dimensional design using a two-dimensional medium. Subjects and techniques presented will include orthographic projection, paralines, plan views, elevations, sections, basic perspective drawing, rendering materials and tonal values, and an introduction to SketchUp and hand modeling. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Graphically communicate a 3-dimensional design using architectural drawing conventions for professional schematic design drawing standards at an acceptable level of quality and completeness assessed by the instructor.

Course Objectives

- 1. Demonstrate the process of design communication through the use of models and drawings.
- 2. Use correct graphical principles for communicating design solutions.
- 3. Apply appropriate line types and values in drawing images.
- 4. Understand and utilize professional formatting and graphic presentation techniques.
- 5. Identify and demonstrate the drawing types currently used in the architectural profession.
- 6. Select and justify the best drawing type for a particular communication need.
- 7. Render the appropriate imagery and graphical values in drawings.
- 8. Compose drawings and poster/board presentations using appropriate graphic conventions.

Lecture Content

This introductory course will focus on the translation and visualization skills necessary to represent a 3-dimensional object in 2-dimensional drawings. Projects will progress from a simple 3-dimensional model (physical and digital) to a set of design drawings that represent the volume and form in 2-dimensional. Drawing emphasis is on drafted pencil layout with freehand overlay drawing in ink to facilitate good line quality and reproduction. Short lectures will be followed by one-on-one and small group studio assistance by instructor. Specific themes and topics will include the following: Design Visualization Thinking and drawing Representation, measured drawings Spatial cues and perception Composition Relational drawings Drawing Conventions Line quality and types Hierarchy: line weights, tonal values, text heights Lettering and fonts Titles, text, layout Scale, graphic scale bars North arrows Symbols Architectural Drawing Types Plans: Site, floor Elevations Section Paralines: Plan Oblique, Isometric Perspectives: 2 point, 1 point Rendering Skills Tone and texture: literal and illustrative Building material representation Landscape: trees, shrubs, groundcover Scale elements: people, cars, furniture Creating depth: overlap, line weights Drawing composition Framing Ground Plane Foreground, Middleground, Background Graphics: Title, scale Design Drawing Submittal Formatting (8 x 11) Reproduction Reformatting Consistency Assembly Large Format Presentation Composition Related Drawings Hierarchy of drawings text Focal points Controlling white space Titles below drawings

Lab Content

Faculty input required.

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)
- Lab (04)
- DE Live Online Lab (04S)
- DE Online Lab (04X)

Instructional Techniques

Lecture using visual examples of drawings and live demonstration by instructor. Informal one-on-one and small group instruction in studio. Informal pin-up reviews and discussions lead by instructor. Small work groups for some assignments.

Reading Assignments

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Writing Assignments

Small amounts of written responses are needed for the study guides or quizzes; and minor amounts of writing may appear on graphic layout presentations, usually in the form of concept statements.

Out-of-class Assignments

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Demonstration of Critical Thinking

Evaluation and critique of drawings, models, and presentation material by instructor (verbal or written). Evaluation of knowledge of basic drawing methods, principles, and drawing conventions by application in drawing assignments and other assessments such as study guides and/or

quizzes assessed by instructor. Instructor may assess and/or credit student oral presentations and participation/attendance in the course.

Required Writing, Problem Solving, Skills Demonstration

Small amounts of written responses are needed for the study guides or quizzes; and minor amounts of writing may appear on graphic layout presentations, usually in the form of concept statements.

Textbooks Resources

1. Required Ching, Francis D.K. . Architectural Graphics, Current ed. New York: John Wiley Sons, 2015 Rationale: or latest edition