

WEST VALLEY COLLEGE Course Outline

Department: Architecture

Course Number and Title: ARCH 061 - Architectural Design I

Length of course in weeks: 16

Units: 3

Total Class Hours/Week: 6

Lecture Hours/Week: 2

Lab Hours/Week: 4

Grade Type: Grade/Credit/No Credit

Catalog Description: This course is an intermediate level architectural design studio. Students have opportunities to study environmental and visual phenomena through architectural design exercises. The theories of building design and problem solving methodologies are introduced and used as a basis for the design process.

Schedule Description: This course is an intermediate level architectural design studio. Students have opportunities to study environmental and visual phenomena through architectural design exercises.

Prerequisites:

ARCH 054, Introduction to Architectural Desktop and
ARCH 056, Basic Architectural Design.

Recommended Preparation:

MATH 103, Elementary Algebra or
MATH 103R, Elementary Algebra.

Course Outcomes: Student Learning Outcomes

Outcome: Students will be able to design an intermediate level architectural project such as a single-family house or a series of town houses.

Assessment: Final project presentation.

Course Objectives: Upon completion of this course the student should be able to:

1. Develop design concepts in an environmental context.
2. Apply advanced analytic techniques and problem solving methodologies.
3. Integrate a design vocabulary into an advanced three-dimensional composition.
4. Use ordering systems in three-dimensional design with particular emphasis laid on the manipulation of composition and structural vocabulary in abstract design problems.
5. Explore the career alternatives available in the environmental design field.

Assessment: Students in this course will be graded base on the following four categories:

1. **Writing Assignments:** Project description
2. **Problem Solving Demonstrations:** Creativity growth
3. **Skill Demonstrations:** Case studies Architectural model making
4. **Examinations:** Final project presentation (a set of architectural drawings, physical model, and rendering)

Repeatability: 1 time

Methods of Instruction: Lecture & Lab

Lecture Content:

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| 1. Introduction to space, order and the environment. | 10.00 % |
| 2. Two-dimensional composition and its vocabulary. | 10.00 % |
| 3. Space and spatial sequence, three-dimensional composition. | 10.00 % |
| 4. Design process and problem solving. | 10.00 % |
| 5. General characteristics of natural and artificial environment: light, sound, odor, proportion, scale and spatial effects. | 5.00 % |
| 6. Concepts of order: Unit growth or system progression or relationship of parts to total concepts, variety within order. | 10.00 % |
| 7. Craftsmanship and basic joinery. | 5.00 % |
| 8. Final project: | 40.00 % |
- a) *Site Considerations*
 - b) *Building Code / Zoning Issues*
 - c) *Climate*
 - d) *Evaluation and Response to Environmental Context.*
 - e) *Structural System Selection*
 - f) *Material Selection*
 - g) *The Role of Detail in design*
 - h) *Building Envelope Considerations*
 - i) *Contemporary Design Issues*

Lab Content:

- | | |
|---|---------|
| 1. Use of graphic-based softwares such as Architectural Desktop, SketchUp, and Photoshop to complete assignments and final project. | 20.00 % |
| 2. Use of (physical) models to study designs at various scales: for example, the overall site, the building, and the detail. A minimum of (3) three models are required. | 20.00 % |
| 3. Explore various aspects of the building in detail, through design studies, such as: exterior envelope, structural system, interior finishes, etc. Students formally present their work at three phases: conceptual design, design development, and final presentation. Instructor approval is required at the completion of each phase before progressing to the next phase. Presentations include architectural drawings (hand and/or computer) and models (physical and computer). | 40.00 % |

4. Research the specific building type assigned, and present case-studies of a similar building that is architecturally significant. Students produce digital 3D-models depicting the selected case studies. 20.00 %

Critical Thinking: Analyze spatial relationships related to function, structure, ergonomics, and aesthetics.

College Level Required Reading, Writing, and other Outside-of-Class Assignments:

Over a 16 week presentation of the course, three hours per week are required for each unit of credit. Two hours of independent work done out of class are required for each hour of lecture. Outside of the regular class time the students in this class will be doing the following outside of class:

- **Study:** 1.00 additional hour
- **Problem solving activity or exercise:** 1.00 additional hour
- **Required reading:** 1.00 additional hour
- **Written work:** 1.00 additional hour

Textbook:

Francis D. K. Ching Architecture: Form, Space, & Order. 3rd Edition ed. John Wiley & Sons, Inc., 2007. ISBN: 9780471752165