

WEST VALLEY COLLEGE
Course Outline

Department: Architecture

Course Number and Title: ARCH 057 - Architectural Model Making

Length of course in weeks: 16

Units: 1

Total Class Hours/Week: 2

Lecture Hours/Week: 0.5

Lab Hours/Week: 1.5

Grade Type: Grade/Credit/No Credit

Catalog Description: This course covers all aspects of the materials, tools, and skills required to build architectural models.

Schedule Description: This course covers all aspects of the materials, tools, and skills required to build architectural models.

Course Outcomes: Student Learning Outcomes

Outcome: Develop a working presentation model using a physical model and taking into account tectonic assembly, abstraction, representation, and appropriate scale.

Assessment: Final model.

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

1. Use different materials to convey the design intent of a design.
2. Use different adhesives, paints, tools and techniques to build a model.
3. Create the different types of models: conceptual, massing, structural and presentation.
4. Identify a series of spatial precedents and learn to build a sketch/massing model to express design intent.

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

1. **Writing Assignments:** laboratory reports
2. **Problem Solving Demonstrations:** homework problems
3. **Skill Demonstrations:** class performance
4. **Examinations:** completion of final model

Repeatability: 1 time

Methods of Instruction: Lecture & Lab

Lecture Content:

1. Review different materials, techniques, types and scales along with different models. 20.00 %
 - A. Famous models through the ages from Christopher Wren's St. Paul's models to most modern architectural projects.
 - B. Images from the Cal Poly 5th year architecture and other student models (this will be built up over time but the point present as wide of focus as possible)

2. The different materials that can be used (advantages & disadvantages): 20.00 %
 - Cardboard
 - Foam-core
 - Gator board
 - Chip board
 - Museum board
 - Illustration board
 - Junk pieces (found objects)
 - Casting metals
 - Plastic
 - Clear acrylic
 - Glass
 - Wire glass
 - Metal and plastic tubing/sheets
 - Wood (bass vs. balsa) sheets and strips
 - Corrugated cardboard (good for base and contours)

3. Review different glues and methods of attachment 5.00 %

4. Fancy sectional models that come apart. 10.00 %

5. Cutting techniques: different knives etc. review all the tools from the tool list and what they are used for. Using technology, laser cutting vs. low technology (hand knives) 5.00 %

6. Review the model making tools: 5.00 %
 - x-acto knife.
 - x-acto miter box.
 - Metal straight edge.
 - Utility knife.
 - Wood "chopper"

Tweezers
 Scissors
 Glue syringe
 Arch scale
 Compass
 Cutting mat
 Tracing paper

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| 7. The different scales of architectural models in relationship to their simple shape or complicated elaborated details. | 10.00 % |
| 8. Information on local places that are sources of material: | 5.00 % |
| Ace hardware
Home Depot
University Art (Palo Alto and San Jose)
Utrecht
The Art Store (Berkeley)
Inkstone (Berkeley)
Tap Plastics (San Jose and Mountain View) | |
| 9. Making a model of an existing building or project having: | 20.00 % |
| Site plan
floor plans
elevations
sections
photographs | |

Lab Content:

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| 1. Introduction of different supplies and project selection. | 15.00 % |
| 2. Massing model of selected project. | 15.00 % |
| 3. Review of paint and other coating materials that covers craftsmanship problems. | 15.00 % |
| 4. The base and site creation (how to reinforce the base). Scale selection for final model.
How to make contours, how to transfer contour information, transfer paper or pin dots
Cutting building into the site and how to deal with pools. | 10.00 % |
| 5. Making the building understanding massing model to develop the final model. | 10.00 % |

6. Talk about materials to use for their final models, cutting techniques, scale, etc). 15.00 %
 How much detail to show on the final model.
 Overlaying the floor plan or not?
 How to make windows: Do you need glass?
 How to sand.
 How to deal with curving surfaces.
7. How to clean up a model at the end 10.00 %
 by covering and painting it.
 How to finish a model with trees and people (depending on scale).
 How to place lights within a model
8. How to photograph your model: setting up a simple background 10.00 %
 Using lights and the sun?
 How to use Photoshop to clean up the images (use of levels)
 Emphasize the 48 hour window to photograph your model after completion before it will start to fall apart

Critical Thinking: Analyze the scale and type of a presentation model and choose the appropriate model materials.

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:

- **Practice Skills:** 1.50 additional hours

Textbook:

Mills, Criss B., Designing with Models: A Studio Guide to Making and Using Architectural Design Models . 2nd ed. Wiley & Sons, 2005. ISBN: 9780471648376