

WEST VALLEY COLLEGE
Course Outline

Department: Architecture

Course Number and Title: ARCH 042 - Architectural Restoration & Rehabilitation

Length of course in weeks: 16

Units: 3

Total Class Hours/Week: 6

Lecture Hours/Week: 2

Lab Hours/Week: 4

By Arrangement/Week:

Grade Type: Grade/Credit/No Credit

Catalog Description: This course is a study of different restoration philosophies and procedures. Course topics include: acquiring research skills for the collection of historic documents from various archives; investigating historic building; preparing field measurements; drawing plans, elevations, and sections of the historic building; following zoning and building code restrictions and requirements for restoration and rehabilitation of an existing historic building when subject to a new use of occupancy; reporting the diagnosis of deterioration causes; and presenting the final restoration and rehabilitation proposal with specifications.

Schedule Description: This course is a study of different restoration philosophies and procedures.

Prerequisites:

ARCH 040, Fundamentals of Historic Preservation and
ARCH 041, Science of Materials in Historic Preservation and
ARCH 054, Introduction to Architectural Desktop

Course Outcomes: Student Learning Outcomes

1. **Outcome:** Create a restoration plan that considers historical significance, diagnoses of deterioration, and proposes a restoration project.
Assessment: Restoration plan.

2. **Outcome:** Present restoration plan using appropriate communication skills and technology.
Assessment: In-class presentation.

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

1. Investigate and collect historic documents on an existing historic building.
2. Apply best restoration and rehabilitation standards to restoration project.
3. Apply zoning and building codes requirements for existing buildings' upgrade.
4. Research historic documents including drawings, manuscripts, and photographs.

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

1. **Writing Assignments:** Report on the history of the historic building, alterations, and restoration specifications
2. **Problem Solving Demonstrations:** Survey and measurement of the floor plans and elevations of the historic building
3. **Skill Demonstrations:** Production of drawings of the floor plans, elevations, sections, and details from the field measurements
4. **Examinations:** Restoration and rehabilitation plan presentation

Repeatability: 1 time

Methods of Instruction: Lecture & Lab

Lecture Content:

1. A General Introduction to the Conservation of Buildings	10.00 %
2. Investigating Old Buildings	10.00 %
3. The Study of Building Materials	10.00 %
4. Restoring and Repairing Old Wooden Structures	10.00 %
5. Restoring Stone Works	5.00 %
6. Architectural Ceramics	5.00 %
7. Cementitious Materials	5.00 %
8. Cleaning Masonry	5.00 %
9. Architectural Metalwork	10.00 %
10. Paint and Coating	5.00 %
11. Architectural Glass	5.00 %
12. Foundations and Footings	5.00 %
13. Restoring Slate Roofing	5.00 %
14. Synthetic Resins, polymers, and Preservation	5.00 %
15. Historic Wallpapers	5.00 %

Lab Content:

1. Use a computer-based lab to draw floor plans, elevations, and sections for their Ante-Operam drawings. 50.00 %
2. Prepare a restoration plan for the final project by using Architectural Desktop for the design production of Post-Operam and PowerPoint for illustration of the historic reports and specification. 50.00 %

Critical Thinking: Apply different restoration philosophies and techniques to a restoration plan.

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:

- **Observation/Participation:** 1.00 additional hour
- **Required reading:** 1.00 additional hour
- **Study:** 2.00 additional hours

Textbook:

Weaver, Martin E. Conserving Buildings: A Manual of Techniques and Materials.
Revised ed. John Wiley & Sons, Inc., 1997. ISBN: 0471509448