OFFICE OF CURRICULUM, INSTRUCTION & PROFESSIONAL DEVELOPMENT

HIGH SCHOOL COURSE OUTLINE

<table>
<thead>
<tr>
<th>Department</th>
<th>Industrial/Technology</th>
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</thead>
<tbody>
<tr>
<td>Course Code</td>
<td>2603</td>
</tr>
<tr>
<td>Grade Level</td>
<td>10-12</td>
</tr>
<tr>
<td>Course Title</td>
<td>Architectural Design 3-4</td>
</tr>
<tr>
<td>Course Length</td>
<td>2 semesters</td>
</tr>
<tr>
<td>Credits/Semester</td>
<td>5</td>
</tr>
<tr>
<td>Required for Graduation</td>
<td></td>
</tr>
<tr>
<td>Meets H.S. Grad Requirement</td>
<td></td>
</tr>
<tr>
<td>Elective Credit</td>
<td>Yes</td>
</tr>
<tr>
<td>Prerequisites</td>
<td>Architectural Design 1-2</td>
</tr>
<tr>
<td>Articulated with LBCC</td>
<td>Yes</td>
</tr>
<tr>
<td>Articulated with CSULB</td>
<td>No</td>
</tr>
<tr>
<td>Meets UC “a-g” Requirement</td>
<td>Yes (f)</td>
</tr>
<tr>
<td>Meets NCAA Requirement</td>
<td>No</td>
</tr>
</tbody>
</table>

COURSE DESCRIPTION

Architectural Design is a course in which the student will express him or herself visually and be able to showcase their creativity. Instruction will be given in the following areas, elements of design, architectural history, technical drafting, sketching, model building, and computer design. The course will give the students confidence in organizing ideas and the ability to work ideas into new and useful creations.

Architecture is a class that is part of a program that builds on the information learned in Architectural Design 1-2. This class will prepare the student for a career in architecture or will transfer to LBCC through an articulation agreement that will permit architecture students to earn up to 8 units of college credit. The classes are taught as lecture/lab with occasional field trips. The lectures are directly related to lab work (drawings). There is out of class work and a portfolio of drawings kept by the student.

GOALS: (Student needs the course is intended to meet)

Students need to:

- Explore professional level skills, and an understanding of the drawing systems and design considerations and to complete the required drawings for a residential structure.
- Explore aesthetic perception (Component 1 - Aesthetic Perception).
- Explore visual arts knowledge and skills to express Architectural ideas graphically (Component 2 - Creative Expression).
- Explore knowledge of historical and cultural developments and their influence on modern architecture (Component 3 - Cultural and Historical Context).
- Explore a base for making informed aesthetic judgments (Component 4 - Aesthetic Valuing).
- Explore information and skill in the presentation of ideas graphically.
- Explore an awareness of architectural fields.

PERFORMANCE OBJECTIVES:

Students will:

- Increase artistic knowledge, perception, and technical skills to express and communicate ideas graphically.
- Be able to apply a variety of architectural styles learned in Architectural Design 1-2 to their designs.
- Understand that contemporary architectural design is a reflection of historical, and culture developments.
- Learn techniques to solve advanced architectural design problems.
- Apply balance, rhythm, movement, variety, proportion, emphasis, and unity in the design of architectural structures.
- Make decisions and be able to respond to the aesthetic value of advanced architectural designs.
- Explore an understanding of color composition.
- Demonstrate the proper use of materials and symbols in architectural drawings.
- Demonstrate the ability to draw residential floor plans that include, proper room layout, utilizing architectural symbols, dimensions notes and schedules.
- Explore the ability to draw various computer aided architectural drawings and demonstrate proper scale plotting techniques.
- Add to the Portfolio of projects created in Architectural Design 1-2.
- Explore the necessary skills to create a more complex three-dimensional model of an architectural residence.
- Be able to perform visual, verbal, and written presentations.
- Be able to recognize the architectural styles of a minimum of five internationally recognized architects.
- Apply local building codes and city ordinances to the design of a residential site.

**OUTLINE OF CONTENT AND TIME ALLOTMENT**

The Four components of Visual Arts Education

- Artistic Perception (1)
- Creative Expression (2)
- Historical and Cultural Context (3)
- Aesthetic Valuing (4) will be utilized throughout the year as the students learn to analyze and respond to their own work and the work of others.

**Course Outline (Visual Arts Components) | Weeks**

<table>
<thead>
<tr>
<th>Elements of Design (1,2,4)</th>
<th>4</th>
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<tbody>
<tr>
<td>Residential design, research, and evaluation</td>
<td></td>
</tr>
<tr>
<td>Preliminary planning, design, and presentation</td>
<td></td>
</tr>
<tr>
<td>Sketching (1,2)</td>
<td>2</td>
</tr>
<tr>
<td>Orthographic Projection</td>
<td>3</td>
</tr>
<tr>
<td>Historic perspective (3,4)</td>
<td>2</td>
</tr>
<tr>
<td>Architectural materials (1,2,3)</td>
<td>3</td>
</tr>
<tr>
<td>Architectural elements (1,2,3)</td>
<td>3</td>
</tr>
<tr>
<td>Computer Aided Design</td>
<td>3</td>
</tr>
</tbody>
</table>
Plan View Drawings
- Site Plan 12
- Floor Plan
- Plot and Roof
- Elevations
- Section
- Foundation Plan
- Schedules
- Electrical Plan
- Details

Career planning 1
Model building 3
Total 36

METHODS: A variety of instructional strategies will be utilized to accommodate all learning styles.

The student will be expected to explore a professional level of the following skills, an understanding of the drawing systems and design considerations and to complete the assignments.

SKILLS
- Line weight, line types
- Lettering
- Scaling
- Abbreviations
- Template use

DRAWING SYSTEMS
- Orthographic projection
- CAD
- Axonometric (oblique)
- Preliminary Drawings
- Drawing Reproduction

DESIGN CONSIDERATIONS
- Proportion
- Composition
- Zoning / Building codes
- Site Analysis
- Geometric shapes
- Space Relationships
- Elevation studies

REQUIRED DRAWINGS
- Site Plan
- Plot and Roof
- Floor Plans
- Elevations
- Section
- Model
- Foundation Plan
- Schedules
- Electrical Plan
- Details

This course makes use of the following methods and materials for instruction:

- Lectures
- Testing
- Class Discussions
- Architectural Drawings
- Demonstrations
- Textbooks, reference materials
- Individual Instruction
- Student work displays
- Design problems
- Transparencies, Videos
- Applied mathematics
- Slides
- Portfolio Presentation
- Critical Comparison and Aesthetic Evaluation
- Daily Vocabulary
- Journal
- Guest Speakers
- Field trips
MATERIALS USED IN TEACHING THE COURSE: In addition to the basic text *(mandatory information – Title, Author, Copyright Date and Publisher)*, a variety of instructional tools will be used to meet the needs of all students

**Basic texts:** *Architecture Drafting and Design*; Helper- Walsh; 1998; Glencoe McGraw Hill  
ISBN 0-02-637067-0  
*Harnessing AutoCAD 2000*; Stellman-Krishnan; 1999; AutoDesk Press

**Supplementary materials:**

- AutoCAD 2000 Software
  ISBN 0-19-508378-4  
- *Gardners Art Through The Ages*; Tansey- kleiner; Harcourt Brace  
- ISBN 0-02-677102-0  
- *Help for the Home Builder*  
  City of Long Beach  
  Planning and Building Department  
  [www.ci.long-beach.ca.us/plan/helphome](http://www.ci.long-beach.ca.us/plan/helphome)  

**EVALUATION:** Student achievement in this course will be measured using multiple assessment tools including but not limited to: (a grading scale and/or rubric should be included)

These program standards are to assist students in maintaining a professional attitude in the classroom. The standards that follow are important to the final grade in this class. Each completed project/drawing should be evaluated on the basis of these criteria.

The following is the grading policy for this class.

- All work will be graded for completeness, application of information given, quality of workmanship and graphic presentation, and scored on a point system (usually 0-100).

- Test and Quizzes will be graded on points equaling the number of questions.

- The grading scale will be as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100%</td>
</tr>
<tr>
<td>B</td>
<td>79-89%</td>
</tr>
<tr>
<td>C</td>
<td>68-78%</td>
</tr>
<tr>
<td>D</td>
<td>57-67%</td>
</tr>
<tr>
<td>F</td>
<td>Below 57%</td>
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</tbody>
</table>

Projects = 50% of each reported grade  
Class participation = 10%  
Quizzes and test = 10%  
Portfolio = 10%  
Aesthetic Journal = 10%  
Final Exam = 10%  
Total = 100%

Submitted by: Christopher Clifton  
School: Technology Education  
Date: 10/02