BUTTE COLLEGE
COURSE OUTLINE

I. **CATALOG DESCRIPTION**

DFT 24 - Architectural Drafting Applications **3 Unit(s)**

Prerequisite(s): NONE
Recommended Prep: NONE

Transfer Status: CSU
34 hours Lecture
51 hours Lab

This is a computer-based drafting course that introduces the student to architectural drafting applications. Building on basic drafting concepts learned previously, this course will introduce residential design concepts including floor plans, foundation plans and details, elevations, framing and section plans, mechanical, electrical and plumbing plans and engineering site plans. Students will also be introduced to three-dimensional (3D) architectural modeling. Students will prepare a plan set including coversheet, site plan, floor plan, electrical plan, elevations, building section and construction details using AutoCAD.

II. **OBJECTIVES**

Upon successful completion of this course, the student will be able to:

A. Prepare a residential floor plan within project limits including the consideration of basic building codes, interior design criteria, room relationships, and traffic patterns.
B. List site plan criteria and prepare a plot plan based on project requirements using engineering units.
C. List the common foundation systems used for residential projects and prepare a foundation plan with typical details.
D. List roof types and materials used for residential projects and draw a sample roof plan.
E. Prepare elevation drawings for a residential project.
F. List and describe the major components in supplemental floor plans including electrical, plumbing heating, ventilation and air-conditioning and draw a sample supplemental floor plan (electrical).
G. Demonstrate plotting, printing and assembling completed architectural drawings for a residential project into a finished set of plans.

III. **COURSE CONTENT**

A. **Unit Titles/Suggested Time Schedule**

Lecture

Topics	Hours
1. Residential design	3.00
2. Construction Procedures and Sketching Applications	3.00
3. Sustainability and green building design	2.00
4. Floor plans	3.00
5. Foundation plans	3.00
6. Roof plans	5.00
7. Elevations	5.00
8. Framing methods and plans	4.00
9. Electrical, Plumbing and Mechanical plans	3.00
10. Site Plan Development	2.00

11. Cover Sheet and General Notes	1.00
Total Hours	34.00

Lab

Topics	Hours
1. Residential design	5.00
2. Construction Procedures and Sketching Applications	2.00
3. Sustainability and green building design	3.00
4. Floor plans	6.00
5. Foundation plans	4.00
6. Roof plans	4.00
7. Elevations	7.00
8. Framing methods and plans	7.00
9. Supplemental floor plans	5.00
10. Site plans	5.00
11. Cover Sheet and General Notes	3.00
Total Hours	51.00

IV. METHODS OF INSTRUCTION

A. Lecture
B. Collaborative Group Work
C. Class Activities
D. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
E. Demonstrations
F. Practical exercises

V. METHODS OF EVALUATION

A. Exams/Tests
B. Quizzes
C. Projects
D. Homework
E. Class participation
F. Practical Examinations

VI. EXAMPLES OF ASSIGNMENTS

A. Reading Assignments
   1. Please read the materials on Professional Careers and Opportunities. Be prepared to discuss the chapter next class.
   2. Please read the chapter on Conservation and Environmental Design and Construction for homework and be prepared to discuss the impact that environmental design has on today's construction projects in class.

B. Writing Assignments
   1. From the chapter readings you have been doing, please report out on "sustainable design" by using the "Going Green" sections. Please include a definition of what sustainable design is,how it applies to our work here and why it is important going forward. Please expound to a total of 1 to 2 paragraphs and submit when complete.

2. Please go to www.greenformat.com and select no less than (5) products that you have searched and record the product name, manufacturer and Master Format ID and submit with the questions you are completing in the study guide. Hand documents are acceptable and if you have any questions, please inform your instructor.

C. Out-of-Class Assignments

1. When assigned to a group, you will take about 20 minutes to discuss and study the following categories: Digitizing and Scanning, CAD Standards, Ergonomics and Networking and Storage. You will provide a consolidated bulleted list of 5 to 8 things that are the most important to remember and comprehend.
2. For homework please develop a sketch for the site plan for your residences based on the MIBRADA LOOP details provided by the instructor.

VII. **RECOMMENDED MATERIALS OF INSTRUCTION**

Textbooks:

A. Jefferis A., Madsen D.A. and Madsen D.P.. Architectural Drafting and Design. 6th Edition. Delmar, 2011.

Created/Revised by: John Dahlgren
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