

**College of San Mateo
Official Course Outline**

1. **COURSE ID:** DRAF 113 **TITLE:** REVIT
Semester Units/Hours: 3.0 units; a minimum of 32.0 lecture hours/semester; a minimum of 64.0 lab hours/semester
Method of Grading: Grade Option (Letter Grade or P/NP)
Recommended Preparation:
 Eligibility for ENGL 838 or 848.

2. **COURSE DESIGNATION:**
Degree Credit
Transfer credit: CSU

3. **COURSE DESCRIPTIONS:**
Catalog Description:
 Preparation of working drawings using AutoDesk REVIT. Students prepare drawings of buildings, their components in 3D, annotation of the models with 2D drafting elements, access building information from the building models database and track various stages in the building's lifecycle, from concept to construction and later demolition.

4. **STUDENT LEARNING OUTCOME(S) (SLO'S):**
 Upon successful completion of this course, a student will meet the following outcomes:
 - A. Use architectural drafting techniques to design, assemble, evaluate, and render architectural building components.
 - B. Develop plan and elevation drawings and details from three-dimensional architectural models.
 - C. Use Building Information Modeling (BIM) software for creation of digital building models.
 - D. Identify architectural and design terminology necessary to effectively operate BIM software.
 - E. Recognize techniques utilized by the architectural profession to create architectural technical drawings from building models.

5. **SPECIFIC INSTRUCTIONAL OBJECTIVES:**
 Upon successful completion of this course, a student will be able to:
 - A. Use architectural drafting techniques to design, assemble, evaluate, and render architectural building components.
 - B. Develop plan and elevation drawings and details from three-dimensional architectural models.
 - C. Use Building Information Modeling (BIM) software for creation of digital building models.

- D. Identify architectural and design terminology necessary to effectively operate BIM software.
- E. Recognize techniques utilized by the architectural profession to create architectural technical drawings from building models.

6. COURSE CONTENT:

Lecture Content:

- 1. Floor Plan Basics
 - a. Create walls, doors, windows, roofs.
 - b. Add dimensions and annotations
- 2. Overview of Linework and Modifying Tools
 - a. Lines and shapes
 - b. Snaps
 - c. Edit tools
 - d. Annotations
- 3. 2D Architectural Objects
 - e. Rectilinear objects
 - f. Objects with curves
- 4. First Floor Floor Plan
 - g. Project setup
 - h. Exterior walls
 - i. Interior walls
 - j. Door openings and windows
 - k. Fireplace
- 5. Second Floor and Basements
 - l. Enclosing the shell
 - m. Adding interior walls, doors, openings and windows
 - n. Basement floor plans
- 6. Roof Designs
- 7. Floor Systems
- 8. Elevations
- 8. Schedules
- 9. Photo-Realistic Rendering
- 10. Construction Document Sets

Lab Content:

- B. Creating floor plan using walls, doors, windows, roof commands
- C. Learning edit tool to create lines and shape
- D. Project in setting up a base floor plan
- E. Project in setting up second, third and basement plans
- F. Roof projects using gable and low roof elements
- G. Project creating bathroom and kitchen layouts
- H. Guardrail balcony projects

- I. Generating door and window schedules
 - J. Create an exterior and interior rendering
 - K. Printing sets of drawings
7. **REPRESENTATIVE METHODS OF INSTRUCTION:**
Typical methods of instruction may include:
- A. Lecture
 - B. Lab
 - C. Critique
 - D. Directed Study
 - E. Guest Speakers
 - F. Individualized Instruction
 - G. Observation and Demonstration
8. **REPRESENTATIVE ASSIGNMENTS**
Representative assignments in this course may include, but are not limited to the following:
- Writing Assignments:**
Homework consists of reading of text and handouts; completion of homework writing assignments. Approximately two extensive design projects will be assigned which require problem solving and critical thinking. The major means of communication is formal standardized CAD drawings. Students will write justifications for their designs.
- Reading Assignments:**
There will be a comprehensive text used in the course. The text changes as new texts become available. Drafting and design is dynamic thus a current text is critical.
9. **REPRESENTATIVE METHODS OF EVALUATION**
Representative methods of evaluation may include:
- A. Class Participation
 - B. Class Performance
 - C. Class Work
 - D. Exams/Tests
 - E. Home Work
 - F. Lab Activities
 - G. Portfolios
 - H. Projects
 - I. Quizzes
 - J. Written examination

10. REPRESENTATIVE TEXT(S):

Possible textbooks include:

- A. Stine, D., J.. *Residential Design Using Autodesk Revit Architecture 2013*, ed. SDC Publications, 2012

Origination Date: November 2012

Curriculum Committee Approval Date: February 2013

Effective Term: Fall 2013

Course Originator: Valeria Vorobey