

Master Syllabus

CAT 2101 - Design in Revit

Division: Science, Mathematics and Engineering

Department: Civil Engineering Technology

Credit Hour Total: 4.0

Lecture Hrs: 1.0 **Lab Hrs:** 6.0

Prerequisite(s): CAT 1101 AND CAT 1121 AND CAT 1201

Date Revised: January 2015

Course Description:

Develop proficiency with Revit design techniques, developing architectural models and coordinating a set of construction documents. Includes architectural and Mechanical, Electrical and Plumbing (MEP) problem-solving skills. One classroom, six lab hours per week.

General Education Outcomes:

- ▣ Critical Thinking/Problem Solving Competency
- ▣ Computer Literacy Competency
- ▣ Information Literacy Competency

Course Outcomes:

Walk- throughs and renderings

Use Revit software to generate and export walk-throughs of building information models, as well as renderings of various interior and exterior views.

Assessment Method: Locally developed exams

Performance Criteria:

Individual student score of 70% or better

Building Information Modeling

Demonstrate familiarity with Building Information Modeling (BIM) philosophy and workflows.

Assessment Method: Locally developed exams

Performance Criteria:

Individual student score of 70% or better

Revit user interface, project browser and ribbon organization

Demonstrate familiarity with Revit Architecture and Revit MEP user interfaces, project browser, ribbon organization, basic modeling and model manipulation.

Assessment Method: Locally developed exams

Performance Criteria:

Individual student score of 70% or better

Building information modeling workflow

Use Revit software to generate construction documents, analyze workflows and perform MEP linkages.

Assessment Method: Locally developed exams

Performance Criteria:

Individual student score of 70% or better

Outline:

Basic building information modeling (BIM) workflow development

Proper use of Revit Architecture and Revit MEP

Development of walk-through videos

Development of architectural renderings

Construction document generation

Link Revit Architectural and MEP models to perform analysis

Develop commercial and residential models