

## 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

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### 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