

## Master Syllabus

### CAT 1131 - Introduction to Revit MEP

**Division:** Science, Mathematics and Engineering

**Department:** Civil Engineering Technology

**Credit Hour Total:** 3.0

**Lecture Hrs:** 2.0 **Lab Hrs:** 2.0

**Prerequisite(s):** CAT 1101 OR CAT 1111 OR CAT 1121

**Date Revised:** October 2012

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### Course Description:

Study and application of advanced drawing using AutoDesk Revit. Major emphasis on building information modeling (BIM) theory along with construction of Mechanical, Electrical and Plumbing (MEP) systems. Two classroom, two lab hours per week.

### General Education Outcomes:

- Critical Thinking/Problem Solving Competency
- Computer Literacy Competency

### Course Outcomes:

#### Advanced modeling and editing

Demonstrate proficiency with advanced model building and editing. Use various Revit features to construct, manipulate and communicate building mechanical, electrical and plumbing models.

**Assessment Method:** Portfolios

**Performance Criteria:** 70% or more of available points.

#### Building Information Modeling (BIM)

Utilize software to construct a MEP model and show the embedded information with other disciplines.

**Assessment Method:** Portfolios

**Performance Criteria:** 70% or more of available points.

#### Types, families and components

Demonstrate proficiency with Revit MEP types, families and components. Create and add new components to be accurately placed within a Revit MEP BIM.

**Assessment Method:** Portfolios

**Performance Criteria:** 70% or more of available points.

### Outline:

CAD vs Building Information Modeling  
Families and components  
Parameters and constraints  
Model representation and communication  
Design information organization  
Interoperability  
Site detailing