CET-211 Advanced Revit 1

Course Description: A course on understanding concepts of mechanical systems and preparing details of mechanical systems layouts using Revit software.

Prerequisites(s): CET 120 **Corequisite(s):** CET 205, CET 212

Lecture Hours: 3	Lab Hours: 3	Credit Hours: 4
Lab Fee: $105	Supplemental Fee: $0	Purpose:
□ Transfer Assurance Guide Course (TAG)	□ Transfer Module Course (TM)	
Course Format: Lecture	Grading: A/B/C/D/F/I	
Delivery Method: □ Web	□ Hybrid	☒ Classroom
Semesters Offered: Fall	X Spring	Summer

Course Primary Text:

Title: Mechanical and Electrical Systems for Buildings	Edition: Fifth
Author(s): Janis, R. R. and Tao, W. K. Y	
Publisher: Pearson Education, Inc.	

Supplemental Materials:

National Electric Code and National Electric Code Handbook; Ohio Building Code; American with Disabilities Accessibility Guidelines; Duke Energy Company Design Handbook
Miscellaneous Manufacturer Catalogues and Web Pages, Lithonia Visual Lighting Software, Light Meters; Drawing from Student Building from CET 205

Course Outcomes:

1	ABET (a), Reinforced: an ability to apply knowledge, techniques, skills and modern tools of the discipline to narrowly defined engineering technology activities.
2	ABET (b), Reinforced: an ability to apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge.
3	ABET (e), Reinforced: an ability to identify, analyze, and solve narrowly defined engineering technology problems
4	ABET (i), Reinforced: a commitment to quality, timeliness and continuous improvement

Course Topics:

Week 1	Introduction of environmental issues in buildings.
Week 2	Introduction to various HVAC systems.
Week 3	Introduction to various HVAC equipment.
Week 4	Introduction to heat loss/heat gain calculations.
Week 5	Introdcution to load calculations.
Week 6	Test 1.

Week 7	Create an architectural model.
Week 8	Create spaces within the architectural model.
Week 9	Create zones within the architectural model.
Week 10	Create the engineering data for the model.
Week 11	Extract the load calculations.
Week 12	Set the diffusers in the different spaces.
Week 13	Select the unit that feeds the system.
Week 14	Select the duct layout that fits the model.
Week 15	Test 2.

Methods of Evaluation/Assessment

Midterm Exam – 20%
Final Exam – 20%
Lab Assignments 60%

Course Keeper: Elias Feghali

Date Completed: March 16, 2018
Updated: March 15, 2019, Carol Morman