STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK

COURSE OUTLINE

SOET 250: Introduction to 3D CAD and BIM

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CANINO SCHOOL OF ENGINEERING TECHNOLOGY
Fall 2015

A. **TITLE**: **Introduction to 3D CAD and BIM (Building Information Modeling)**

B. **COURSE NUMBER:** SOET 250

C. **CREDIT HOURS:** 2

D. **WRITING INTENSIVE COURSE**: No

E. **COURSE LENGTH:** 15 weeks

F. **SEMESTER(S) OFFERED:** Fall

G. **HOURS OF LECTURE, LABORATORY, RECITATION, TUTORIAL, ACTIVITY:**

2 -2 hour labs per week

H. **CATALOG DESCRIPTION:**

This course introduces students to commercial construction drawings using object based CADD/REVIT software used by engineers, architects and designers also known as Building information Modeling (BIM). Produce plans, sections elevations, 3D models, quantities, and other data which are fully coordinated and can be readily manipulated, accessed and shared. In addition BIM allows students to perform design tasks, query quantities and takeoffs, and generate drawing sheets for construction documentation needs.

I. **PRE-REQUISITES/CO-REQUISITES**:

NONE REQUIRED

J. **GOALS (STUDENT LEARNING OUTCOMES)**:
By the end of this course, the student will be able to:

	Objective	***SLO***
1	Demonstrate an intermediate level of knowledge of parametric design using Building Information Modeling (BIM)	4
2	Evaluate residential and commercial architectural design using BIM software	2, 4
3	View and comprehend a single BIM model in for the various perspectives of : design, scheduling, materiel, modeling, construction management, and documentation	1, 2, 4
4	Analyze the fully coordinated nature of BIM Architecture and MEP project files	1, 2, 4
5	Utilize families and types to query BIM	4
6	Apply core concepts within the context of a project planning and accomplishment	4

K. TEXTS:

Title: Design Integration Using Autodesk Revit 2010+Architecture+Structural and MEP
Author: Daniel John Stine
Publishing Company: *SDC Publications ISBN: 978-1-58503-582-3*

L. **REFERENCES: Autodesk Education Community**
http://students.autodesk.com/ , **Revit City** http://www.revitcity.com/index.php

M. **EQUIPMENT:** (Drafting Lab – NS119 – with plotters, Autodesk REVIT ARCHITECTURE , REVIT MEP, STRUCTURAL, ANGEL)

N. **GRADING METHOD:** A-F

N. **MEASUREMENT CRITERIA/METHODS:**

- Exams
- Quizzes
- ANGEL/Online class café participation
- Participation

P. **DETAILED COURSE OUTLINE:**

I. INTRODUCTION AND METHODOLOGY
   a. User Interface.
   b. Conceptual Underpinnings of Revit Architecture
   c. Content

II. CREATE THE BUILDING MODEL
   a. Project Setup and Worksharing
   b. Floor plan
   c. Roof
   d. Floor system/Reflective ceiling plans
   e. Interior & exterior Elevation
   f. Site plans
   g. Structural plans

III. CONTENT
   a. BIM Content Topics

IV. DOCUMENTATION AND COORDINATION
   a. Coordination Tools.
   b. Detailing and Annotation
   c. Plotting and Publishing
   d. Schedules