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

MASTER SYLLABUS

COURSE NUMBER – COURSE NAME
SOET 314 - Advanced CADD

Created by: Robert F. Burnett

Updated by:

Canino School of Engineering Technology

Department: Civil and Construction Technology

Semester/Year: Fall 2020

A. **TITLE**: Advanced CADD

B. **COURSE NUMBER:** SOET 314

C. **CREDIT HOURS: (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity)**

 # Credit Hours: 3
 # Lecture Hours: 1 **per week**
 # Lab Hours: 4 **per week**
Other: **per week**

Course Length: 15 **Weeks**

D. **WRITING INTENSIVE COURSE**: Yes ☐ No ☒

E. **GER CATEGORY: None:** ☒ **Yes:** GER
***If course satisfies more than one*:** GER

F. **SEMESTER(S) OFFERED: Fall** ☐ **Spring** ☒ **Fall & Spring** ☐

G. **COURSE DESCRIPTION:**

Students learn advanced methods, tools, and applications of 2D AutoCAD software. Students learn to use external references (XREFS) in CADD project files. Other topics include: learning to use attributes and dynamic blocks, scaling objects, using annotative tools and view ports, and alternate formatting. Students create civil, architectural and MEP type drawings using advanced CADD tools and industry concepts. A higher level of communication in CADD is emphasized with utilization of advanced tools to maintain control of and standardize CADD files for a commercial project. Projects mimic real world expectations of a professioanl CADD designer.

H. **PRE-REQUISITES: None** ☐ **Yes** ☒ **If yes, list below:**

SOET 116 or SOET 114; or permission of the instructor

CO-REQUISITES: None ☒ **Yes** ☐ **If yes, list below:**

I. STUDENT LEARNING OUTCOMES: (*see key below*)

By the end of this course, the student will be able to:

Course Student Learning Outcome [SLO]	***Program Student Learning Outcome [PSLO]***	***GER*** *[If Applicable]*	***ISLO & SUBSETS***	
1.Use external references (XREFS) in files to maintain control over certain parts of the CADD project file	SO 6		5-Ind, Prof, Disc, Know Skills ISLO ISLO	Subsets Subsets Subsets Subsets
2. Create, edit and link attributes and dynamic blocks within a CAD file	SO6		5-Ind, Prof, Disc, Know Skills ISLO ISLO	Subsets Subsets Subsets Subsets
3. Explore alternate methods of scaling objects, setting up annotative tools and view ports.	SO6		5-Ind, Prof, Disc, Know Skills ISLO ISLO	Subsets Subsets Subsets Subsets
4. Learn alternate ways of formatting CADD files.	SO6		5-Ind, Prof, Disc, Know Skills ISLO ISLO	Subsets Subsets Subsets Subsets
5. Apply the use of more advanced tools and concepts as would be seen in Industry by experience CADD users	SO6		5-Ind, Prof, Disc, Know Skills ISLO ISLO	Subsets Subsets Subsets Subsets
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KEY	Institutional Student Learning Outcomes [ISLO 1 – 5]
ISLO #	**ISLO & Subsets**
1	**Communication Skills** Oral [O], Written [W]
2	**Critical Thinking** *Critical Analysis [CA] , Inquiry & Analysis [IA] , Problem Solving [PS]*
3	**Foundational Skills** *Information Management [IM], Quantitative Lit,/Reasoning [QTR]*
4	**Social Responsibility** *Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T]*
5	**Industry, Professional, Discipline Specific Knowledge and Skills**

*Include program objectives if applicable. Please consult with Program Coordinator

J. **APPLIED LEARNING COMPONENT:** Yes ☒ No ☐

If YES, select one or more of the following categories:

- ☒ Classroom/Lab
- ☐ Internship
- ☐ Clinical Placement
- ☐ Practicum
- ☐ Service Learning
- ☐ Community Service

- ☐ Civic Engagement
- ☐ Creative Works/Senior Project
- ☐ Research
- ☐ Entrepreneurship
  (program, class, project)

K. TEXTS:

TBD

L. REFERENCES:

https://www.nypl.org/ New York Public Library/ Autodesk Education community

M. EQUIPMENT: None ☐ Needed: Mechanical (automatic) pencil, engineering computation paper, Flash drive/Memory Stick, Architects and engineers scales,

N. GRADING METHOD: A-F

O. SUGGESTED MEASUREMENT CRITERIA/METHODS:

quizzes, exam, drawing assignments; project

P. DETAILED COURSE OUTLINE:

1. External referencing

2. Dynamic blocks

3. AutoLISP Core Concepts

4. CAD Administrator's Guide (Windows Only)

5. Annotative monitor and scales

6. Properties

7. Parametric tools

8.Collaborate/cloud tools

9.Referance tools

10. Advanced view tools

11. Layer states manages

12. AIA layer standards

Q. LABORATORY OUTLINE: None ☐ Yes ☒

1. External referencing exercise

2. Dynamic blocks exercise
3. Scaling exercise
4. Project using annotative monitor and AUTOLISP Core Concepts
5. Exercise with parametric and collaborative/cloud tools
6. Civil type drawings using advanced CADD tools and concepts.
7. Architectural type drawings using advanced CADD tools and concepts.
8. MEP type drawings using advanced CADD tools and concepts.