New York City College of Technology
The City University of New York
Department of Architectural Technology

ARCH 3609 Integrated Software in
the Architectural Office

Part I. DIAGRAMS ILLUSTRATION

Illustrating Drawings Guidelines:
01	Open your boolean operation study In Rhino and set up and save a parallel camera. (Right click on any window view/ viewport properties/ projection: parallel).
02	In Rhino use the commands **make 2d, extract isocurves, extract wireframe, crv boolean** to create the base of the diagrams that best describe your geometry and the steps. You will have to illustrate all the steps required to produce the geometry using the same parallel view you saved.
03	Go to the top view, select your 2d line drawings and export (file/export) them as **dwg** or **ai** file types
04	Open the files in illustrator and set up your art board to be letter size 8.5" by 11".
05	Use different **strokes, grayscale tones and transparencies** to create hierarchy on your vector information.
06	Organise your work in **layers.**
07	Save your illustrator file as .pdf. Upload this file on Blackboard **individually.**
08	Repeat the same process for the 12 studies of architectural elements (stairs, atrium, partitions) you produced for assignment 02. Save your illustrator file/s as .pdf and upload on Blackboard **as group.**

ALWAYS SAVE THE ILLUSTRATOR FILES FOR YOUR ARCHIVE.

Part II. SURFACE CREATION IN RHINO
Agenda
1. Curve degree, Rebuild, Curve Direction
2. Curve extrusion
3. Surface creation
	Planar Surface, Sweep 1&2, Edge surface, Loft, Extrude crv along crv, Network Surface,Patch
4. History
5. Surface deformation
	Edit points, Srf Normals, Srf Curvature, backface shading
6. Deriving curves from surfaces
	Projections, contours, duplication and various methods of extraction.

Surface Creation Guidelines:
01.	Draw a 10" by 10" rectangle, explode and **rebuild** it.
02.	Move vertically the control points of the rebuilded lines.
03.	Extrude curve (**extrudeCrv**)
04.	Extrude curve along curve (**extrudeCrvAlongCrv**)
05.	Sweep 1 rail (**sweep1**)
06.	Sweep 2 rails (**sweep2**)
07.	Patch surface (**patch**)
08.	Surface from edge curves (**edgeSrf**)

Professor: Loukia Tsafoulia	LTsafoulia@citytech.cuny.edu	Spring 2014

New York City College of Technology
The City University of New York
Department of Architectural Technology

ARCH 3609 Integrated Software in the Architectural Office

09. Surface from lofted curves (**loft)**
10. Surface from curve network (**networkSrf**)
11. Copy all of the surfaces 15″ in the positive Y direction and match all of their **surface normal directions** and UV isocurve directions.
12. Copy only the edgeSrf another 15″ in the positive Y direction and evenly **extract 10 isocurves** in the X and Y directions.
13. Copy only the edgeSrf another 15″ in the positive Y direction and perform **extract wireframe and dubfaceborders**.
14. Copy only the edgeSrf another 15″ in the positive Y direction and **contour** along the X,Y and Z axes using a step of 0.1″.
15. Use the **dot** command to name each of the above operations.
16. Save and upload your file on Blackboard **individually.**
17. Use the above mentioned commands on srf creation to generate 9 more studies of stairs, atrium, partitions (3 studies per element). Save and upload your files on Blackboard **as a group.**
DO NOT FORGET TO ORGANIZE ALL THE DIFFERENT GEOMETRIES IN LAYERS.

Tutorials
Uploaded on blackboard:
- Rhino_Surface Creation
- Illustrator Tutorial I
- Illustrator Tutorial II (pages 1-6 and 14)
- Rhino & Illustrator Layered Drawings I & II

Submission
Due Date: 2.00 pm Friday, February 21st.
Upload on blackboard, your files NAMED ACCORDINGLY:

Individually:
01. A rhino file with multiple surface creation and line information. Follow the steps described above under Guidelines and the Tutorial *Rhino_Surface Creation*.
02. A pdf file with a series of process diagrams of one of your cube substraction outcomes (Assignment 02). Follow the tutorials *Rhino & Illustrator Layered Drawings I & II*.

As a group ((one of the group members uploads. Do not upload the same files 2 times)**:**
01. A rhino file with 3 more studies of Atrium forms.
02. A rhino file with 3 more studies of Stair forms.
03. A rhino file with 3 more studies of Wall forms.
04. A pdf file with all the 12 studies produced for assignment 02 illustrated as axo (parallel) drawings. For the axo view see references from previous semester at PLB_Education_Bustling Vacancy

BRING IN CLASS PRINTED IN LETTER OR TABLOID PAPER SIZE THE ARCHITECTURAL ELEMENTS STUDIES' DRAWINGS.

Professor: Loukia Tsafoulia   LTsafoulia@citytech.cuny.edu   Spring 2014