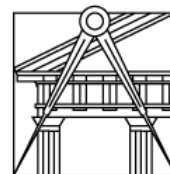


# REPRESENTAÇÃO DIGITAL

Mestrado Integrado em Arquitetura | 1º Semestre | 2023/2024

Margarida Cabral | 20211423 | Turma 2J

Docente – Nuno Alão



**FACULDADE DE ARQUITETURA**  
**LISBON SCHOOL OF ARCHITECTURE**  
UNIVERSIDADE DE LISBOA

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# Semana 1

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Criação do site do aluno, onde serão entregues os trabalhos.

Programas usados:

- Brackets – usado para a edição do ficheiro html;
- Filezilla – usado para fazer upload do ficheiro html no servidor da Faul;

```
index.html
1 |<!DOCTYPE html>
2 |<html lang="en">
3 |<head>
4 |   <meta charset="UTF-8">
5 |   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6 |   <title>Margarida Cabral</title>
7 |   <style>
8 |     body {
9 |       background-color: #d3d3d3;
10 |      font-family: monospace sans-serif;
11 |      text-align: center;
12 |      color: white;
13 |      margin: 0;
14 |    }
15 |
16 |    .logo {
17 |      display: block;
18 |      text-align: center;
19 |      margin: 20px auto;
20 |    }
21 |
22 |    .logo img {
23 |      width: 500px;
24 |      height: auto;
25 |    }
26 |
27 |    .profile-photo {
28 |      border-radius: 50%;
29 |      width: 200px;
30 |      height: 200px;
31 |      object-fit: cover;
32 |      margin: 20px auto;
33 |      box-shadow: 0 0 10px rgba(0, 0, 0, 0.2);
34 |    }
35 |
36 |    .profile-name {
37 |      font-size: 30px;
38 |      color: white;
39 |      margin: 10px 0;
40 |    }
41 |
42 |    .transparent-button {
43 |      background: transparent;
44 |      border: 2px solid white;
45 |      padding: 10px 20px;
46 |      margin: 20px;
47 |      cursor: pointer;
48 |      font-size: 15px;
49 |      color: white;
50 |    }
51 |
52 |    .contact-link {
53 |      text-decoration: none;
54 |      color: white;
55 |      font-size: 15px;
56 |      margin: 10px;
57 |    }
58 |
59 |    .contact-link:hover {
60 |      text-decoration: underline;
61 |      color: white;
```

# Semana 1

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FACULDADE DE ARQUITETURA  
LISBON SCHOOL OF ARCHITECTURE  
UNIVERSIDADE DE LISBOA



MARGARIDA CABRAL

20211423 | TURMA 2J

[PDF CASA SIZA](#)  
DWG CASA SIZA  
BLOG  
MAIL  
BACK

# Semana 2

---

## Introdução ao AutoCad;

Comandos usados:

**L** (line)– Criar linha;

**PL** (polyline) – Criar linhas agrupadas;

**O** (offset) – Criar paralelas;

**M** (move) – Mover;

**CO** (copy) – Copiar;

**DI** (dist) – Medir distâncias;

**CL** (close) – Fechar desenhos abertos;

**TR** (trim) – Apagar;

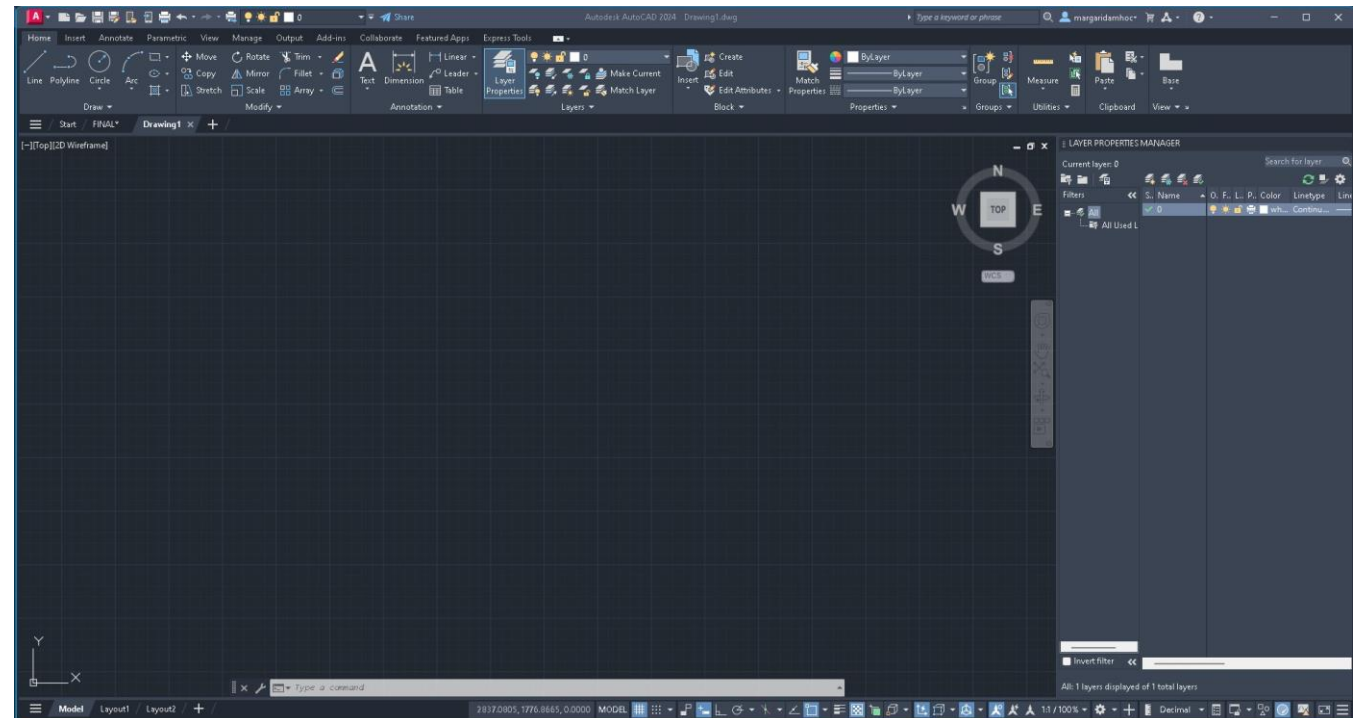
**H** (hatch) – Colorir;

**STR** (stretch) – Mover apenas vértices e extremidades;

**RO** (rotate) – Rodar;

**T** (texto) – Texto;

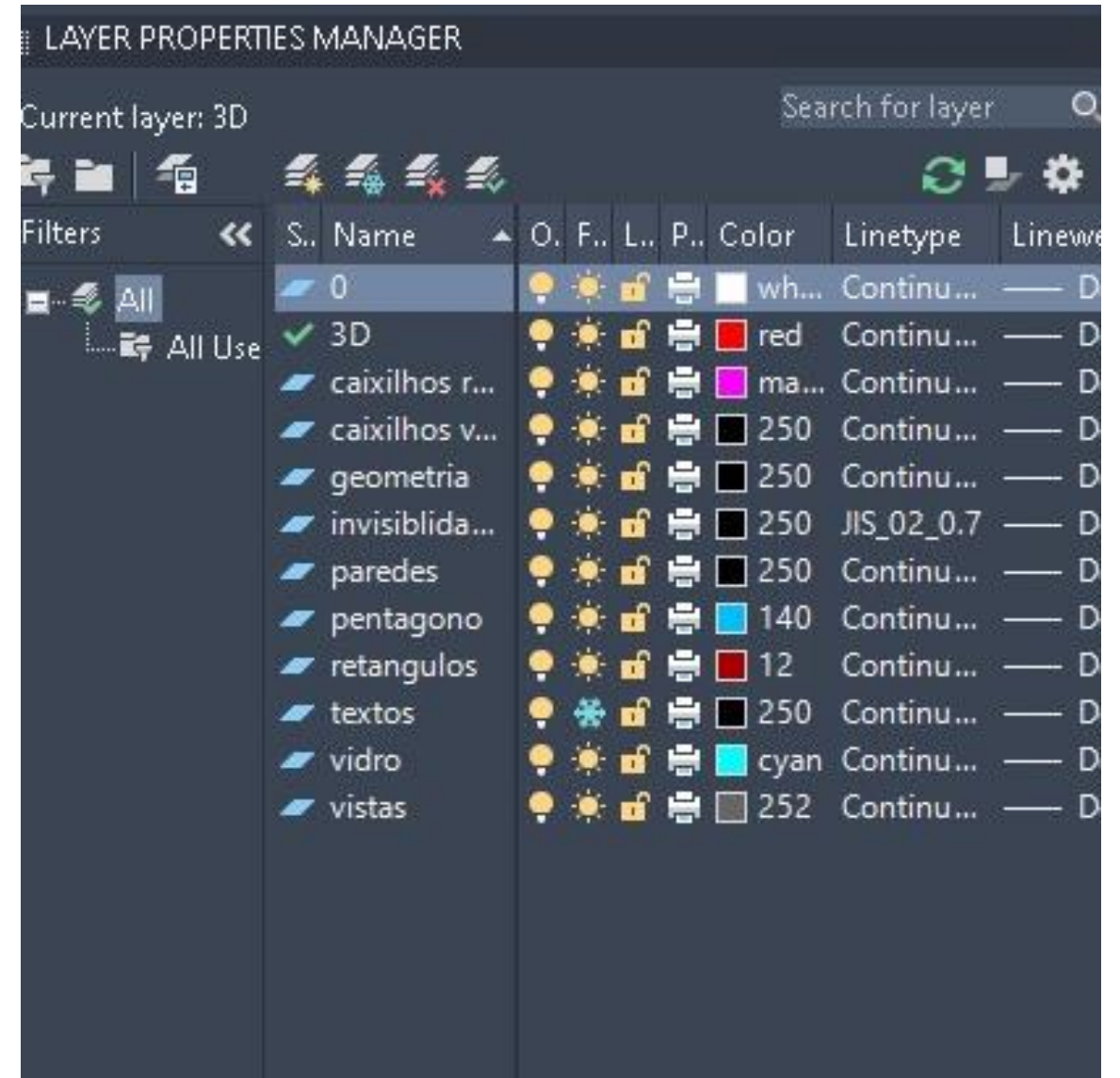
**C** (circle) – Criar circunferências;



# Semana 2

---

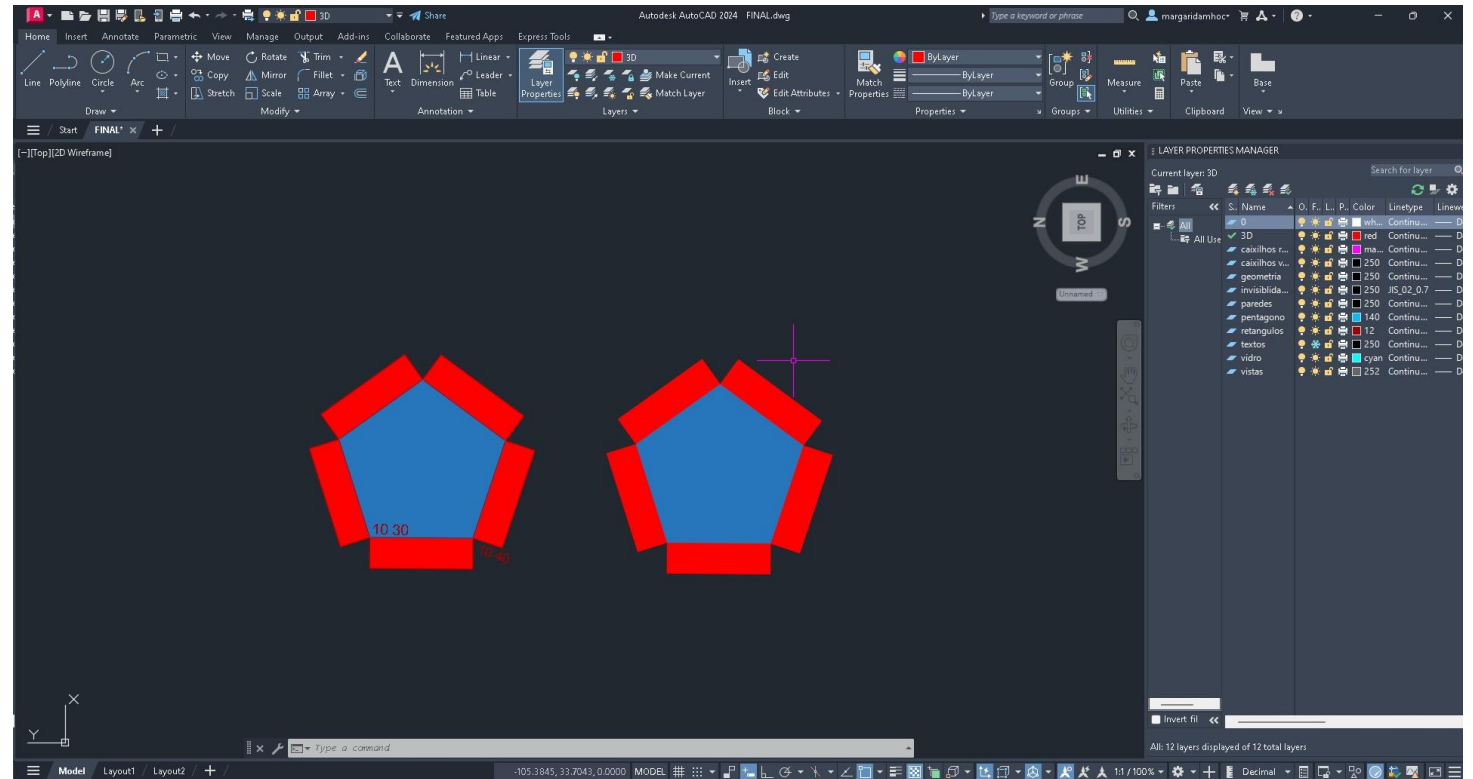
Criar layers;



# Semana 2

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Pentágonos e Retângulos;



# Semana 2

---

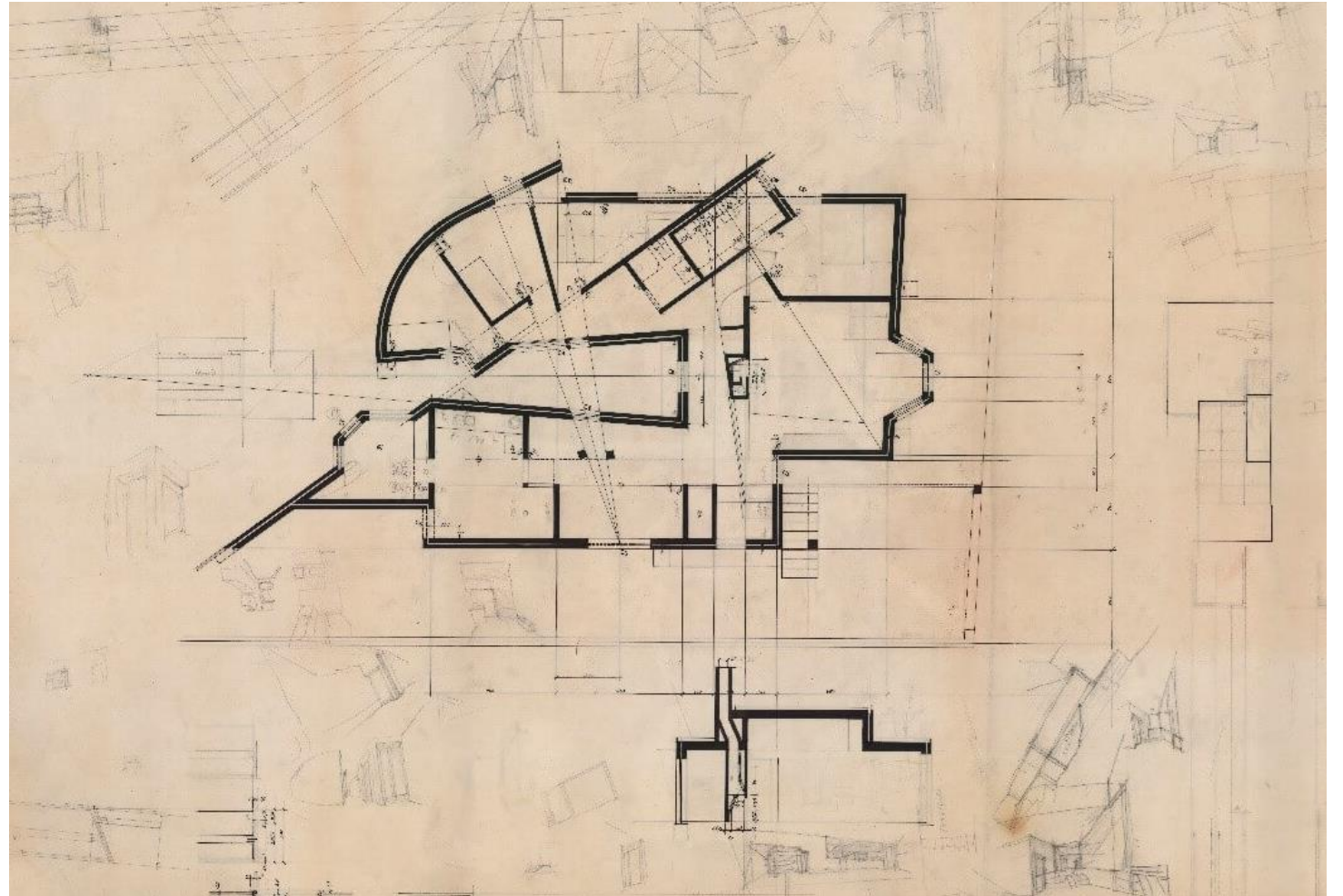
Decalque da casa Carlos António Siza do Siza Vieira à escala 1.100;

Comandos introduzidos:

**SC** (scale) – Definir a escala;

**ATTATCH** – Inserir a imagem da planta;

**AL** (align) – Alinhar, também pode ser usado para escalar.



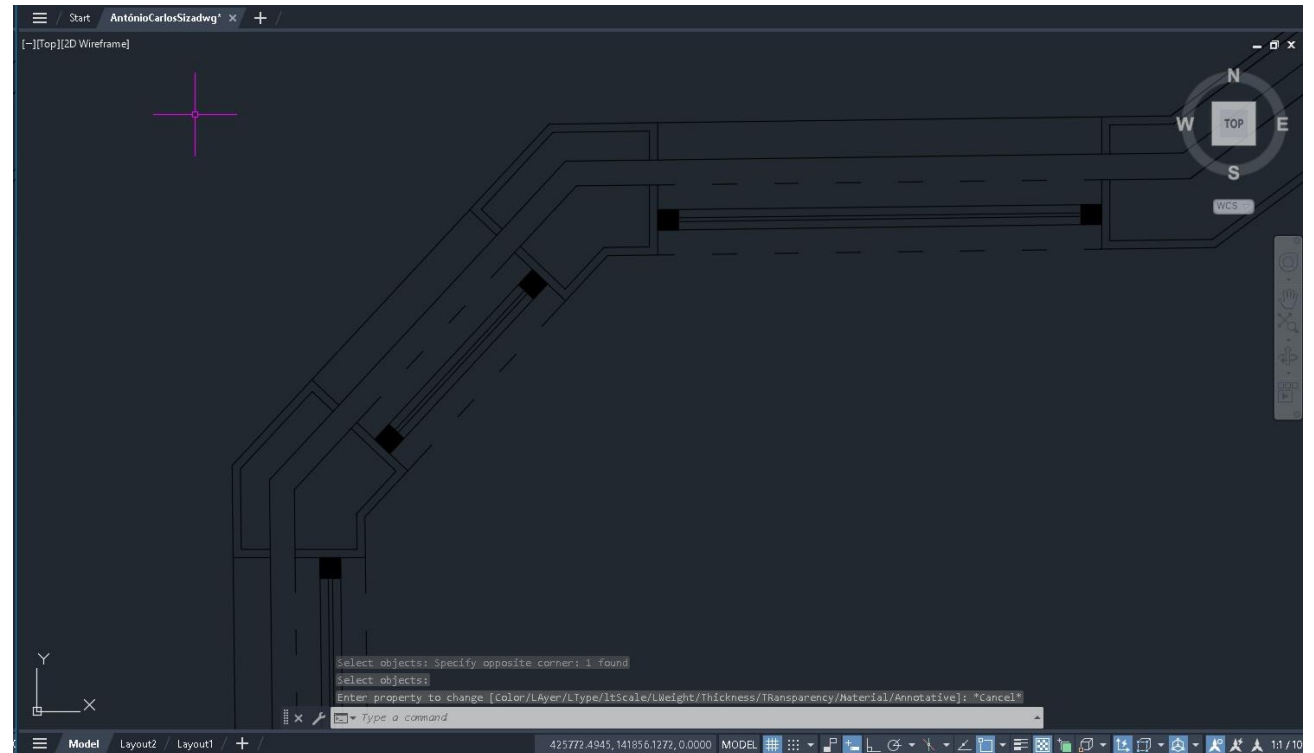
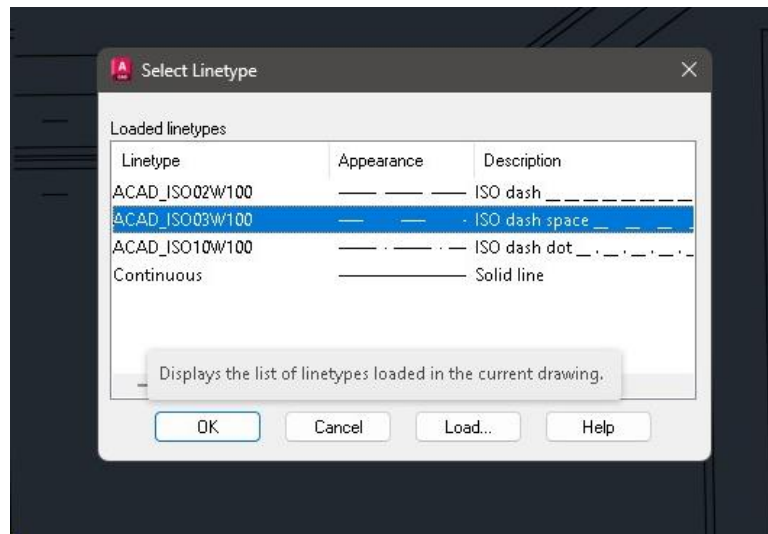


# Semana 3

Decalque da casa Carlos António Siza do Siza Vieira à escala 1.100 – Vãos;

Layer properties: Linetype – definir o tipo de linhas;

**CHPROP** – Alterar propriedades, como a escala do tracejado;



# Semana 3

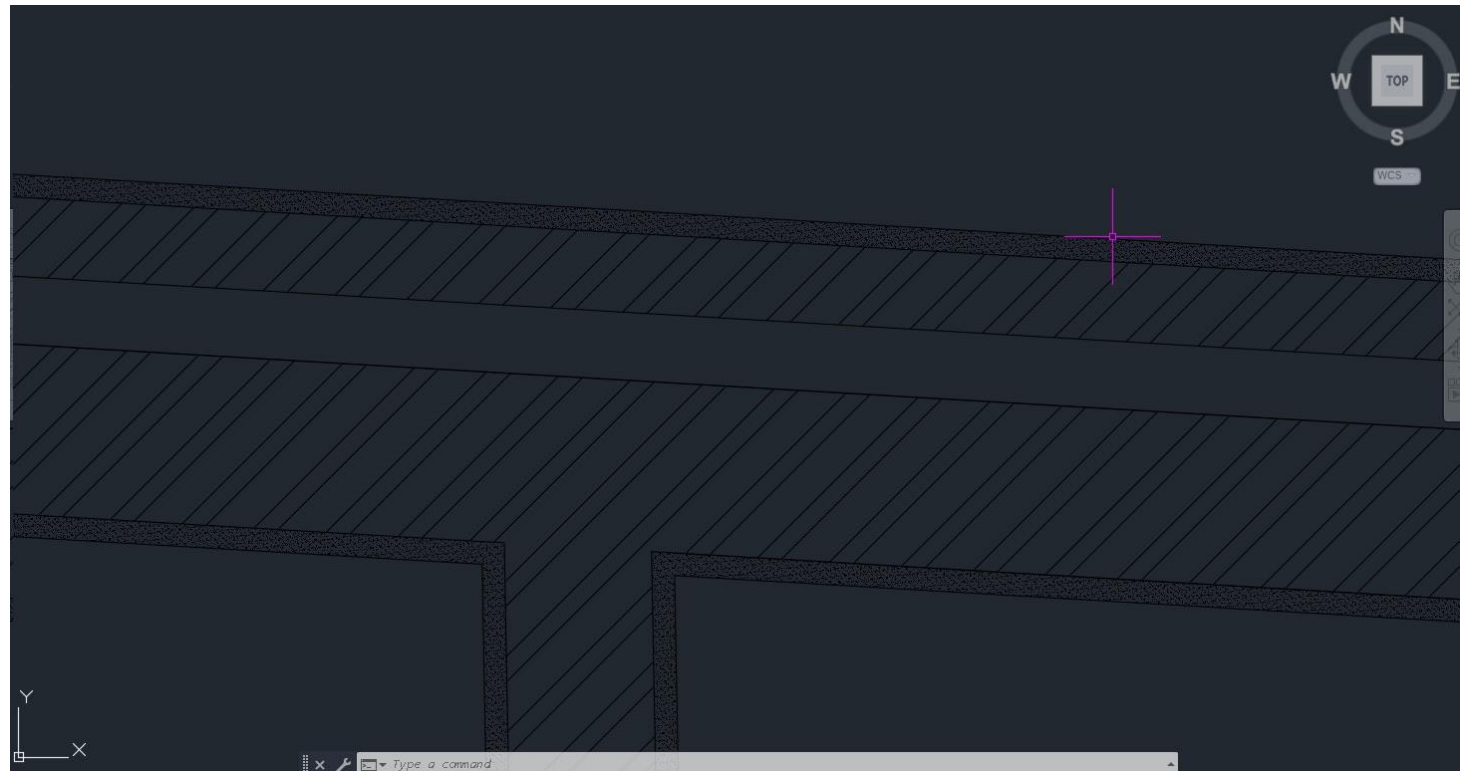
---

Detalhes;

## HATCH

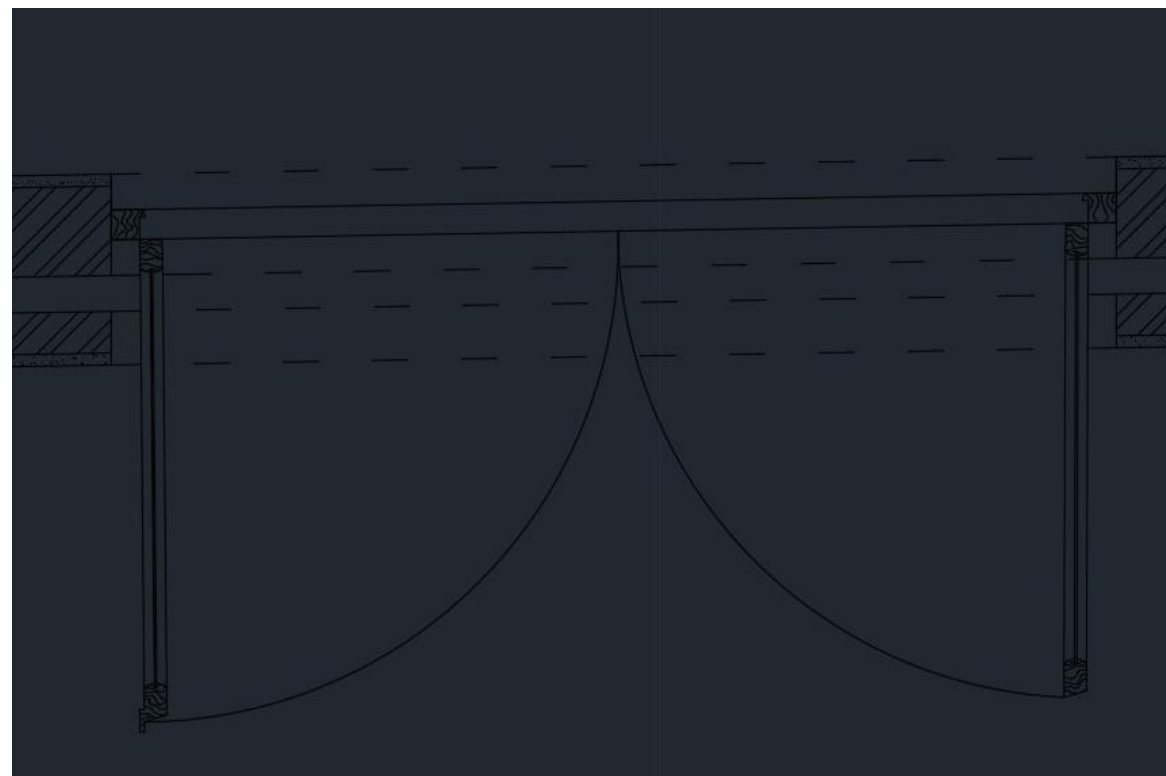
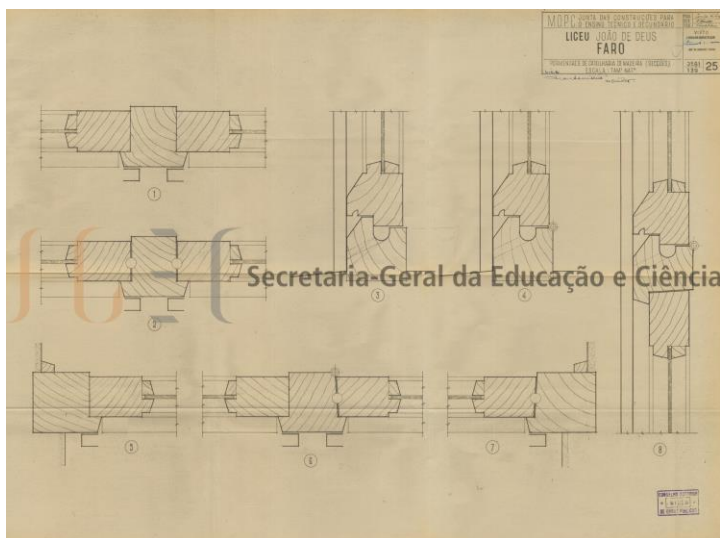
Para o reboco: AR – Sand

Para o tijolo: ANSU32



# Semana 4

Representação dos caixilhos;



# Semana 5

Pormenor dos caixilhos de madeira;

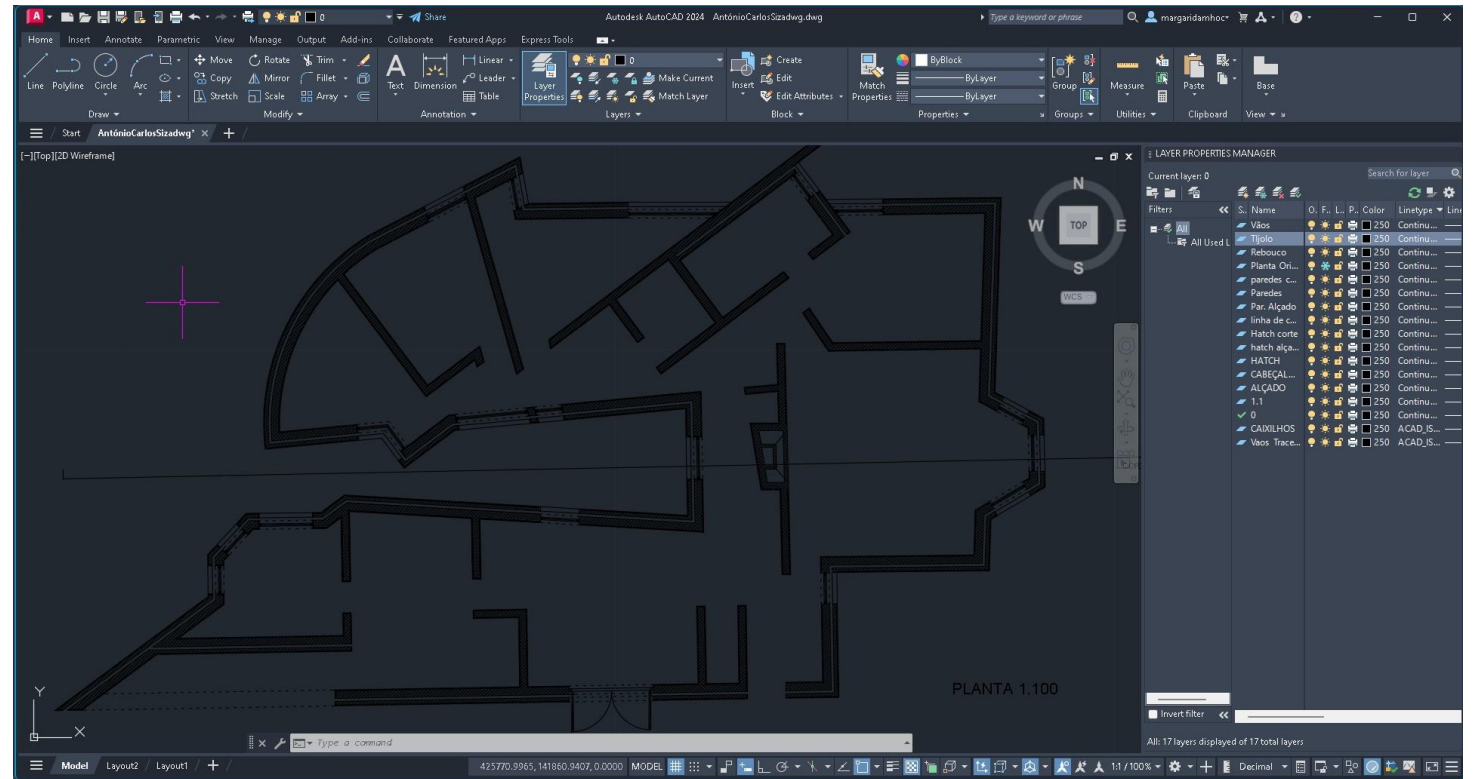
**SPL** (spline) – linhas curvas;



# Semana 5

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Decalque da casa Carlos António Siza do Siza Vieira – completo;



# Semana 5

---

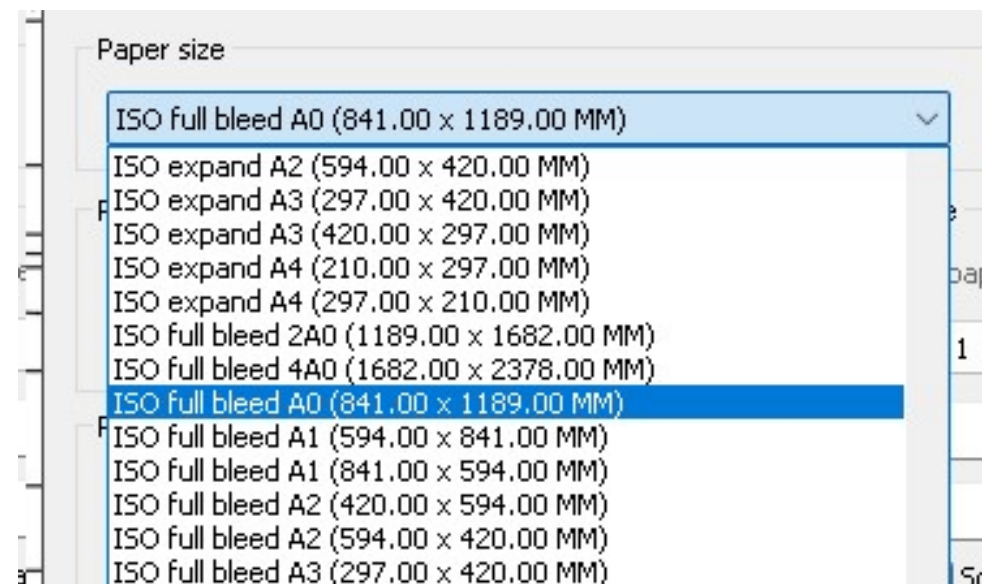
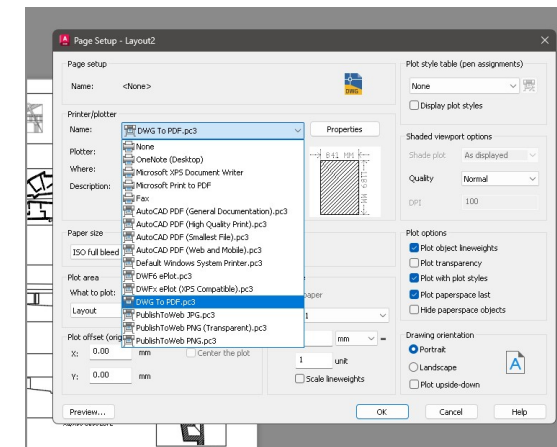
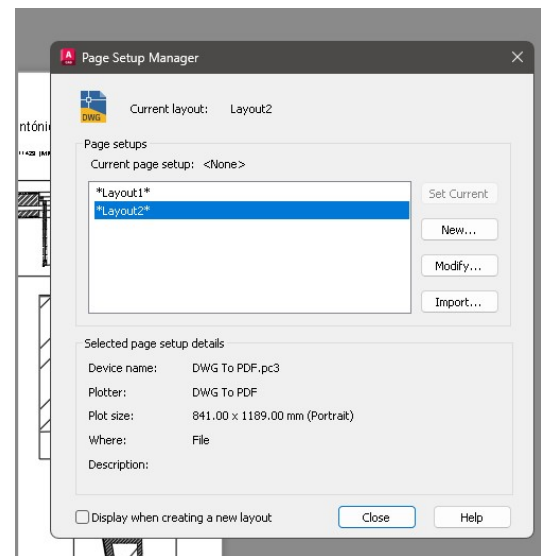
Layout de impressão;

Layout – right click – Page Setup Manager;

Selecionar o layout – modify;

Ficheiro DWG para PDF.pc3;

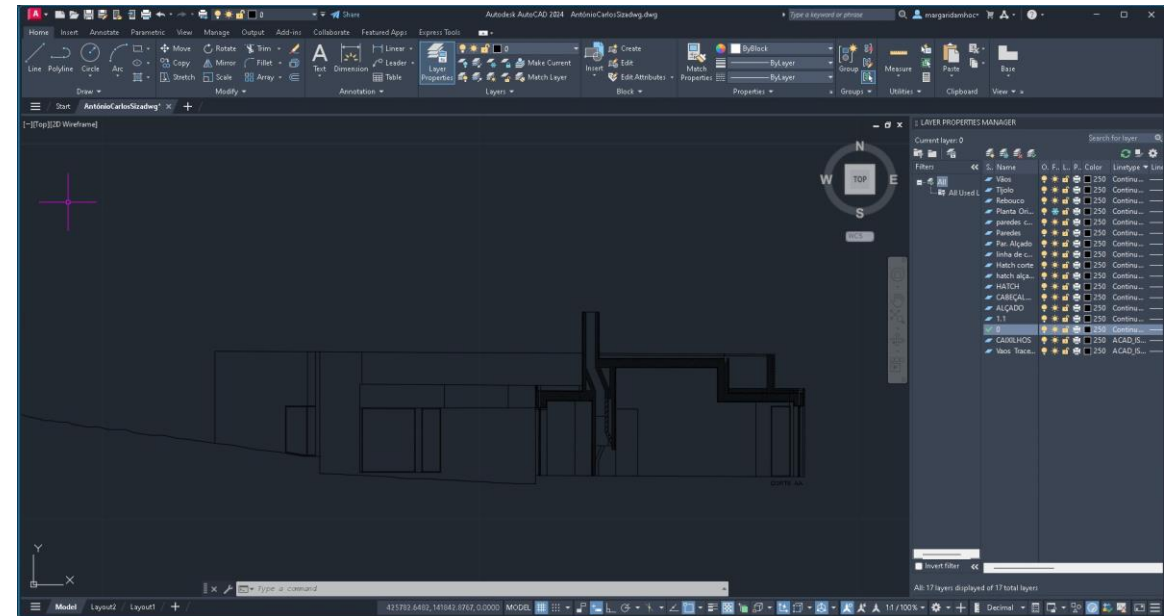
Tamanho ISO full bleed A0



# Semana 6

---

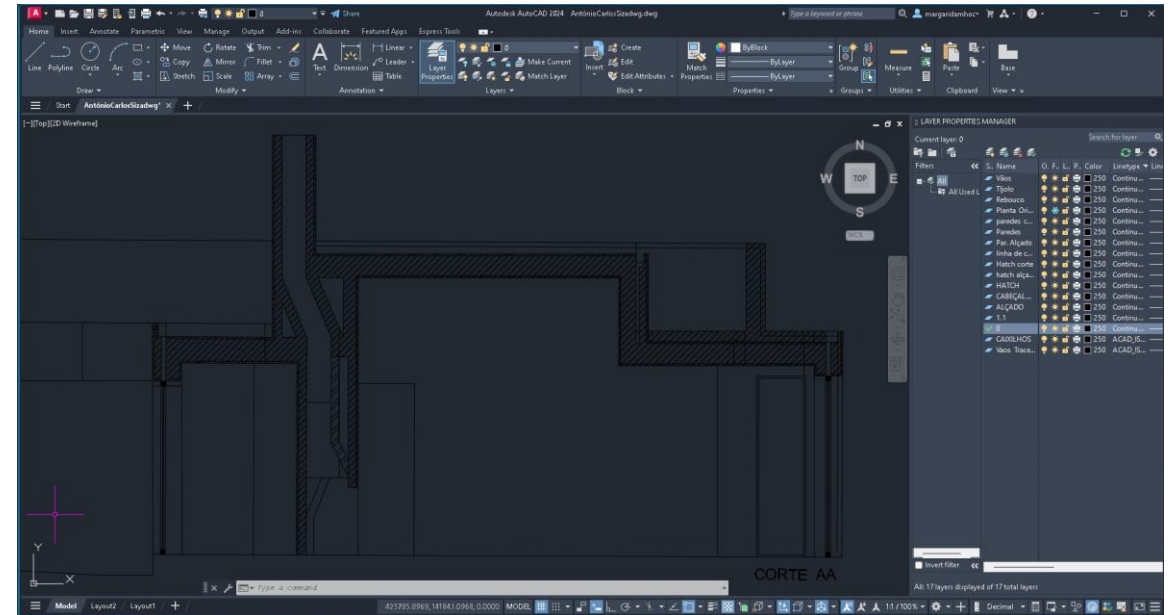
Cortes e Alçados;



# Semana 6

---

Detalhe do corte;



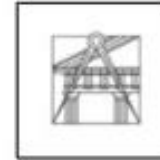


# Semana 6

---

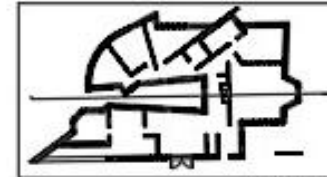
Viewpoints e layout final;

**Mview** – Criar viewpoints;

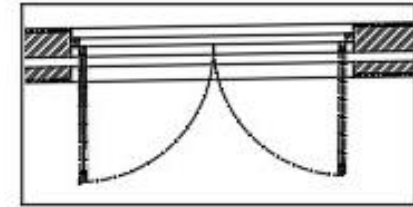


Casa Carlos António Siza - Álvaro Siza Vieira

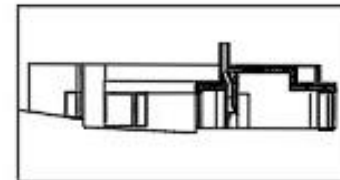
F. A. L. (2020-2024) (FD)  
MARGARIDA CABRAL (2021-142) (MARR02)



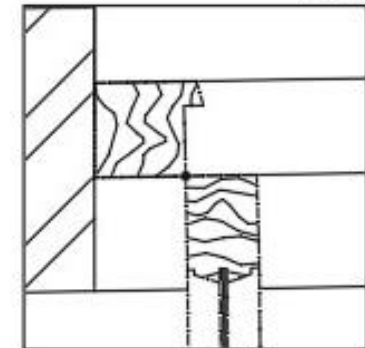
PLANTA 1.00



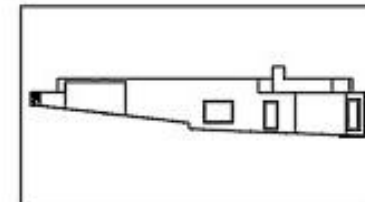
JANELA 1.10



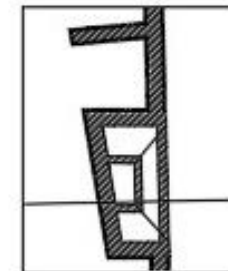
CORTEAA



DETALHE  
JANELA 1.1



ALÇADO SUDESTE

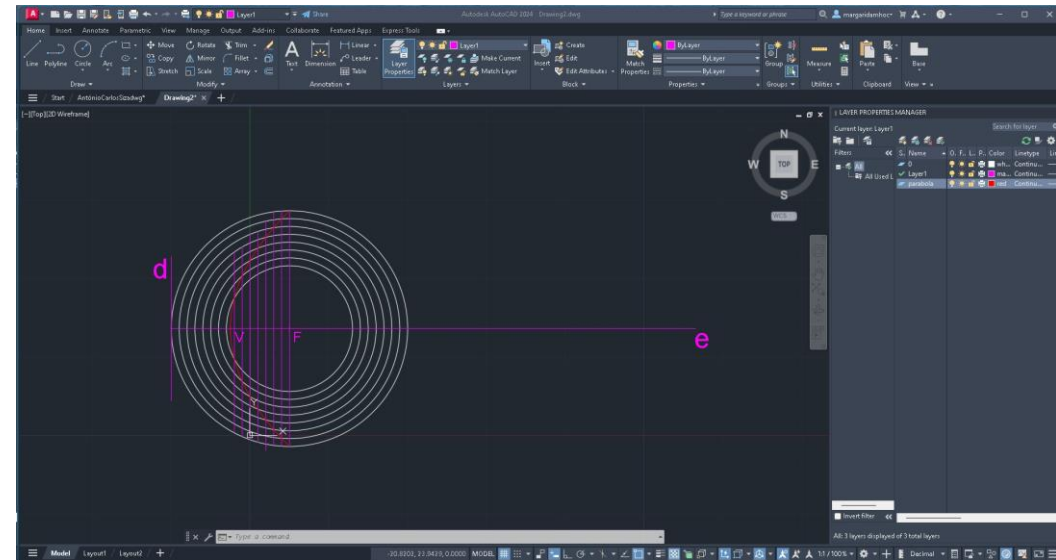
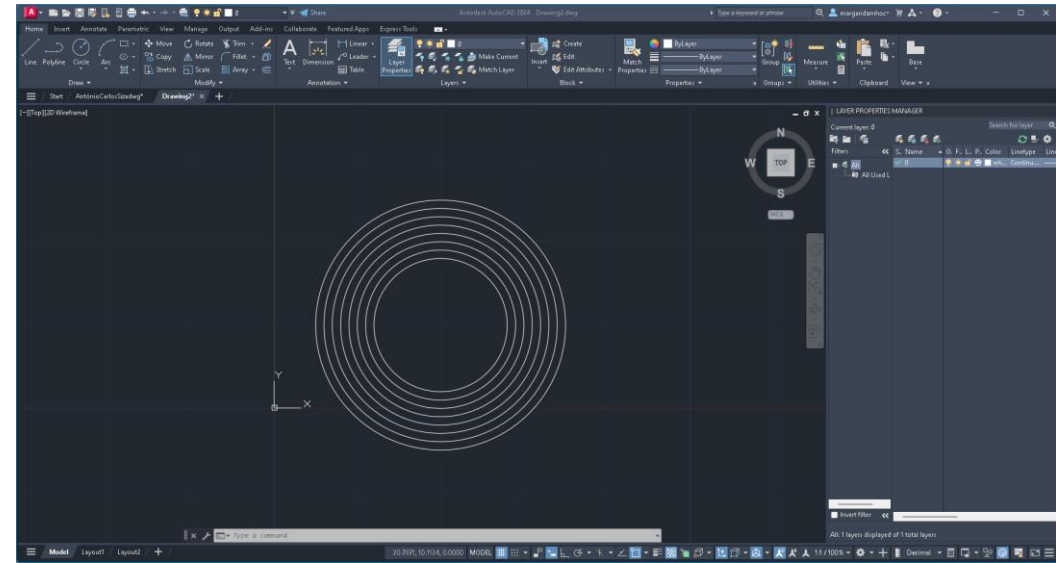


LAREIRA

# Semana 7



Parábola;



# Semana 7

---

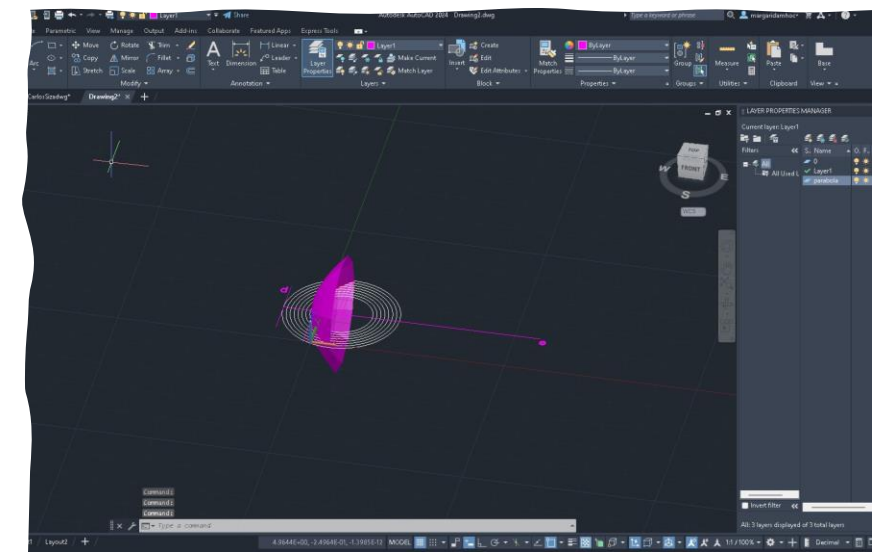
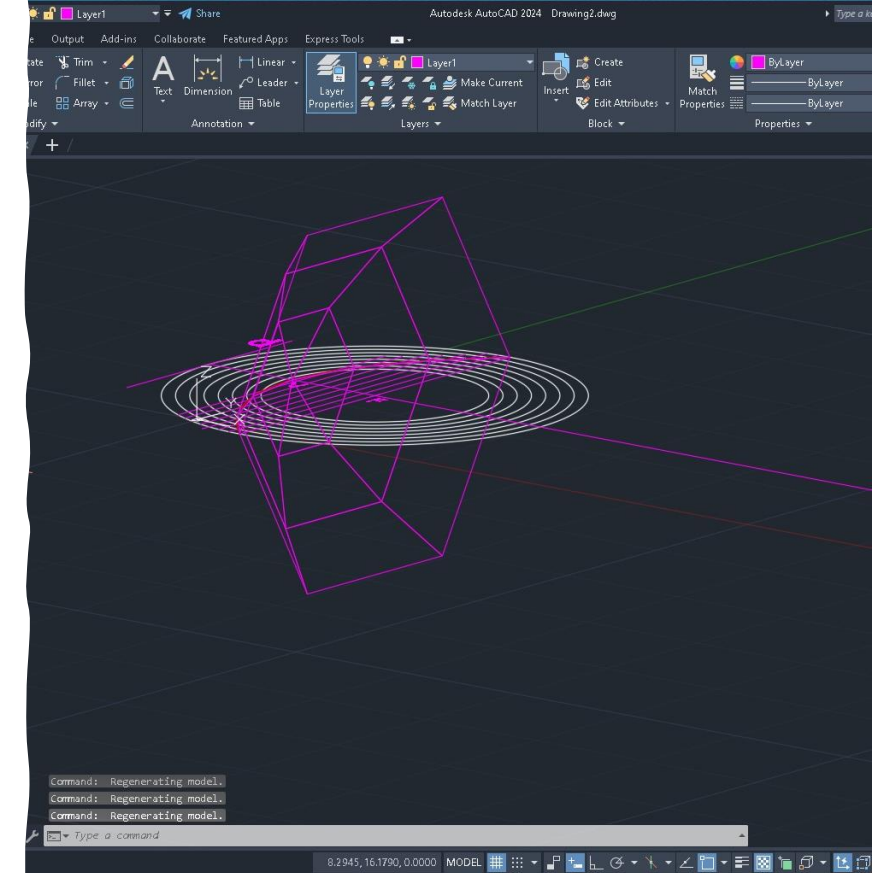
Parábola;

**Revsurf** – V – ângulos 0 e 360;

**Surftab1** – elementos – 30;

**Surftab2** – elementos – 30;

**Shade**;



# Semana 7

---

Representar sólidos;

Pentágono – EXT – 10;

Comandos introduzidos:

**EXT** (extrude) – criar estruturas a partir de formas;

**3DROTATE** – Rodar em 3D;

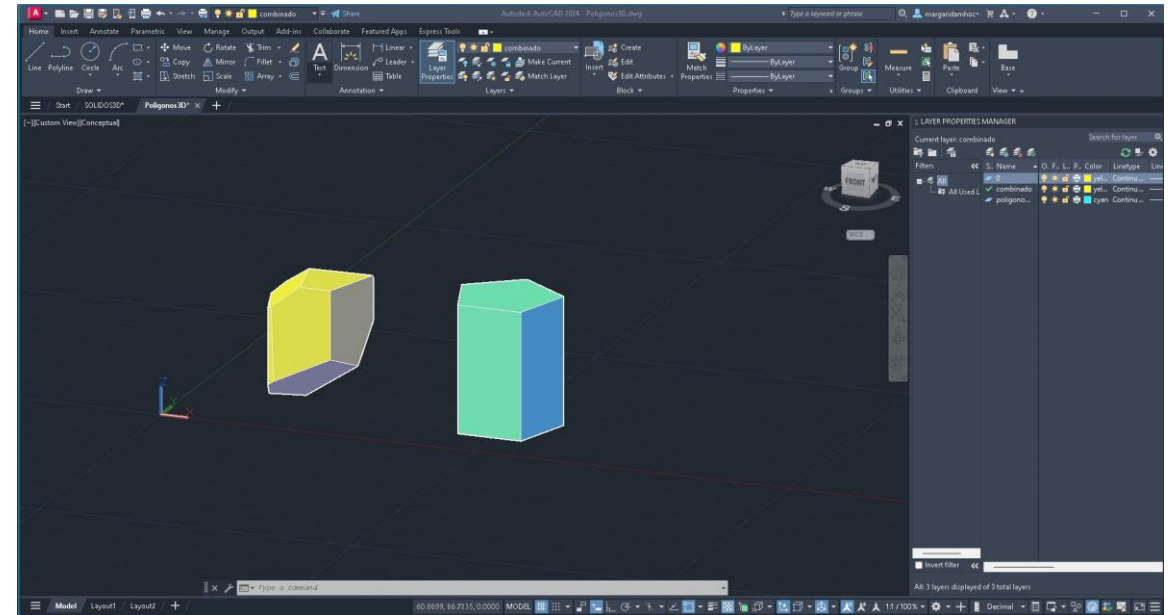
**ROTATE3D** – definir o eixo e o ângulo de rotação;

**VISUALSTYLES** – diferentes estilos de visualização de sólidos;

**UNI** (union) – unir sólidos;

**SUBTRACT** – subtrair sólidos;

**INTERSECT** – Intersectar sólidos;



# Semana 8

---

Representar polígonos;

Tetraedro – 4 bases;

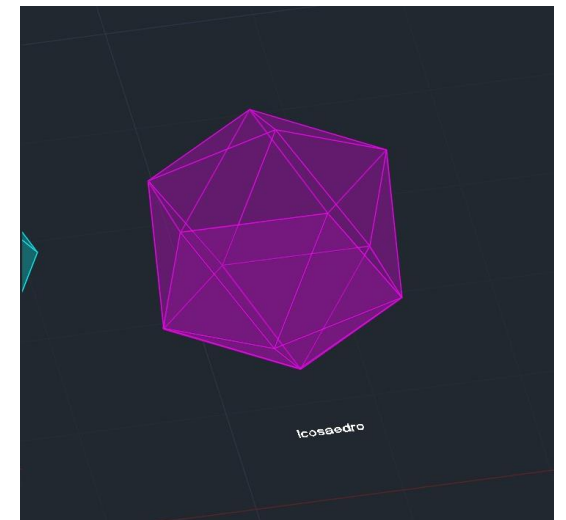
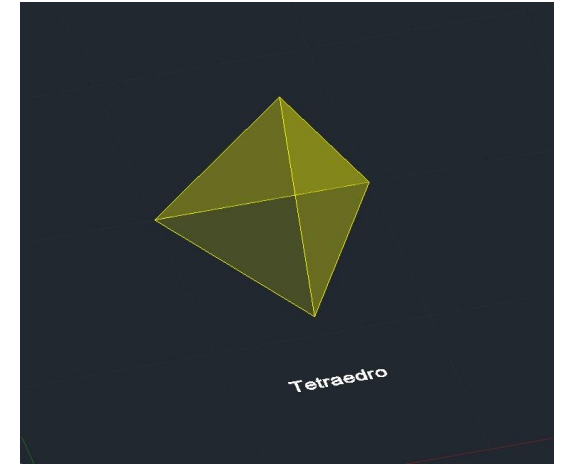
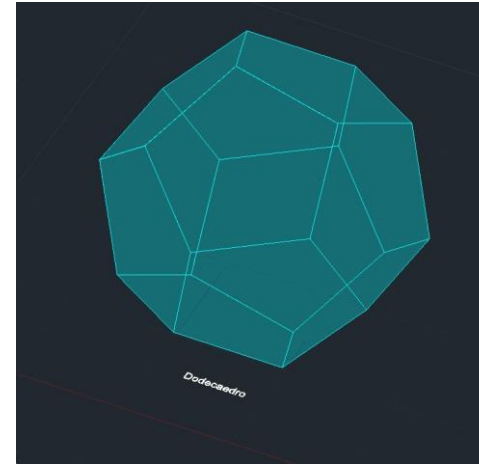
Octaedro – 8 bases;

Dodecaedro – 12 bases;

Icosaedro – 20 bases;

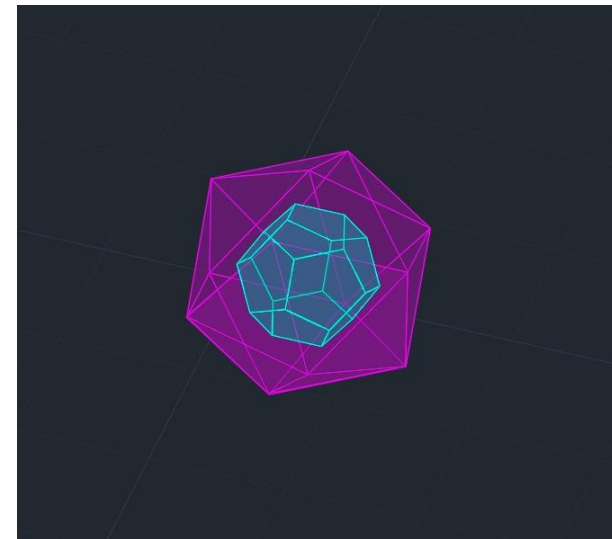
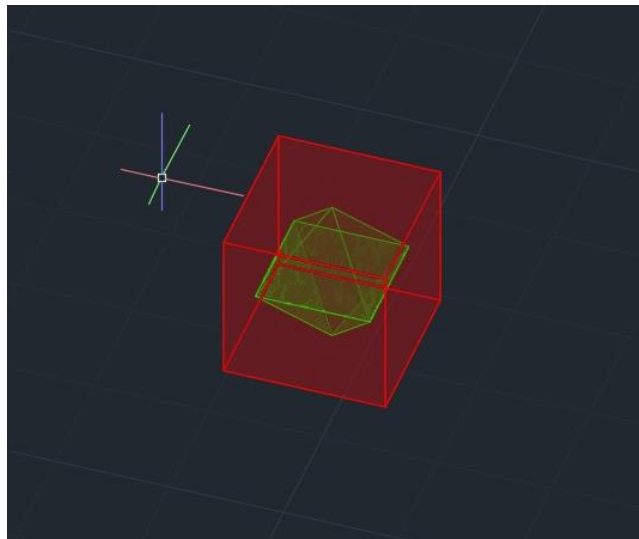
Comandos introduzidos:

**3DMIRROR** – Espelhar em 3D;



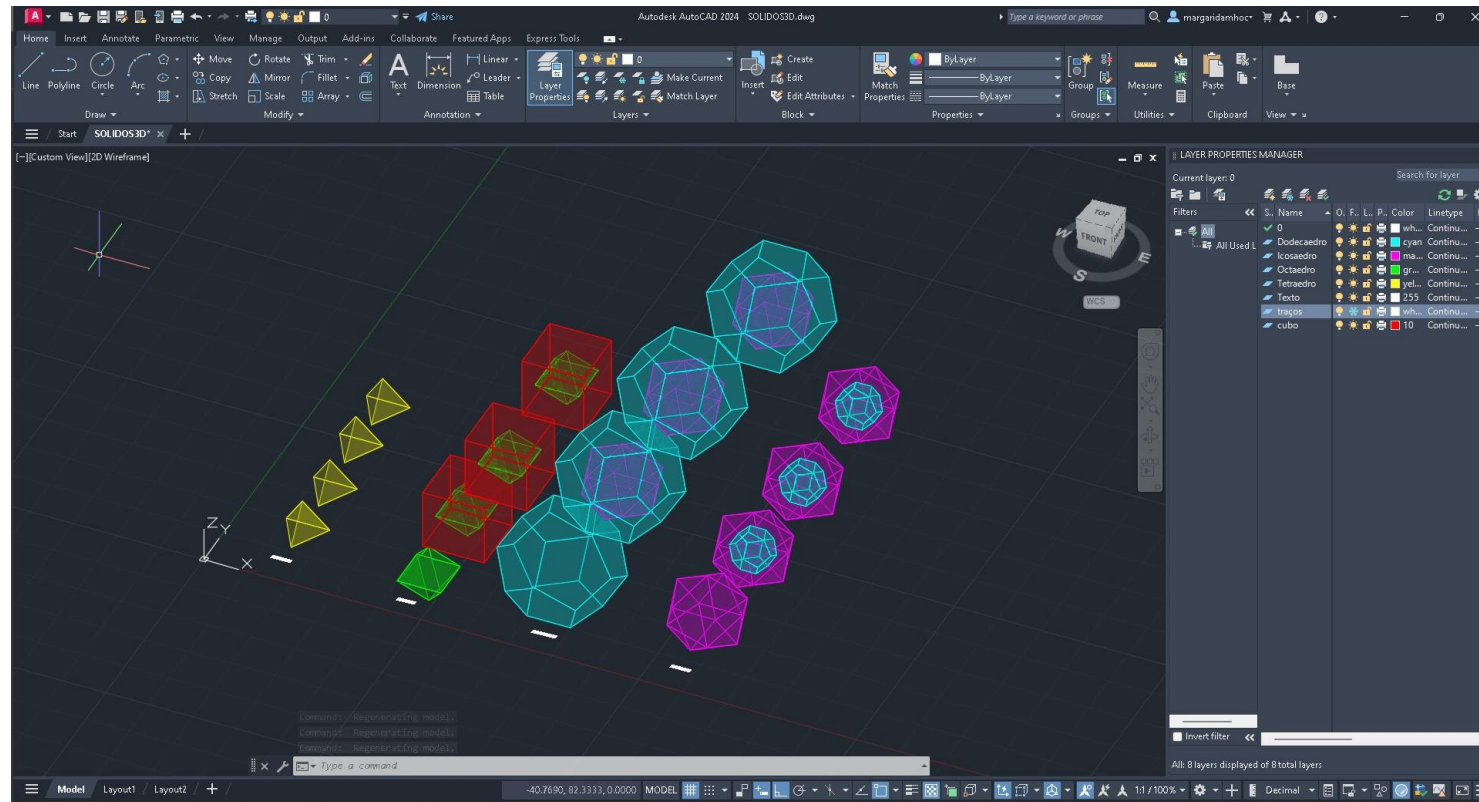
# Semana 8

Interseção de polígonos;



# Semana 8

## Interseção de polígonos - FINAL



# Semana 9

---

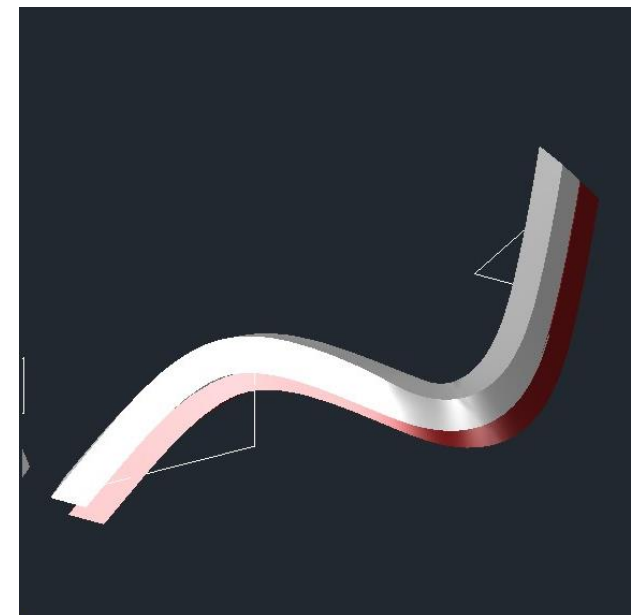
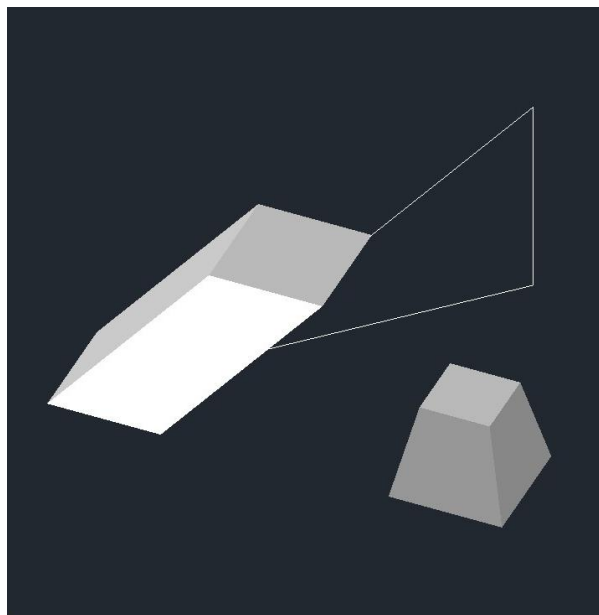
Mais usos com o comando extrude;

Comandos introduzidos:

**Direction** – determina a direção do extrude;

**Path** – faz um extrude a seguir o caminho dado;

**Taper angle** – faz um extrude afunilado;





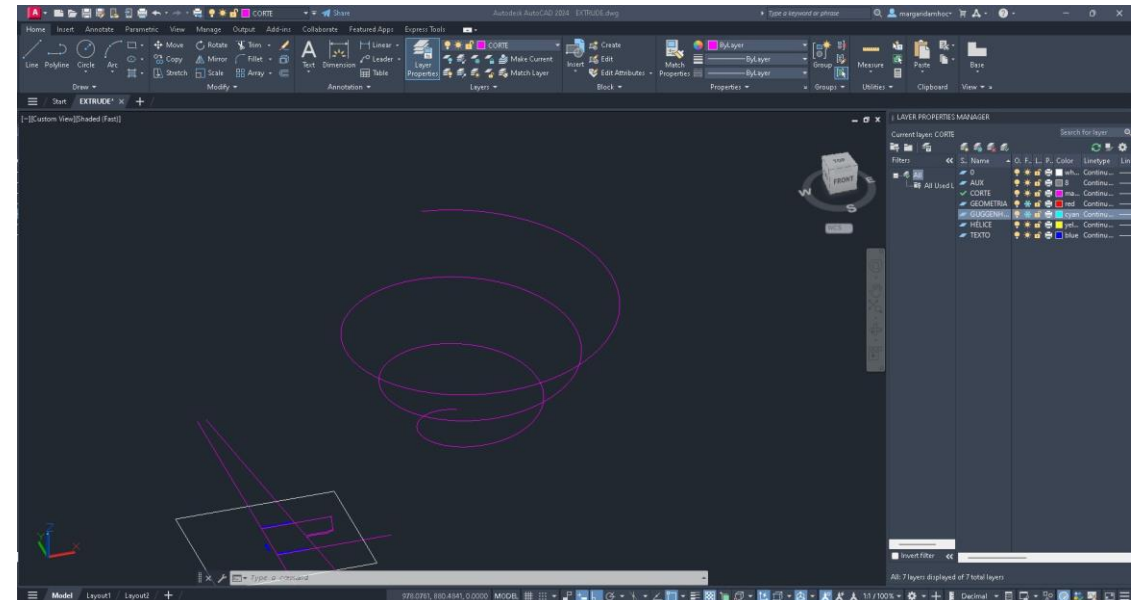
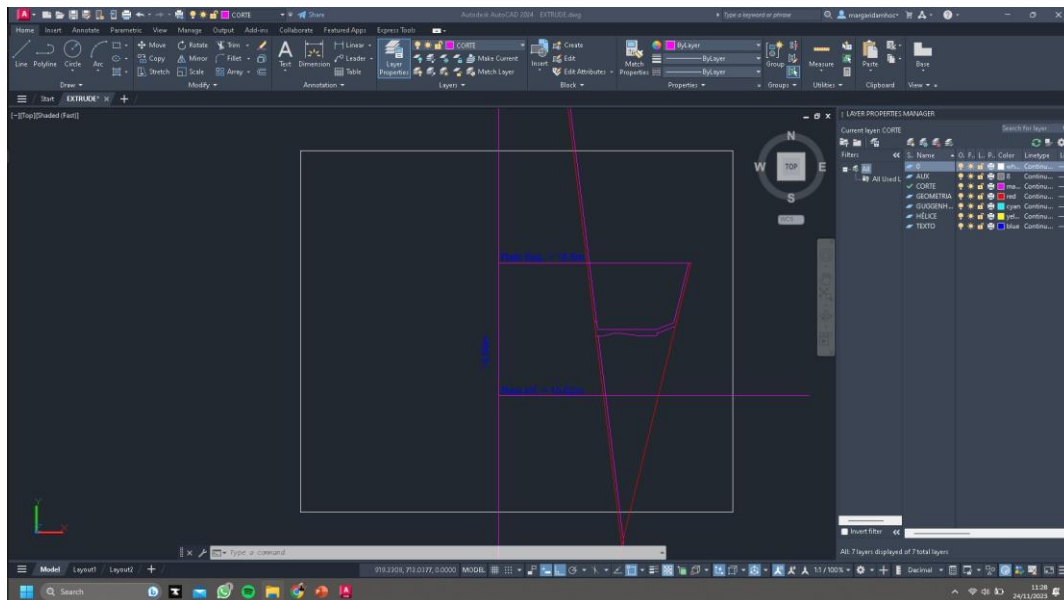
# Semana 9

---

Rampa do Guggenheim;

Decalcar o corte;

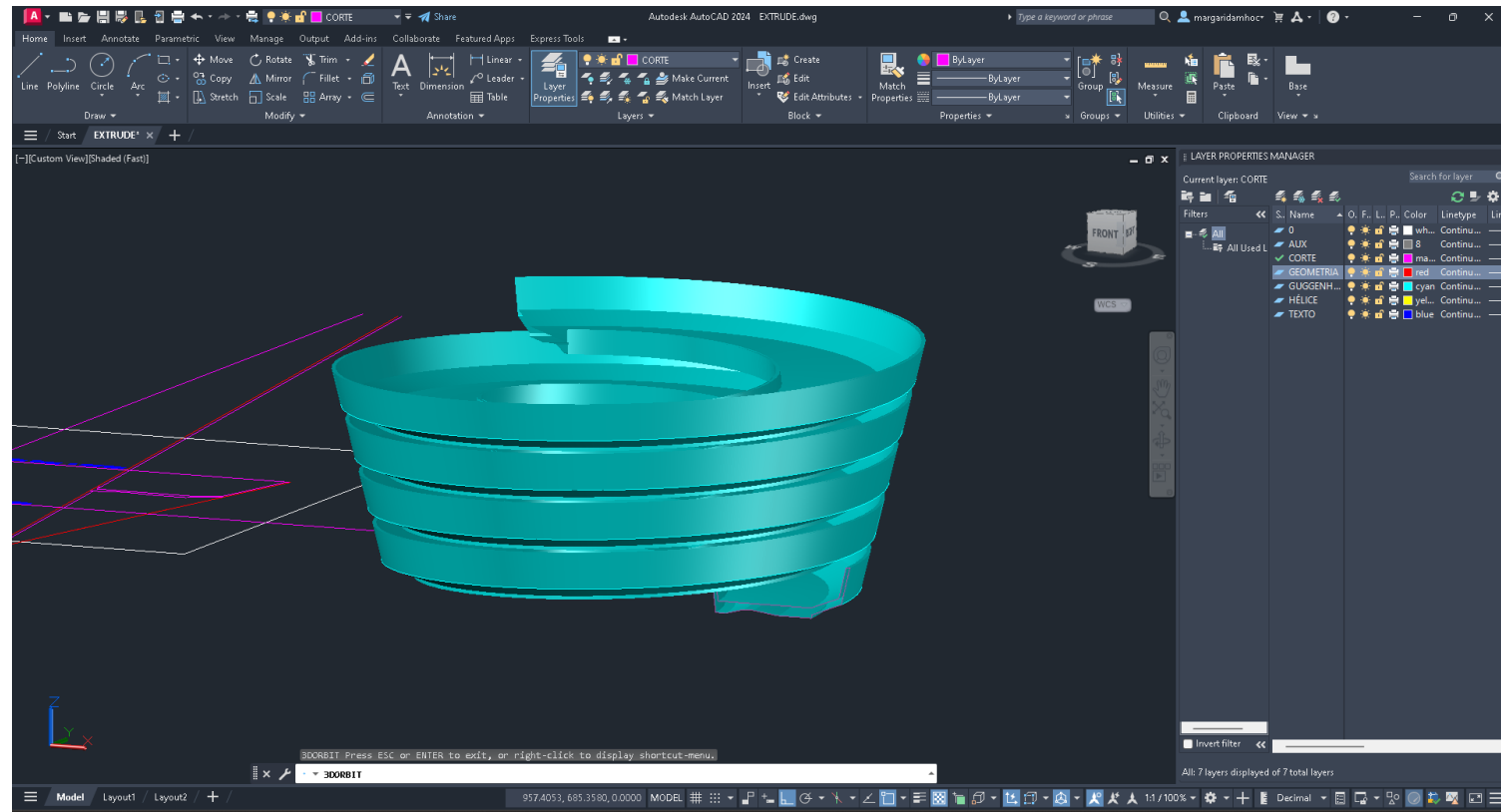
**Helix** – cria uma hélix;



# Semana 9

---

Rampa do Guggenheim;



# Semana 10

---

Cone:

Raio – 5mm

Altura – 5mm

Espessura – 1.5mm

Comando Mirror no vértice para obter outro cone igual;

Desenhar planos secantes pela figura, criando triângulos e hipérbolas;

Comando Intersect entre a figura e os planos;

# Semana 11 - 3D MAX

Lamparina

Cilindro:

Raio - 75mm

Altura – 80mm

8 segmentos;

Torus no cilindro:

1º raio – 75mm

2º raio – 2mm

Compound objects - boolean –  
fazer subtract do torus

Modifier list – taper

Adicionar dois cilindros para o  
botão;

Chama

Cilindro

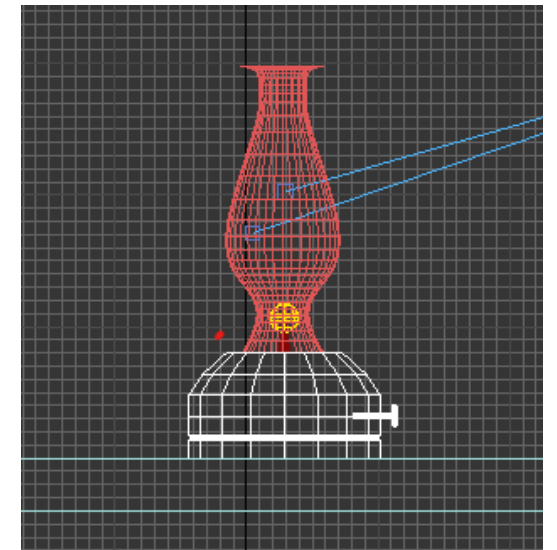
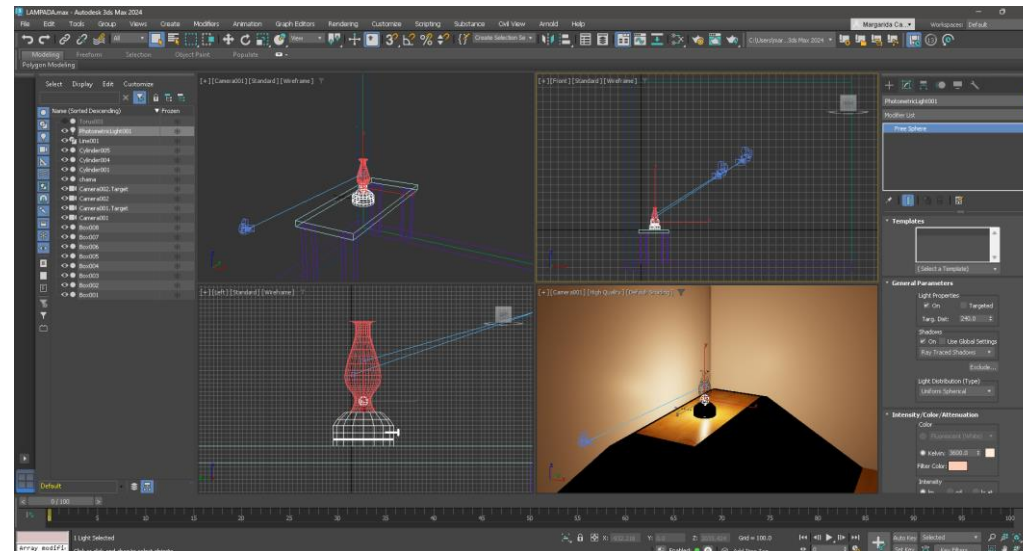
Modifier list – Stretch até  
se parecer a uma chama

Campânula

Criar linhas e arredondá-las em Modifier list –  
Selection – Vertex até se parecerem com a forma  
desejada;

Modelar a forma com Bezier ou Smooth;

Para obter o objeto ir a Modifier List – Lathe;



# Semana 11

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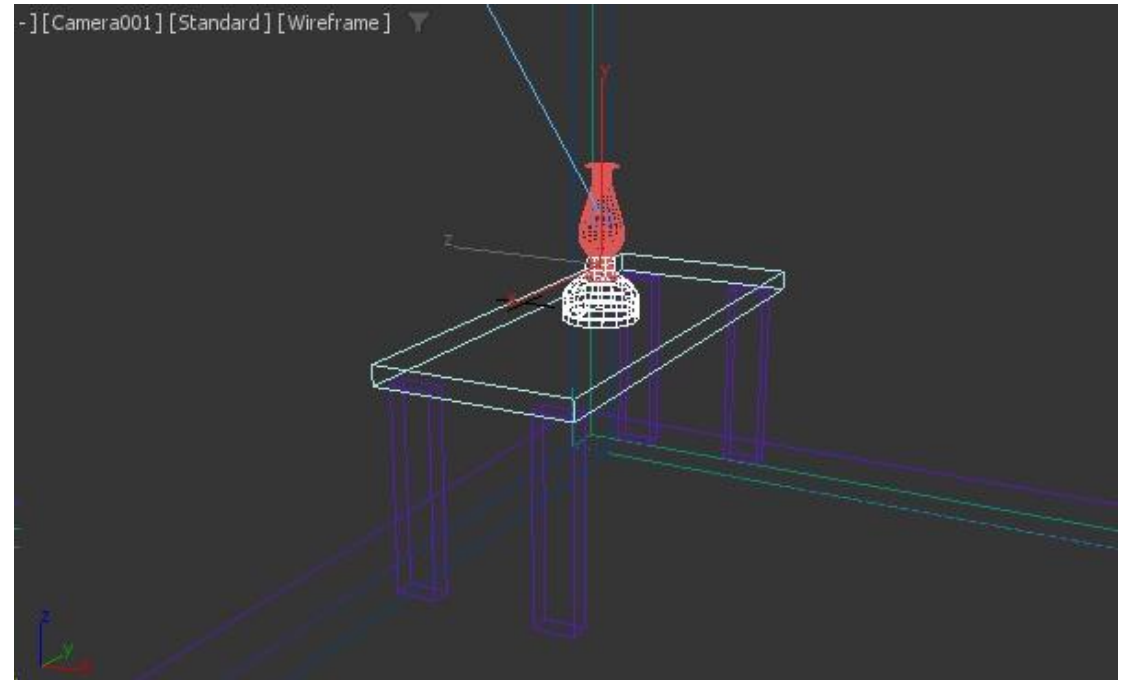
## Mesa

Criar box 400x1000x-40 (tampo);  
Criar box 40x80x-800 (pernas x4);  
Alinhar;

## Chão e Paredes

Criar box 2000x3000x-100 (chão);  
Criar box 2000x100x2500 e 3000x100x2500 (paredes);

Escolher os materiais em Material Editor e arrastar para o objeto;



# Semana 11

---

## Light e Render

Adicionar no lugar da chama - Photometric light - Target light;

Shape/ Area Shadows – Emit light from – Point;

Adicionar cameras e posiciona-las de modo a obter uma boa vista;

Renderizar;

