

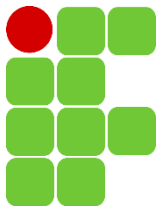
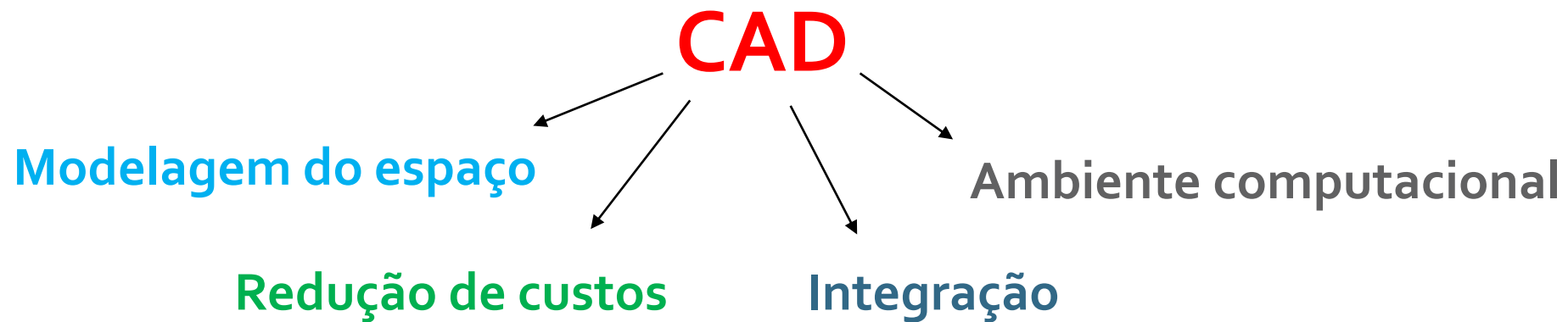
# INTRODUÇÃO AO CAD

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Prof. Filipe A. Loures

# INTRODUÇÃO

- ✓ CAD: *Computer Aided Design* (Desenho Auxiliado por Computador)
- ✓ **Objetivo:** auxiliar o projetista ou desenhista na confecção das plantas ou esquemas técnicos, dando a ele ferramentas de construção de elementos gráficos vetoriais (pontos, linhas, arcos, polígonos), em um espaço completamente digital.

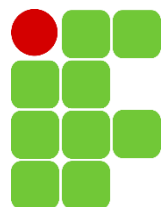


# AUTOCAD



- ✓ Ferramenta de CAD desenvolvida em 1982 pela empresa **Autodesk**
- ✓ Pacote de CAD mais difundido no mundo → ambiente de trabalho limpo, acessível e totalmente interativo
- ✓ **AutoCAD 2021 versão Educacional**

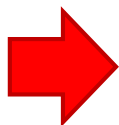
*<https://www.autodesk.com.br/education/edu-software/overview?sorting=featured&page=1>*



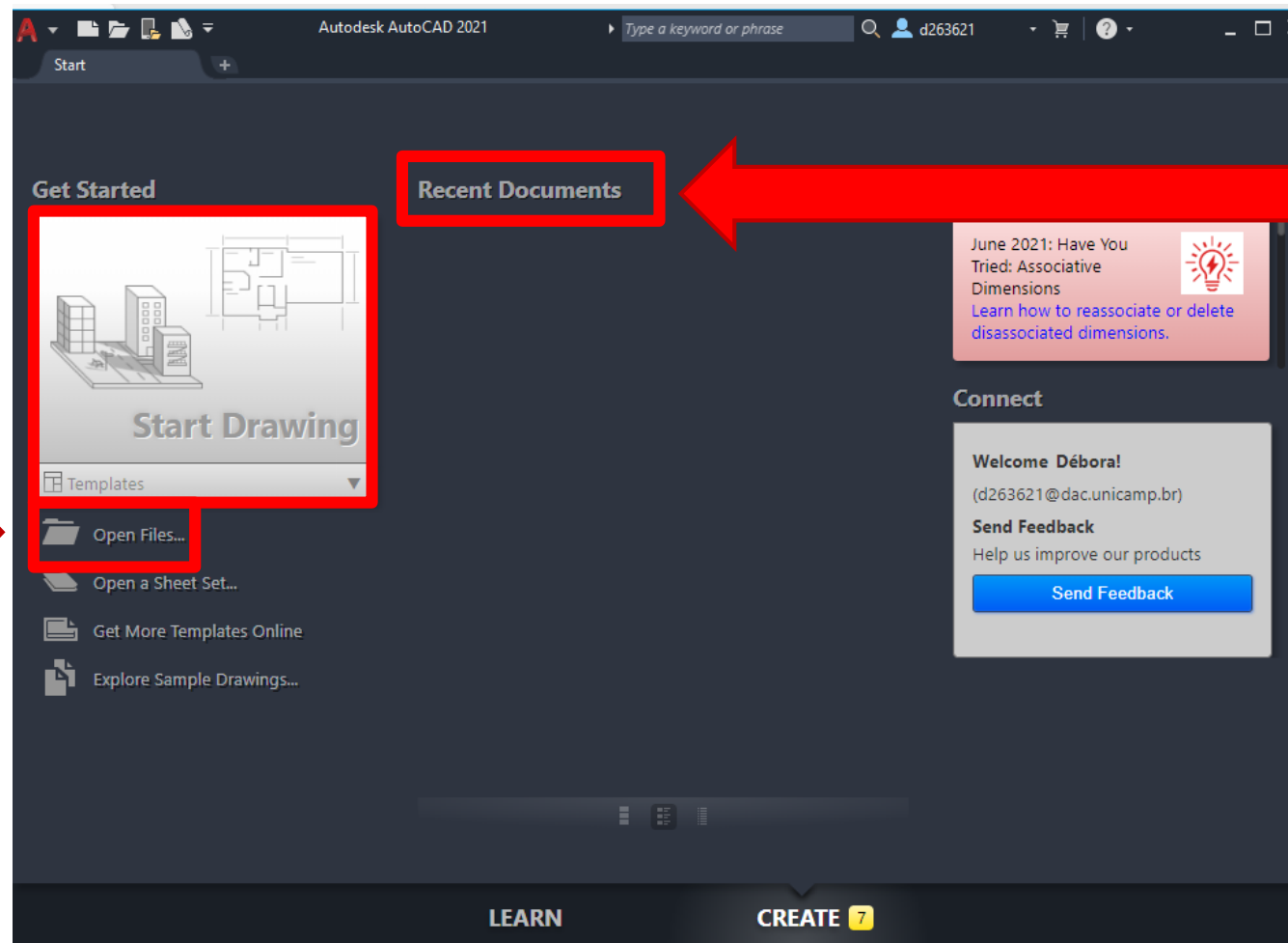
# Interface do AUTOCAD



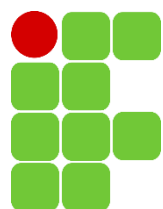
Iniciar um projeto novo



Abrir um arquivo



Trabalhar em um projeto anterior



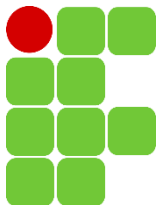
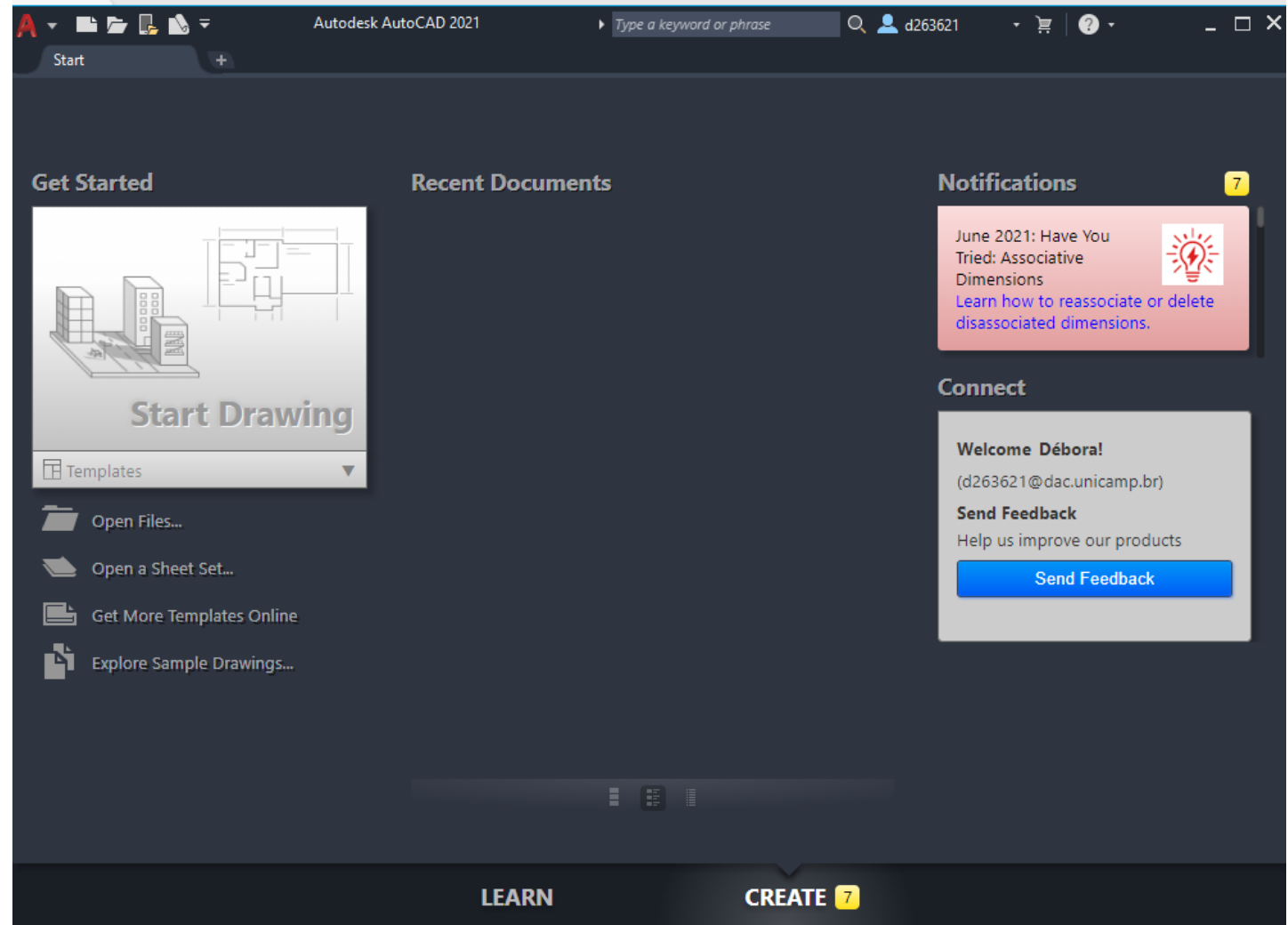
# Interface do AUTOCAD



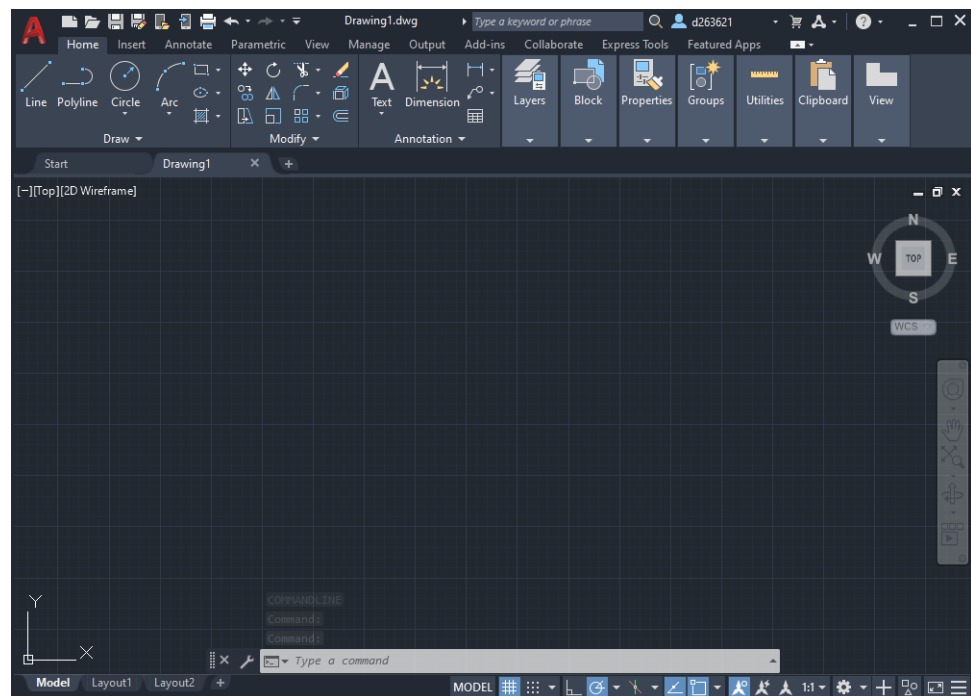
- **TELA INICIAL**

- Comando "Startup"
- Opções: 0, 1, 2 ou 3.

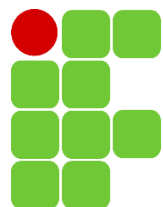
Opção 2 →



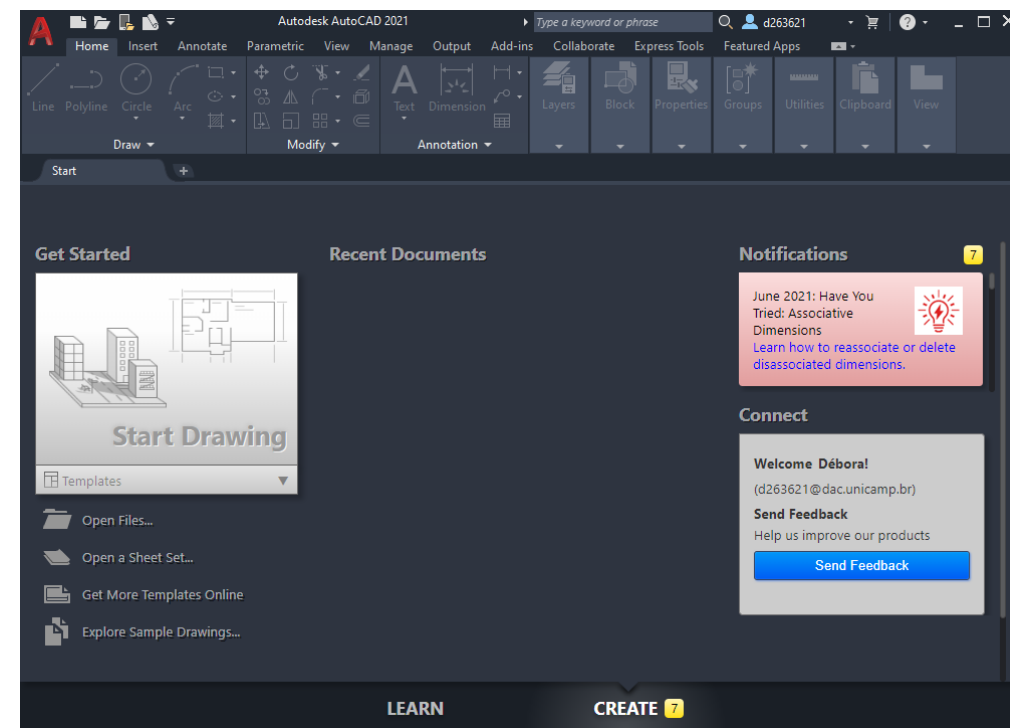
# Interface do AUTOCAD



Opção 0

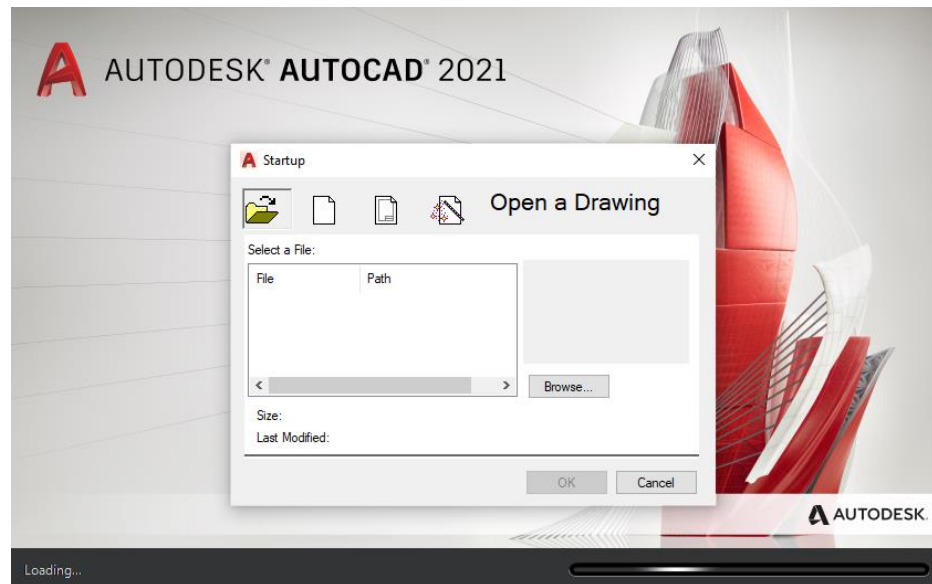


Opção 3

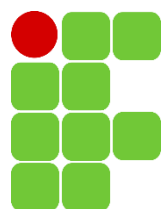
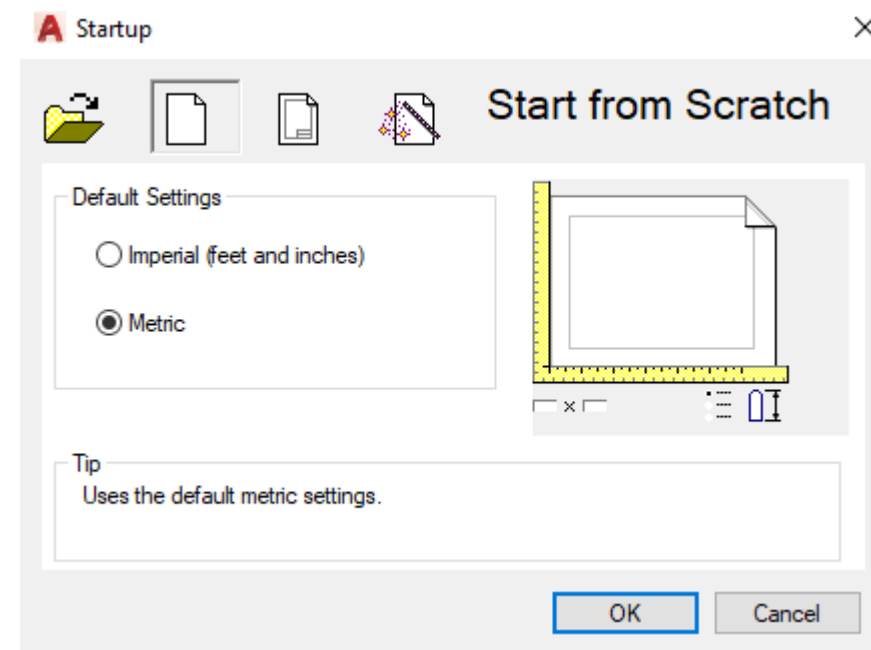


Desenho Auxiliado por Computador

# Interface do AUTOCAD



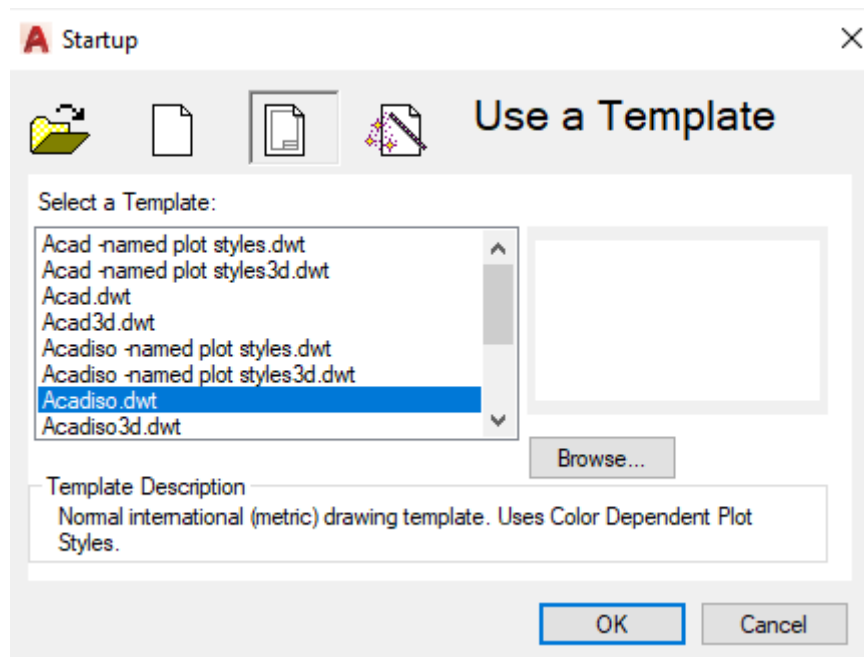
← Opção 1



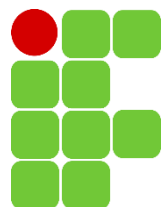
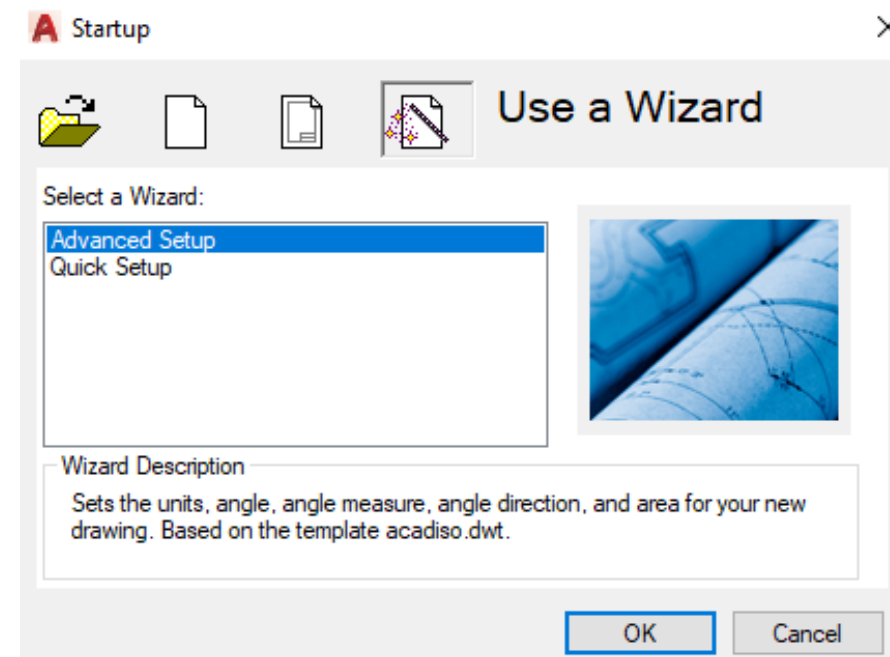
✓ ***Start from Scratch:*** permite iniciar o desenho de um modo rápido pela seleção de uma das configurações default do AutoCAD para o sistema métrico ou para o sistema inglês.



# Interface do AUTOCAD

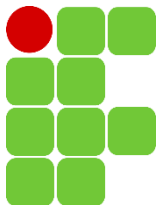
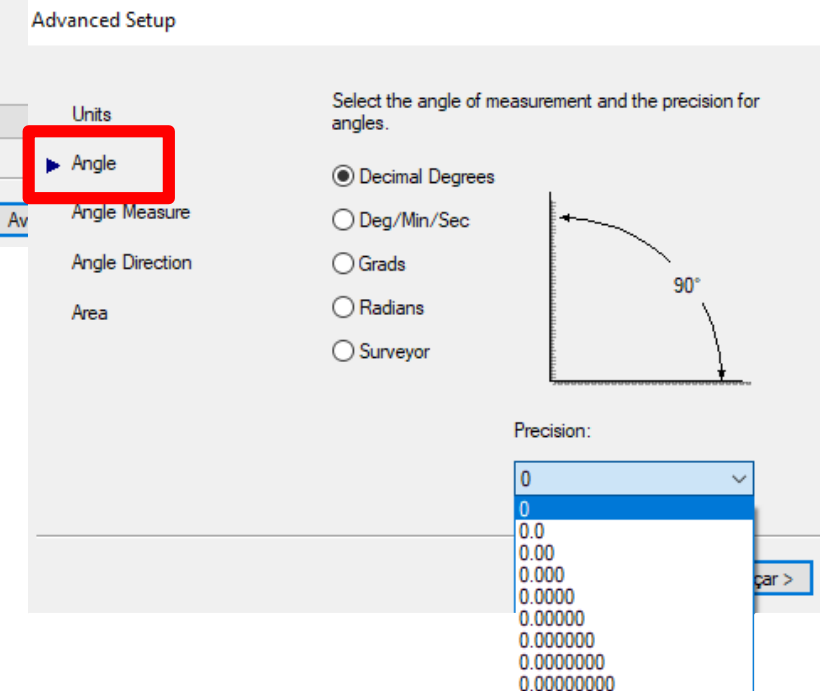
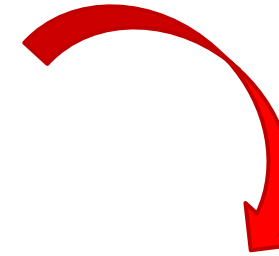
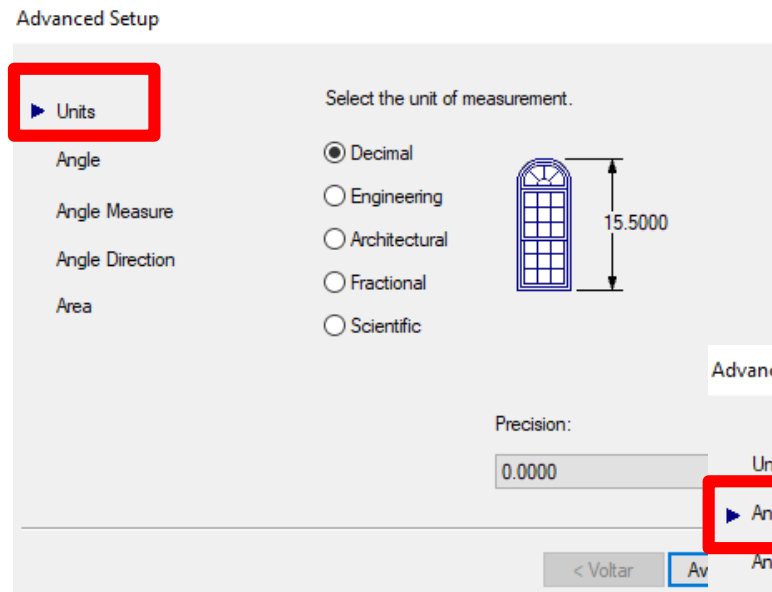
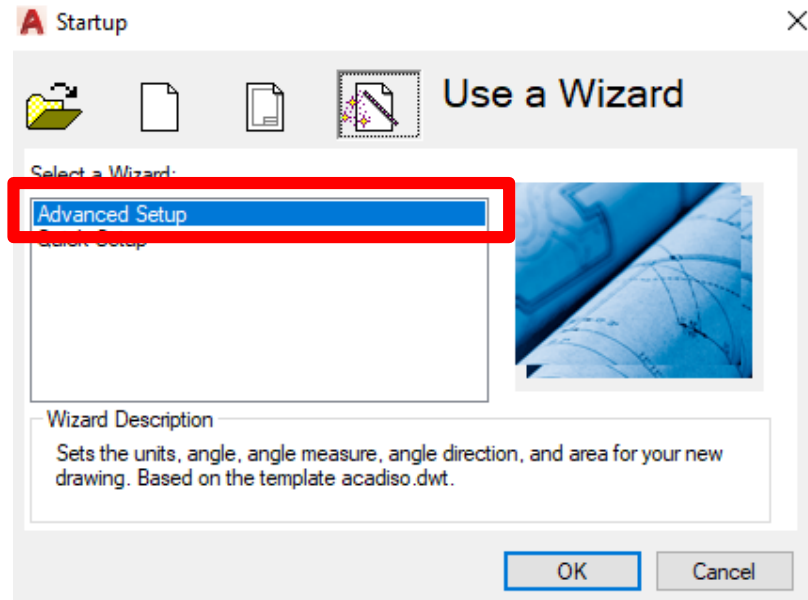


✓ **Template:** permite iniciar o desenho pela seleção de um modelo, isto é, de um arquivo de desenho do AutoCAD já criado e pré-configurado, que serve como padrão para o novo desenho.



✓ **Wizard:** permite utilizar um assistente que o ajude a configurar seu desenho por meio de uma sequência de passos.

# Interface do AUTOCAD



# Interface do AUTOCAD



Advanced Setup

Units

Angle

▶ Angle Measure

Angle Direction

Area

Select the direction for angle measurement

☒ East

☐ North

☐ West

☐ South

☐ Other

W 180 N 90 E 0 S 270

< Voltar Avançar >



Advanced Setup

Units

Angle

Angle Measure

▶ Angle Direction

Area

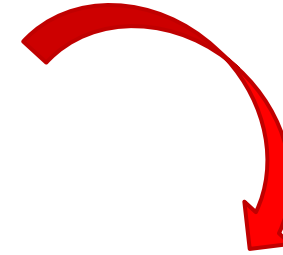
Select the orientation for angle measurement.

☒ Counter-Clockwise

☐ Clockwise

W N E

< Voltar



Advanced Setup

Units

Angle

Angle Measure

Angle Direction

▶ Area

Enter the area you want to represent using full scale units. Example: to draw in an area 12 x 9 meters, enter 12 under Width and 9 under Length.

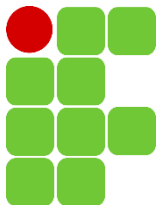
Width: 420

Length: 297

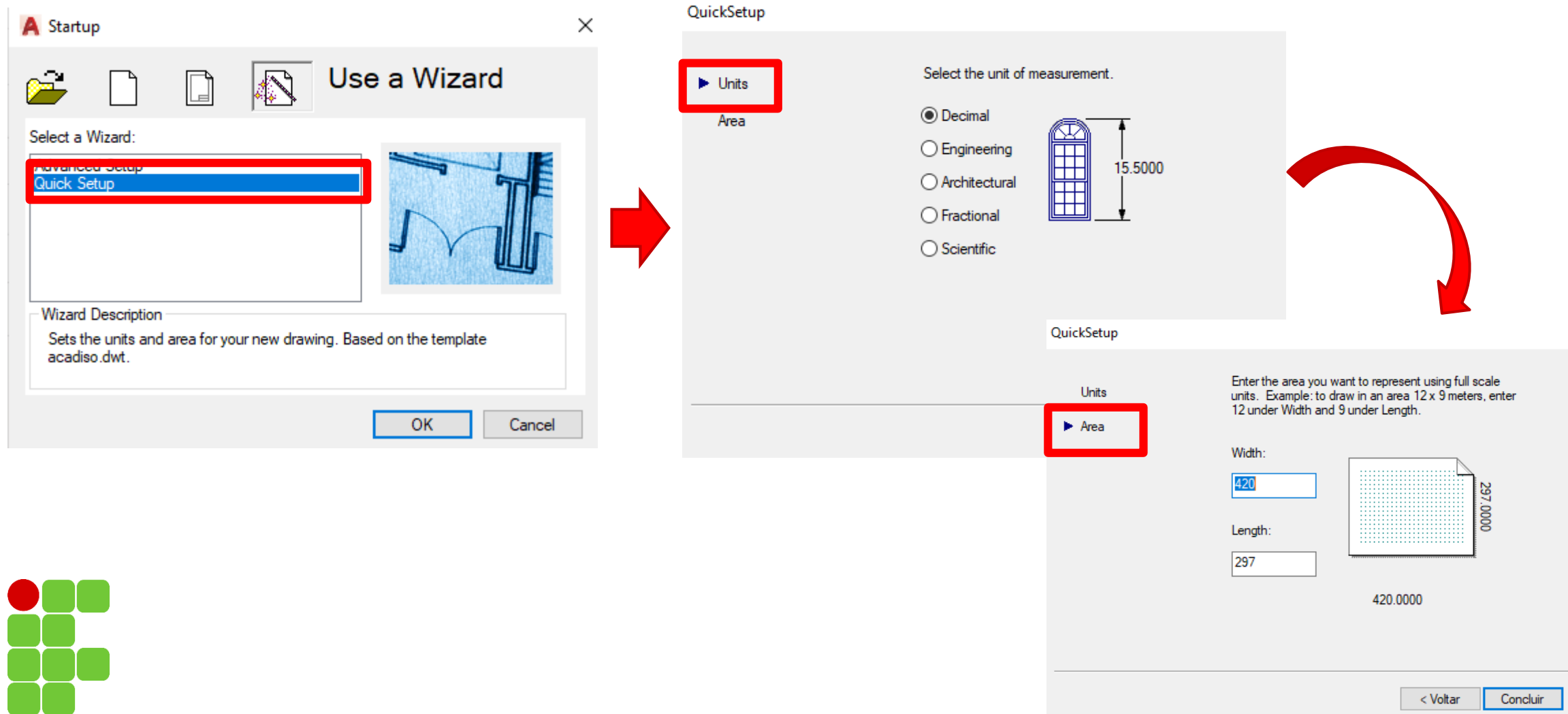
420.0000

297.0000

< Voltar Concluir



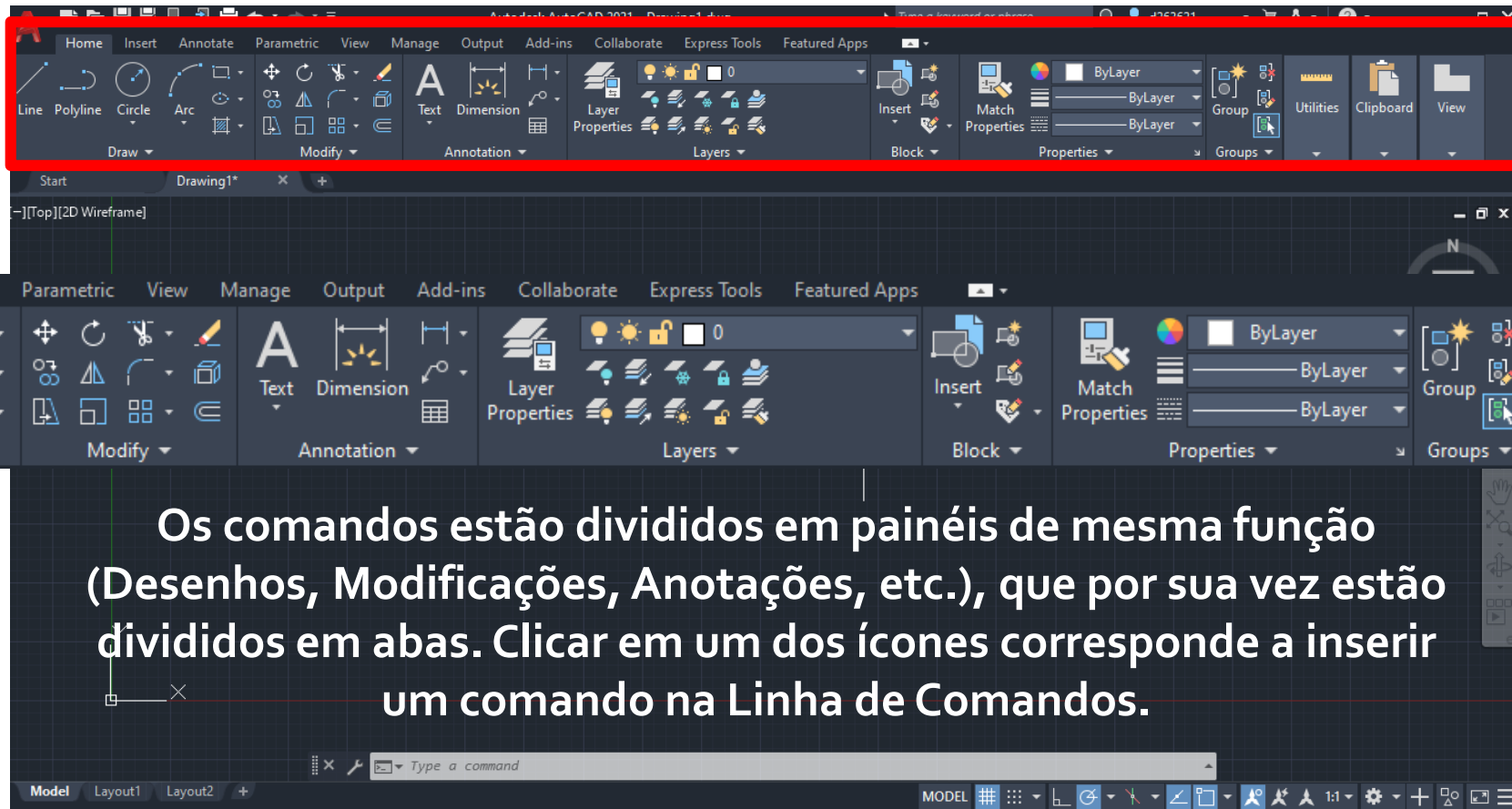
# Interface do AUTOCAD



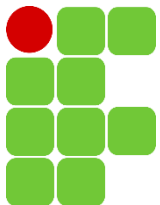
# Interface do AUTOCAD



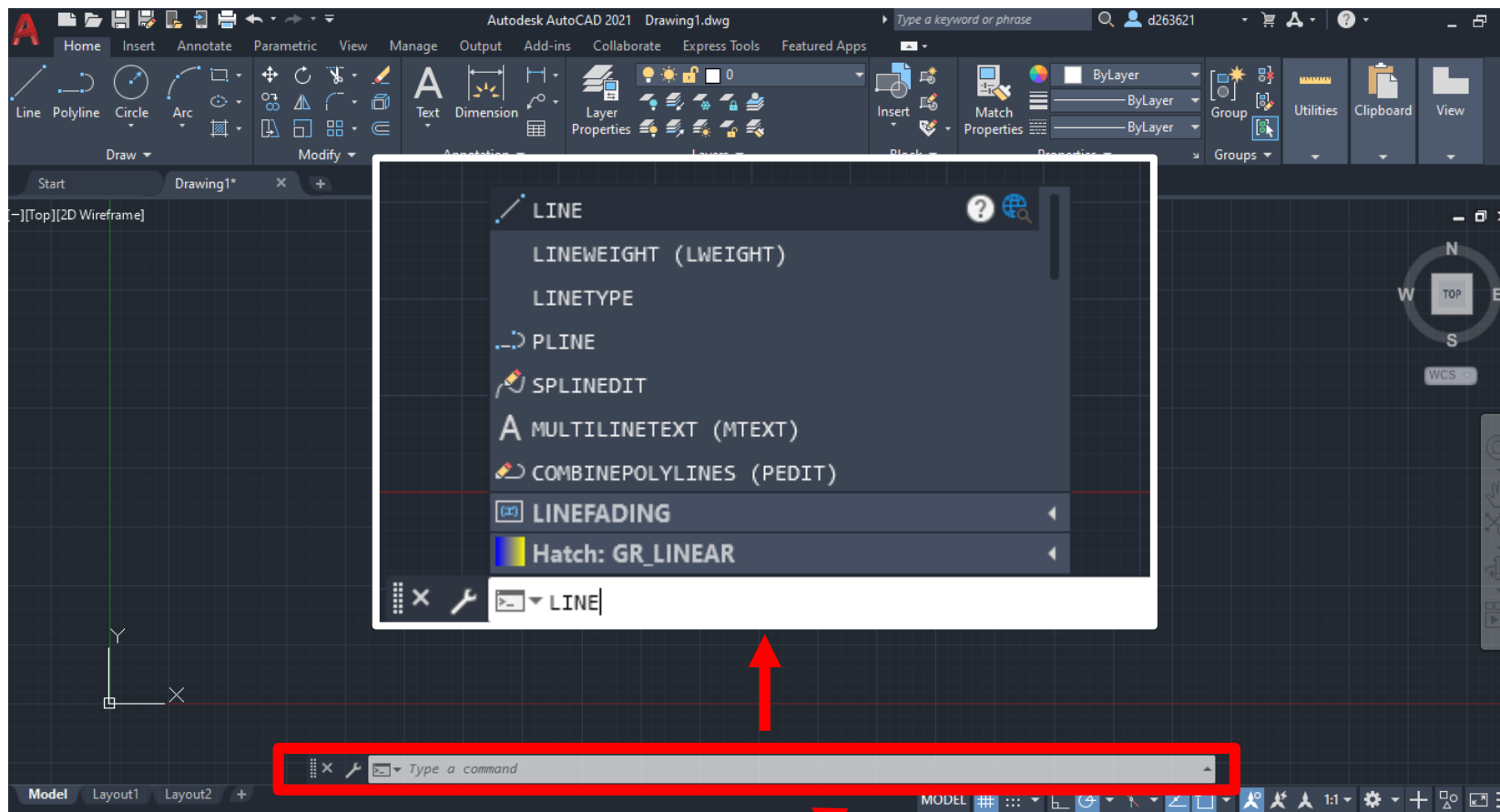
Ribbon



Os comandos estão divididos em painéis de mesma função (Desenhos, Modificações, Anotações, etc.), que por sua vez estão divididos em abas. Clicar em um dos ícones corresponde a inserir um comando na Linha de Comandos.



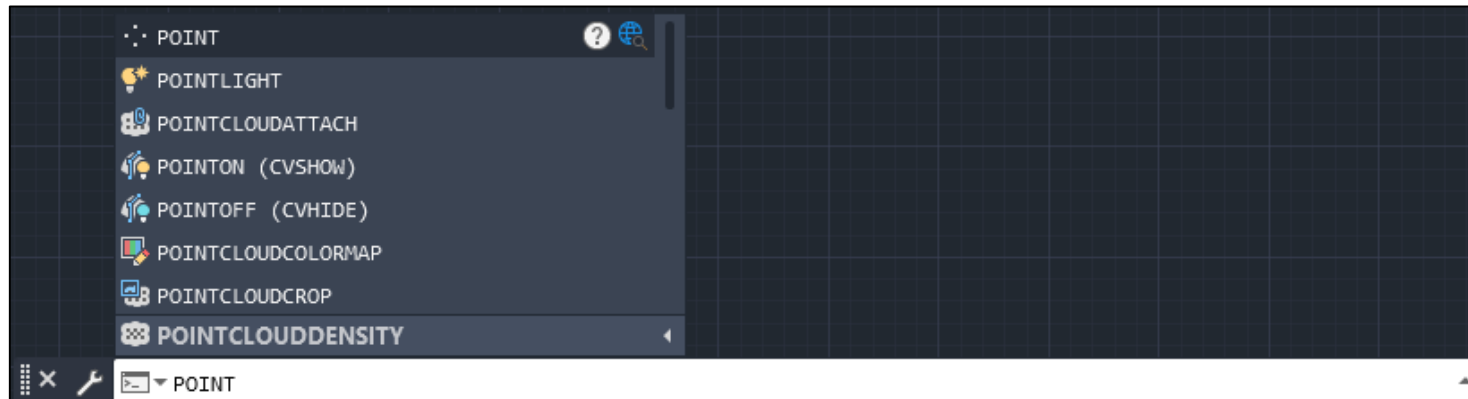
# Interface do AUTOCAD



**Linha de comandos**

Desenho Auxiliado por Computador

# \*Linha de comando



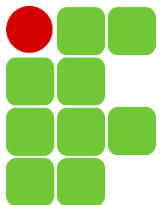
Comando + ENTER

```
Command:
Command:
Command: _line
Specify first point:
Specify next point or [Undo]:
Specify next point or [Undo]:
Specify next point or [Close/Undo]:
Specify next point or [Close/Undo]:
Specify next point or [Close/Undo]:
Specify next point or [Close/Undo]:
Command:
Command:
Command: _circle
Specify center point for circle or [3P/2P/Ttr (tan tan radius)]:
Specify radius of circle or [Diameter]:
Command:
CIRCLE
Specify center point for circle or [3P/2P/Ttr (tan tan radius)]:
Specify radius of circle or [Diameter] <330.4370>:
```

F2

ATENÇÃO!

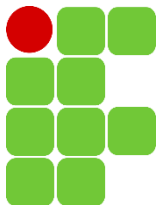
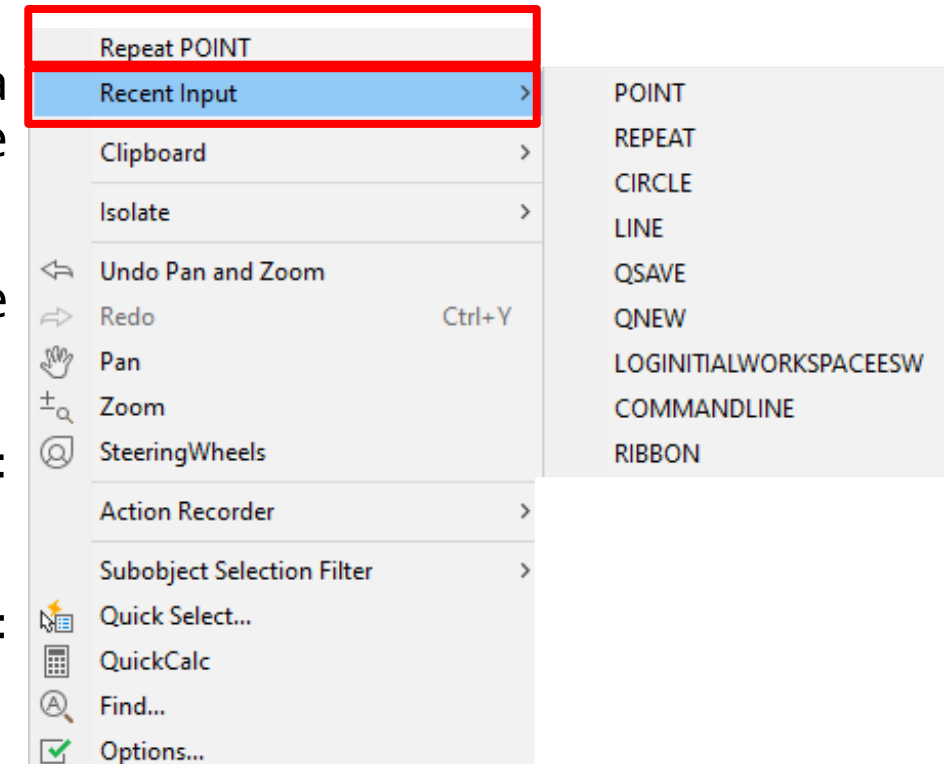
**Espaço:** Mesma função do **Enter**.



# \*Linha de comando

- **PARA REPETIR O ÚLTIMO COMANDO USADO**

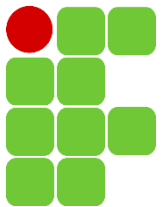
- Basta teclar **Enter** → sem que haja nenhuma interação solicitada no *prompt* da linha de comando.
- 2ª opção: clicar no botão direito do mouse e escolher "**Repeat Comando**".
- Para repetir os últimos comandos utilizados: **Recent Input**.
- Para repetir o mesmo comando várias vezes: comando "**Multiple + comando desejado**".



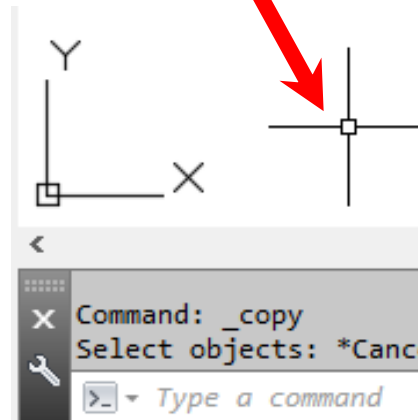
# \*Linha de comando

- PARA CANCELAR O COMANDO → ESC

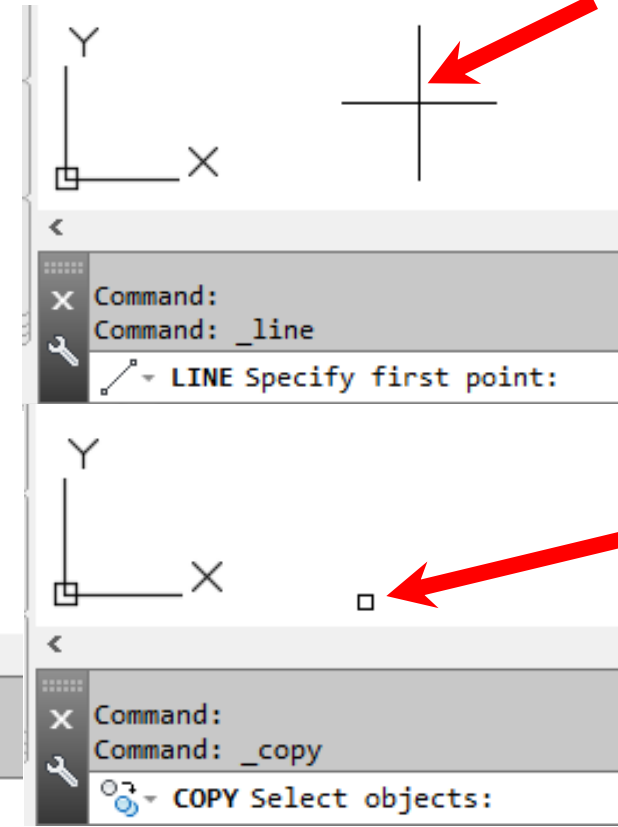
Importante!



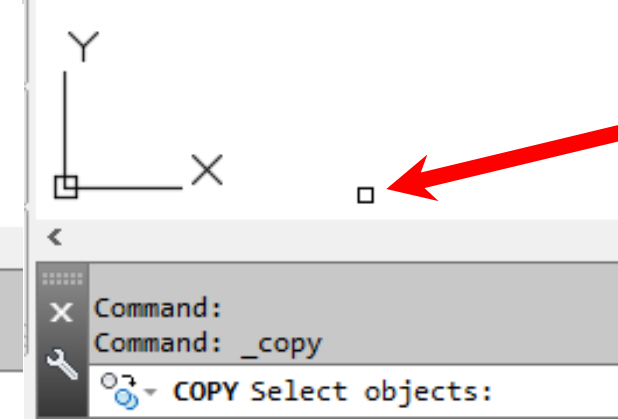
Comando desabilitado



Comando de inserção (desenho) habilitado



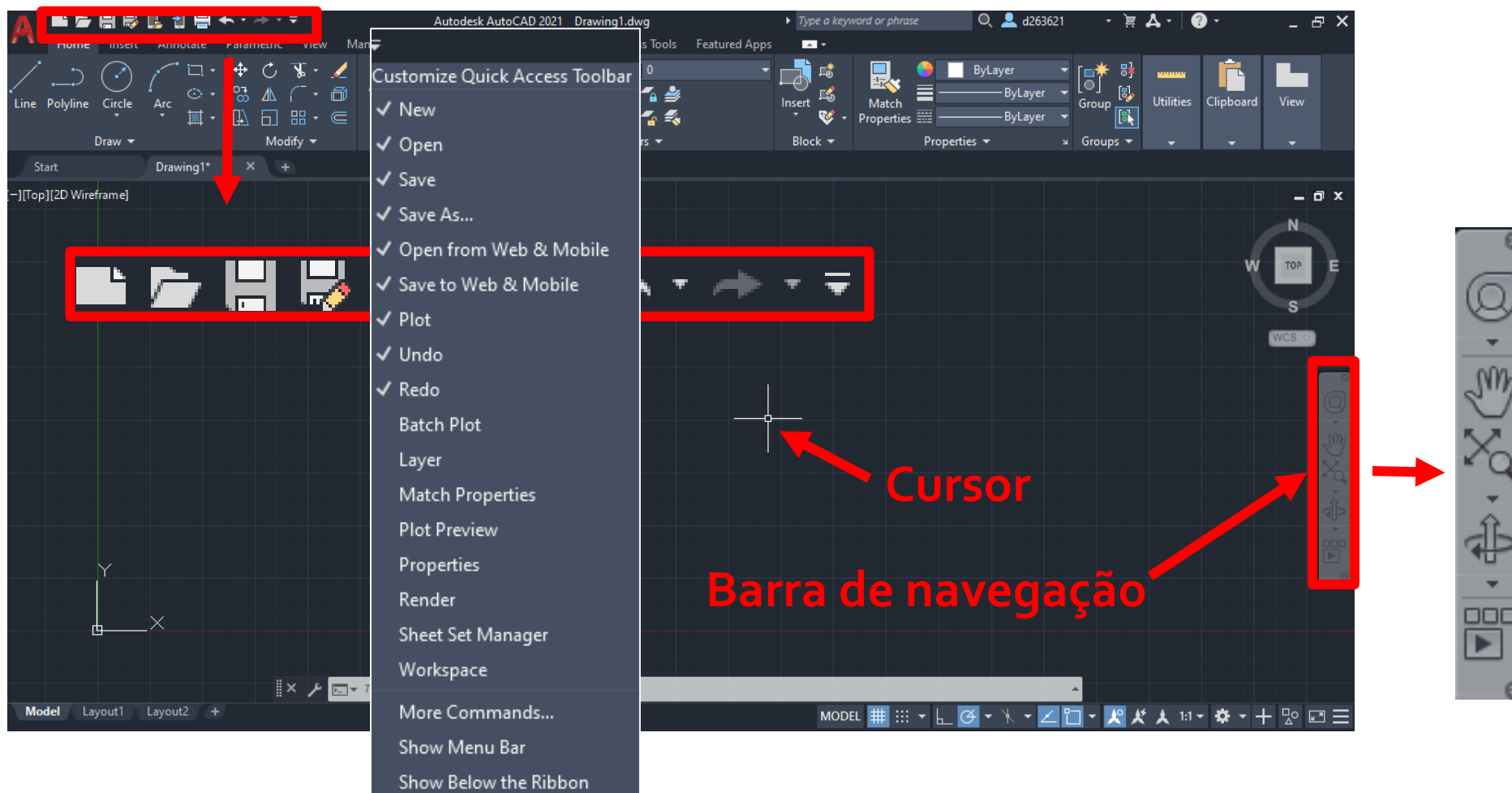
Comando de edição habilitado



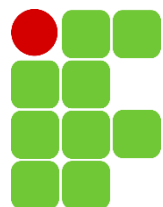
# Interface do AUTOCAD



Barra de comandos de acesso rápido



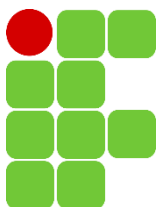
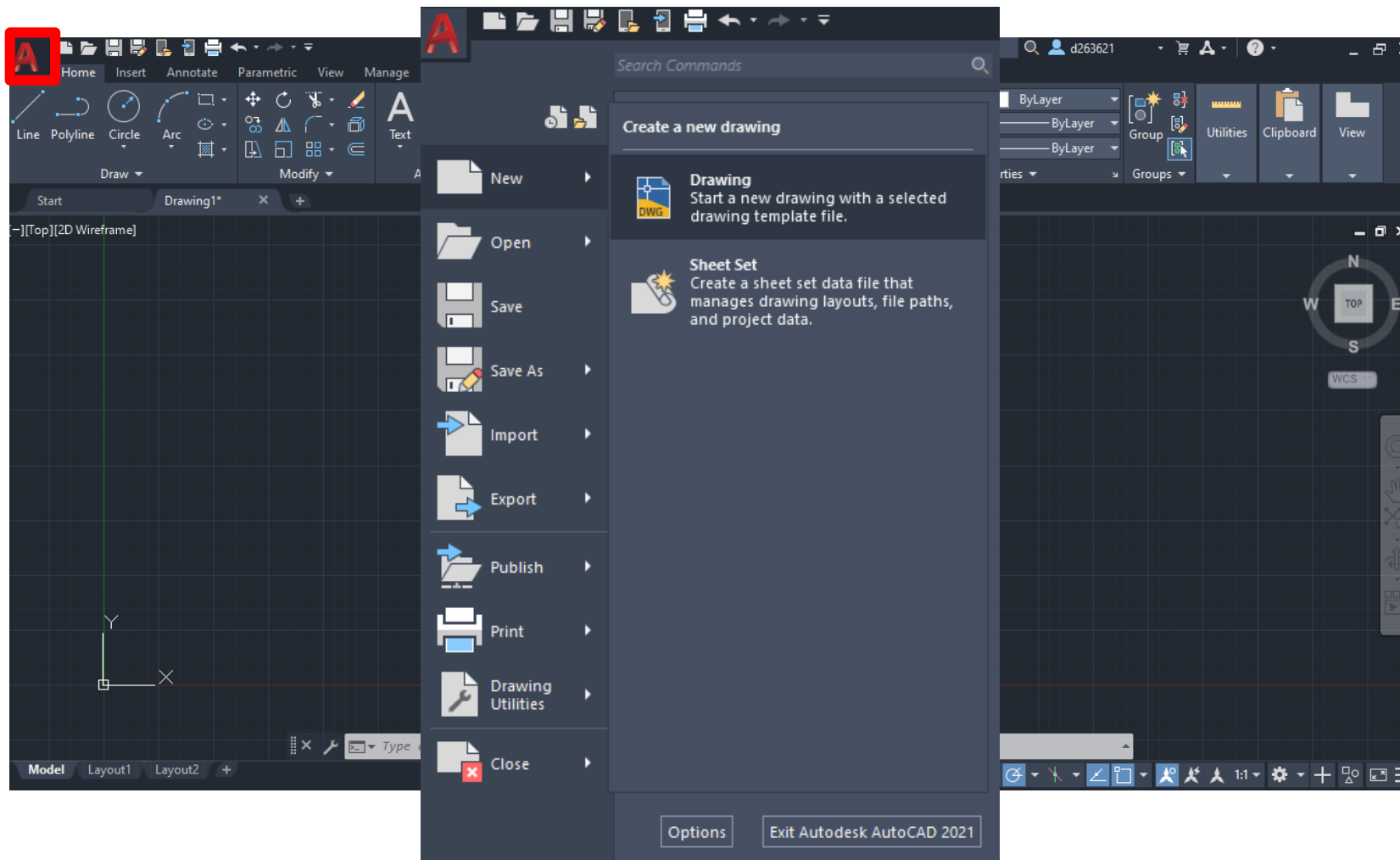
Desenho Auxiliado por Computador



# Interface do AUTOCAD



Menu do  
aplicativo

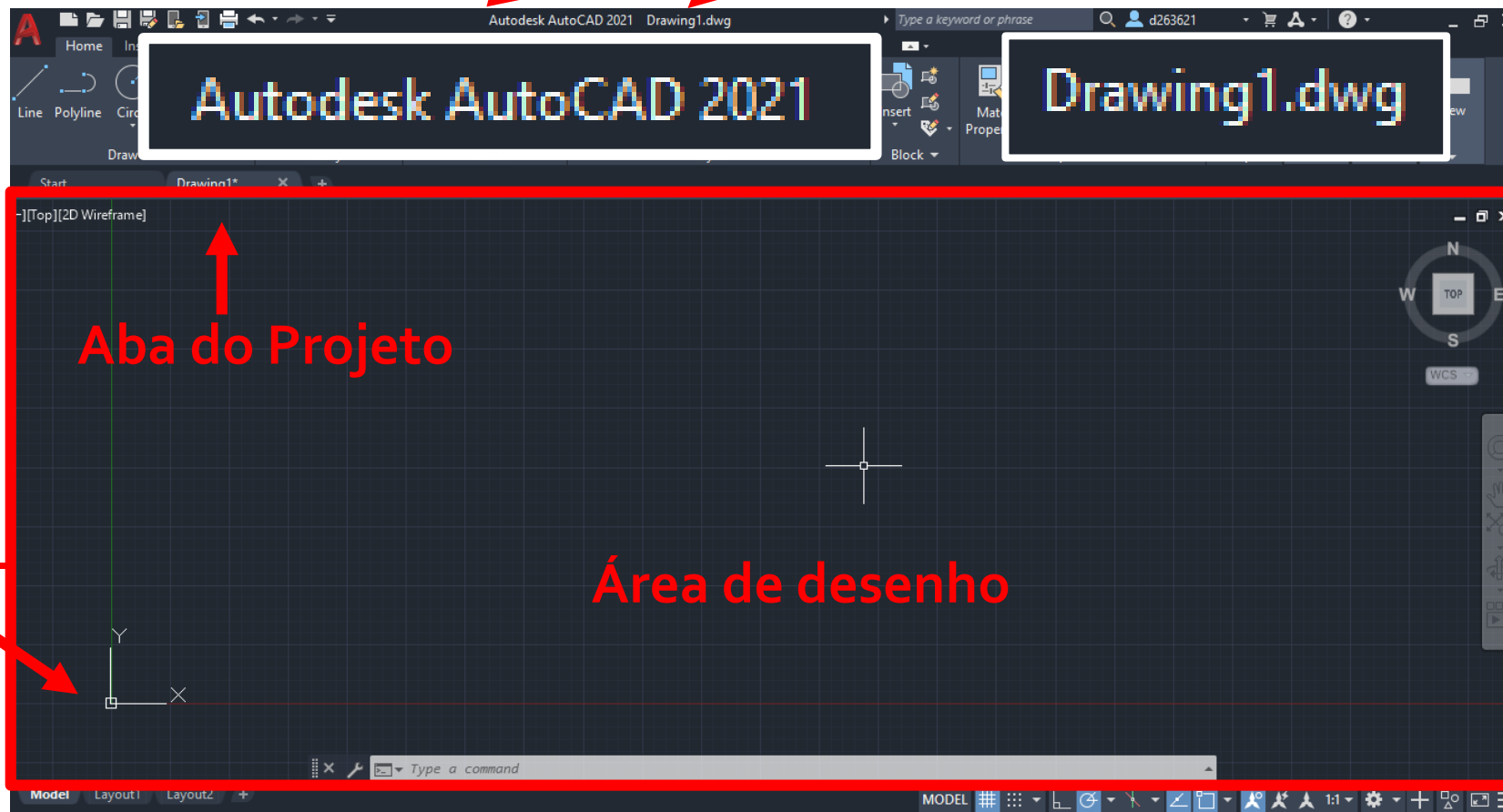




# Interface do AUTOCAD

Barra de Identificação

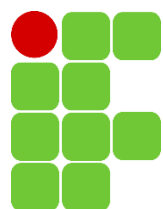
Título do projeto



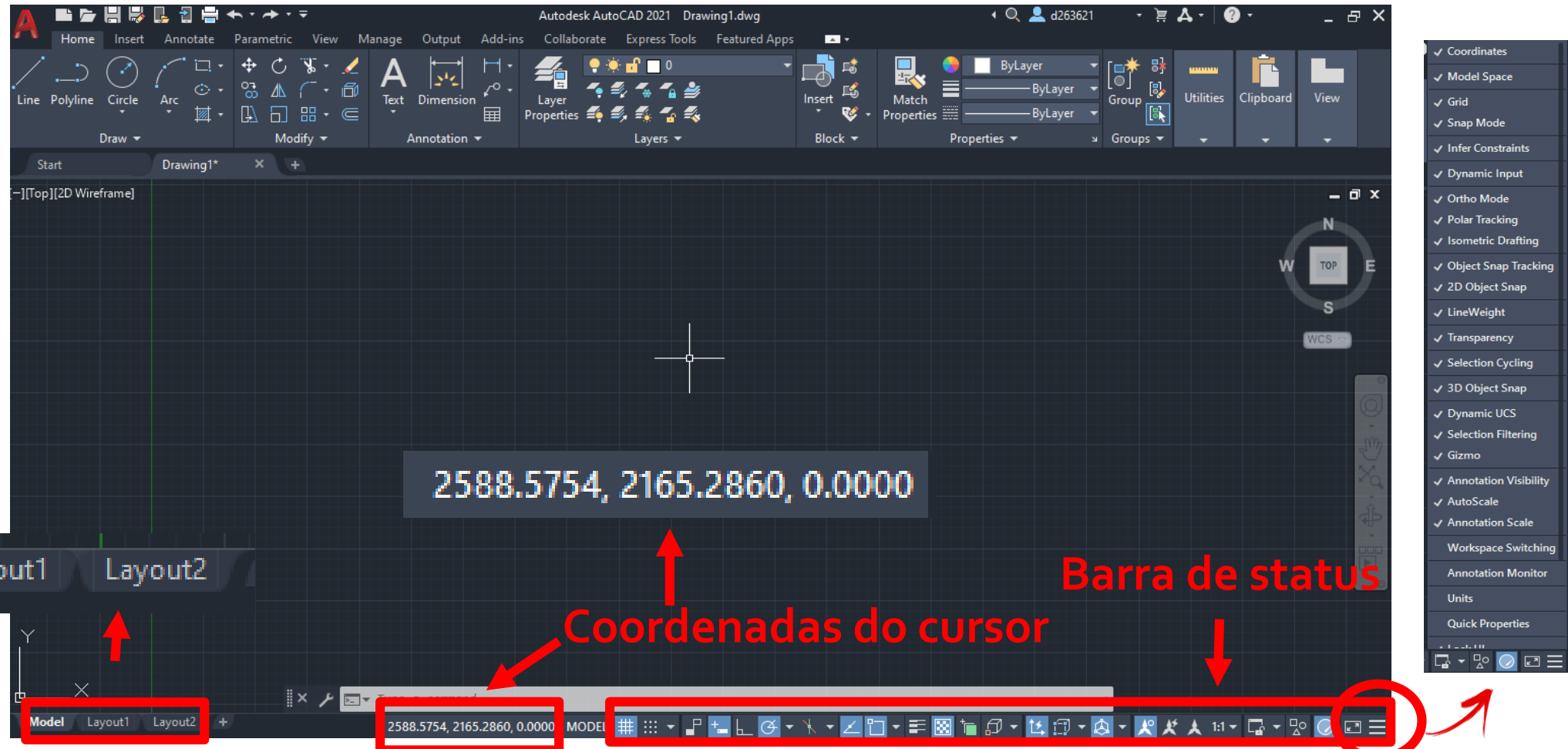
Aba do Projeto

Origem do sistema de coordenadas - UCS

Área de desenho



# Interface do AUTOCAD



Abas de modelo e layout

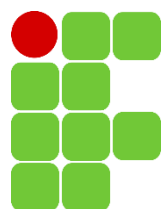
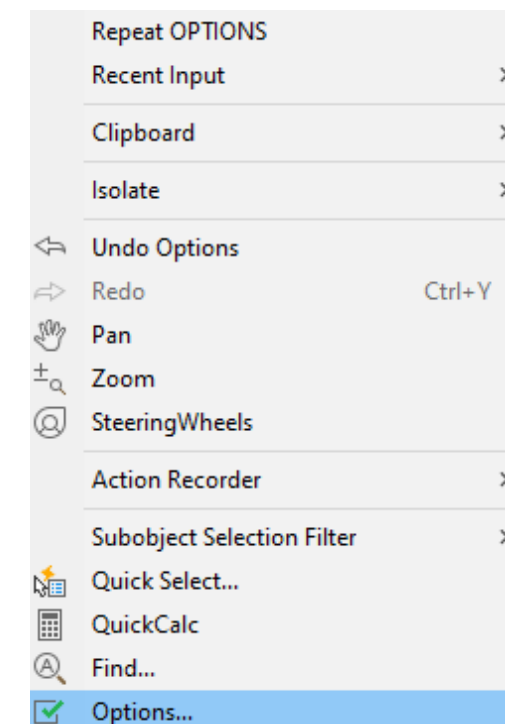
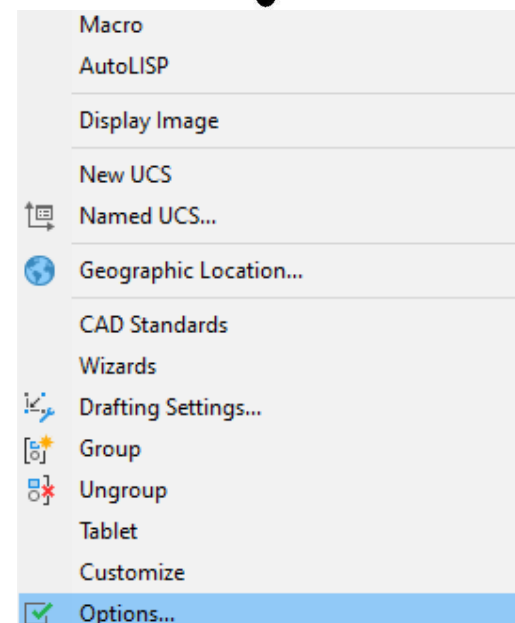
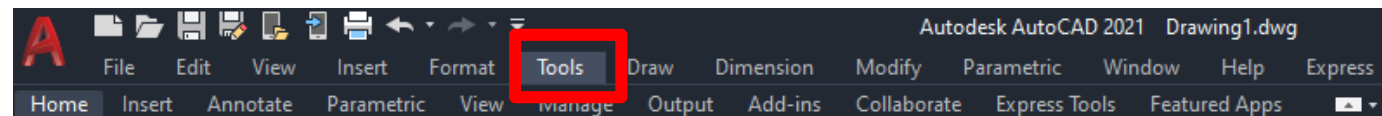
Coordenadas do cursor

Barra de status

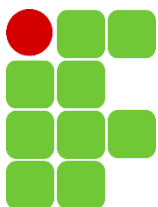
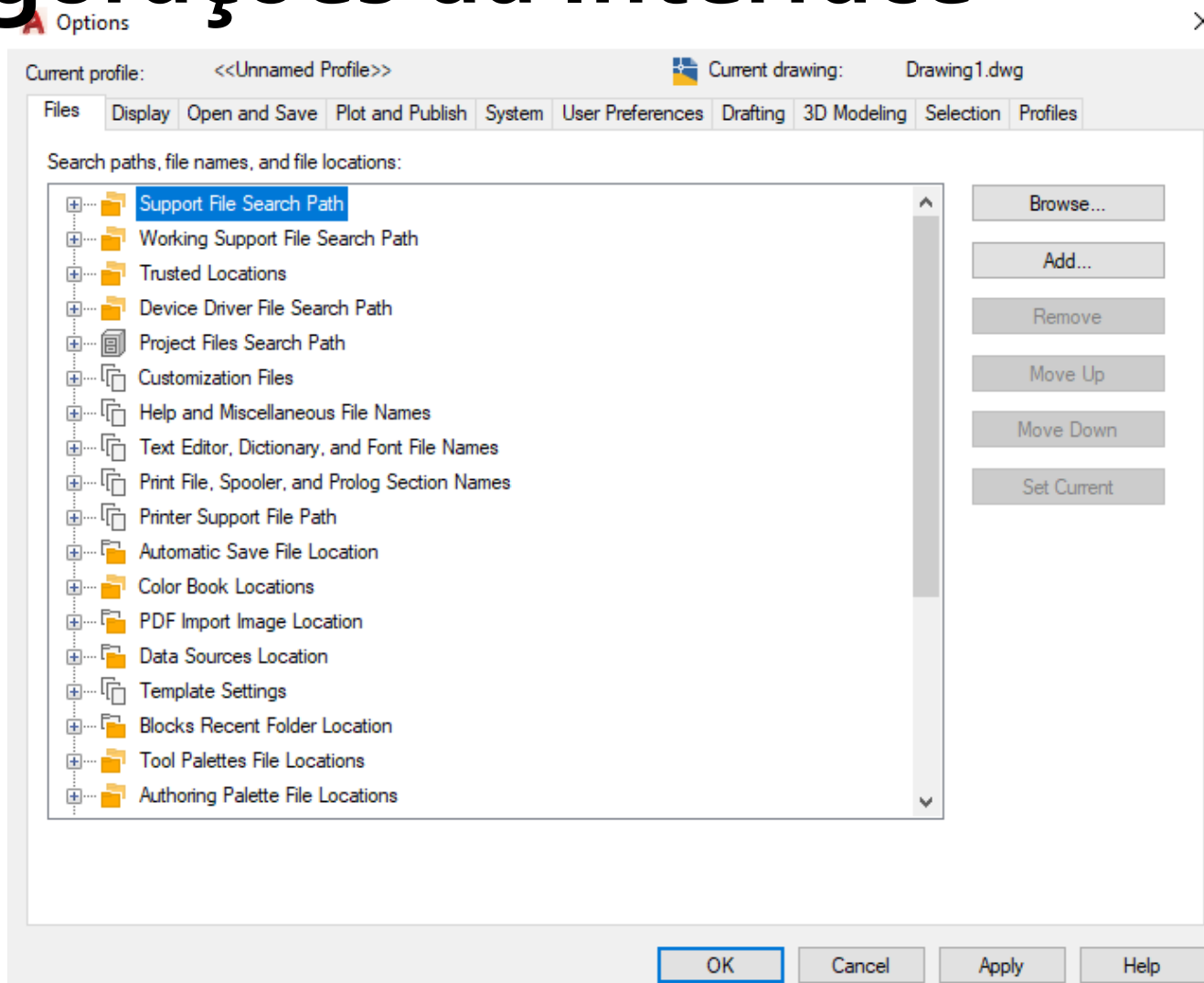
# Configurações da Interface



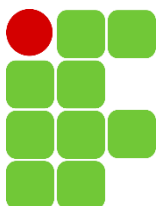
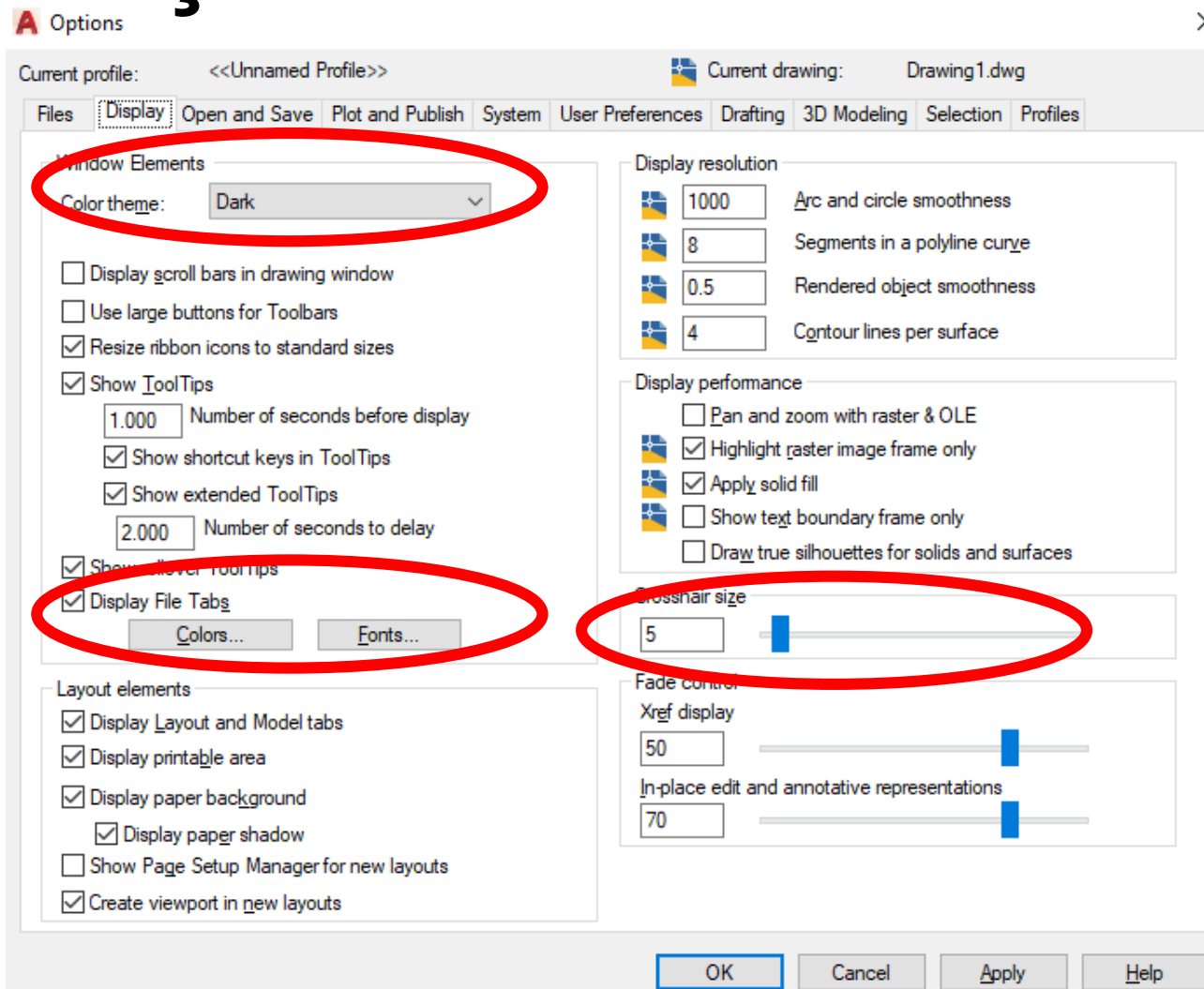
1. Comando "Options"
2. Menu "Tools" → "Options"
3. Botão direito do mouse → "Options"



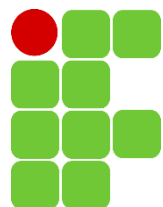
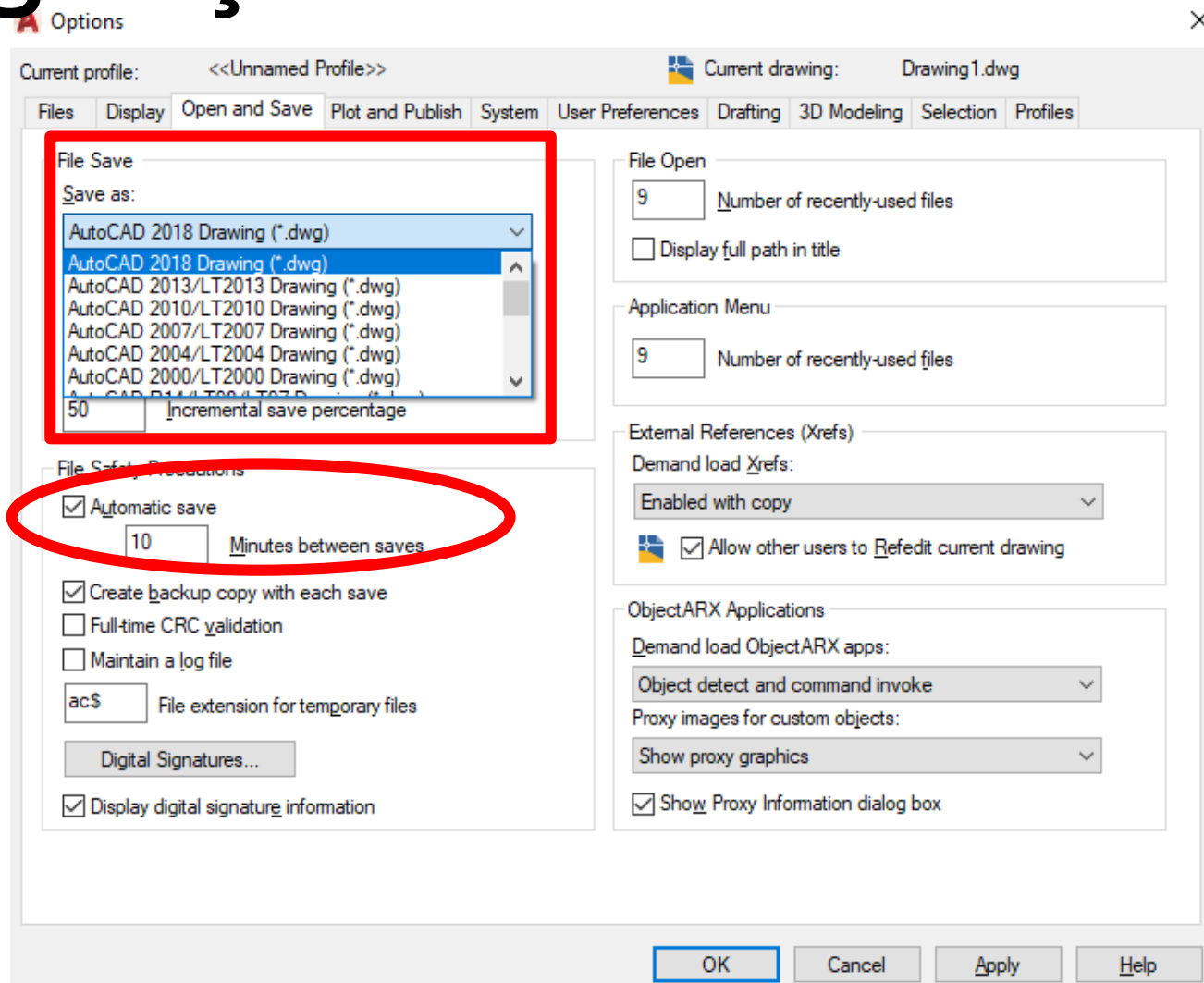
# Configurações da Interface



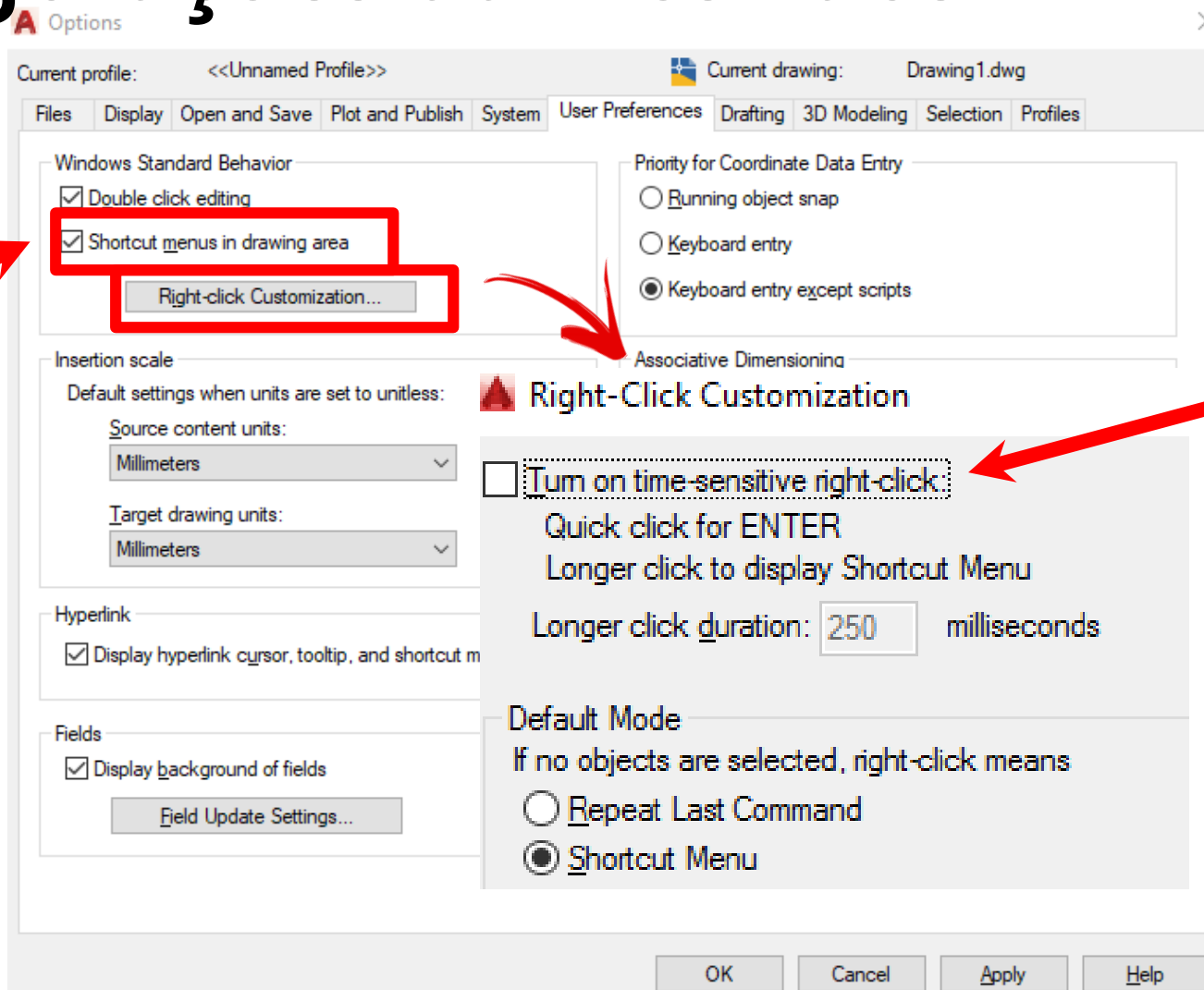
# Configurações da Interface



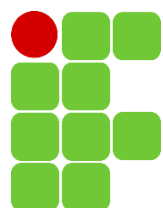
# Configurações da Interface



# Configurações da Interface

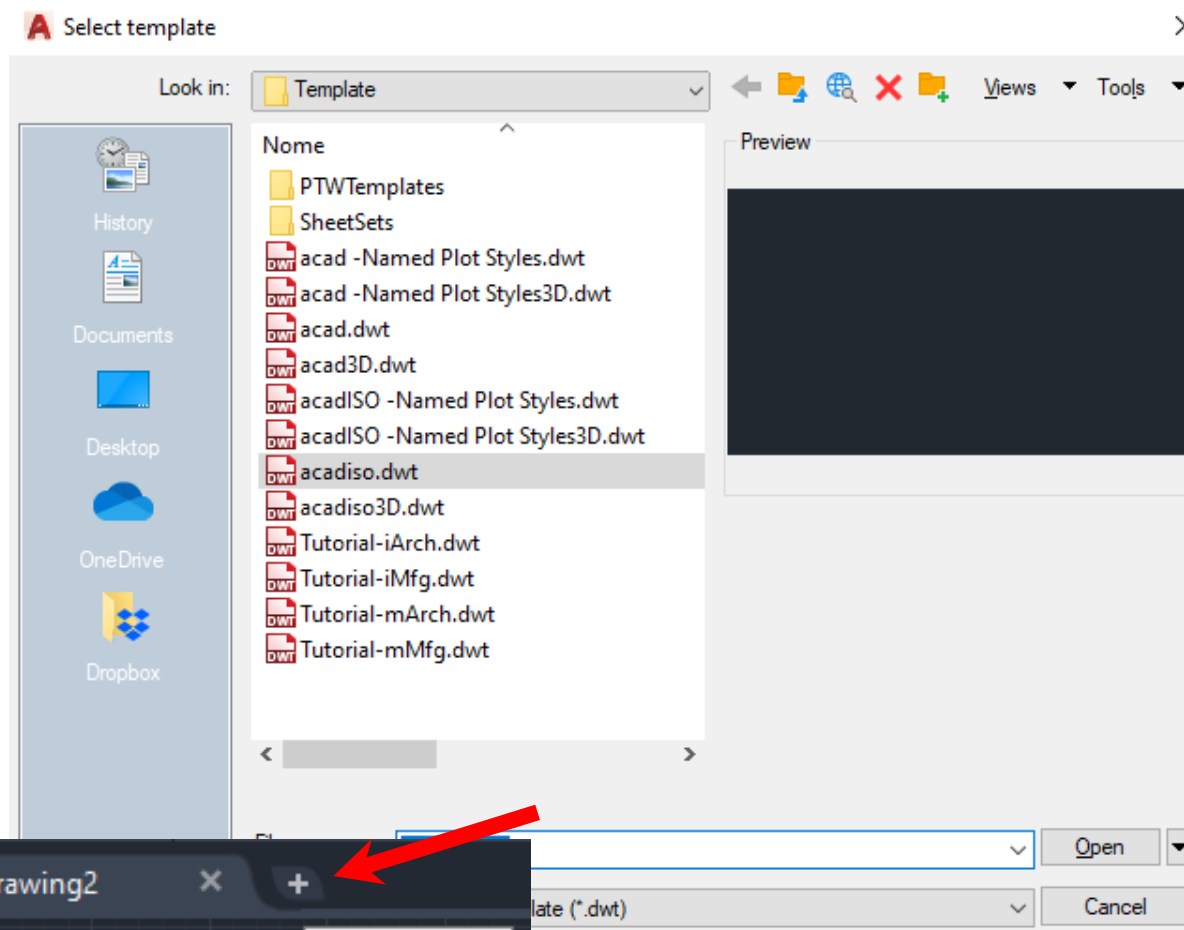
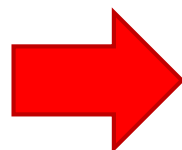
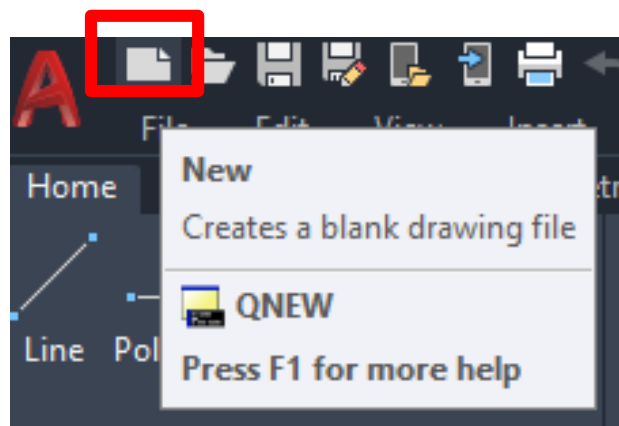


Ao desabilitar esta função, o botão direito do mouse funciona como **Enter**, porém não é possível utilizá-lo como atalho para acesso a algumas funções.

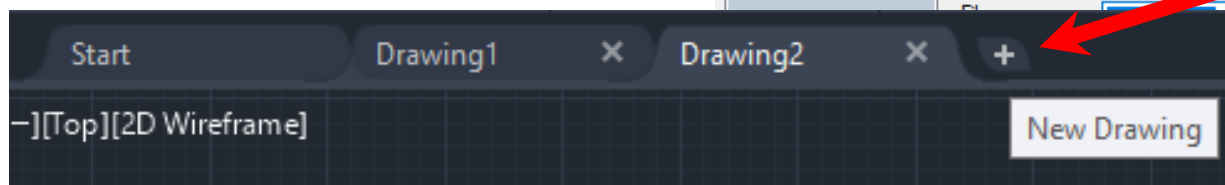


Ao ativar esta função, o botão direito do mouse funciona como **Enter**. Nesta condição, o botão direito do mouse permite acesso a algumas funções. Para utilizar pressione e segure por alguns segundos.

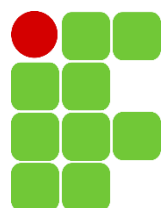
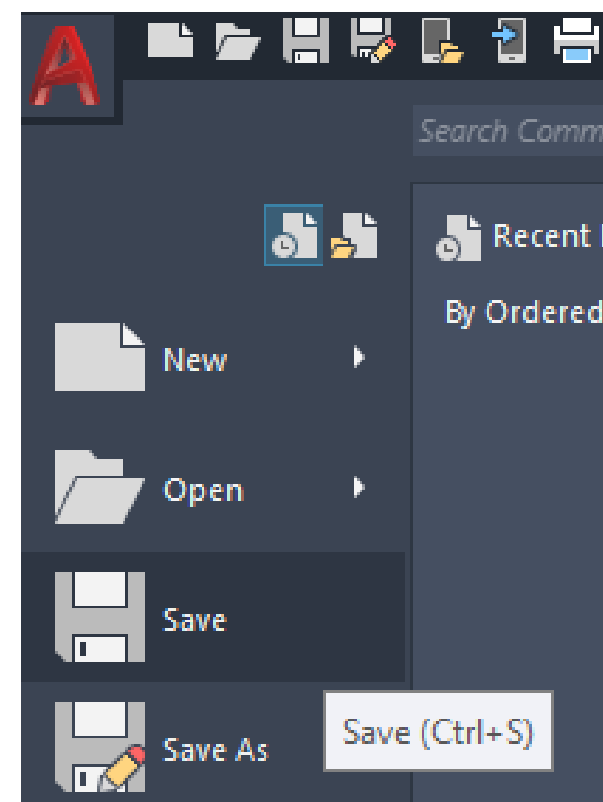
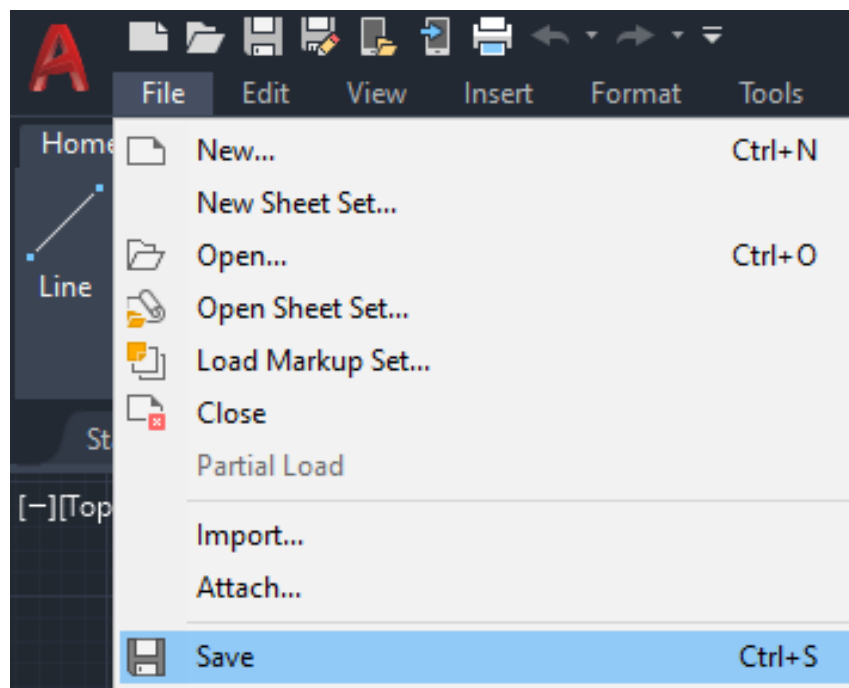
# Criar um novo desenho



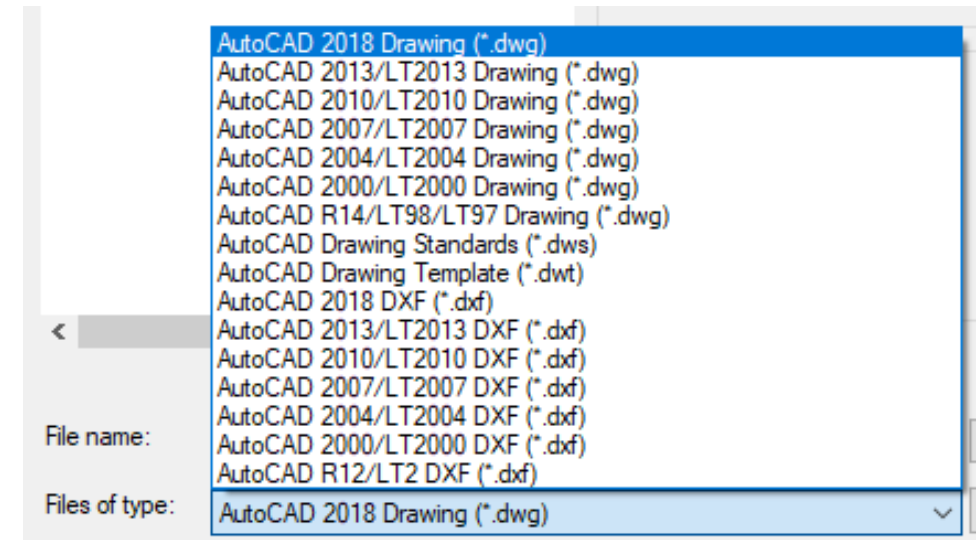
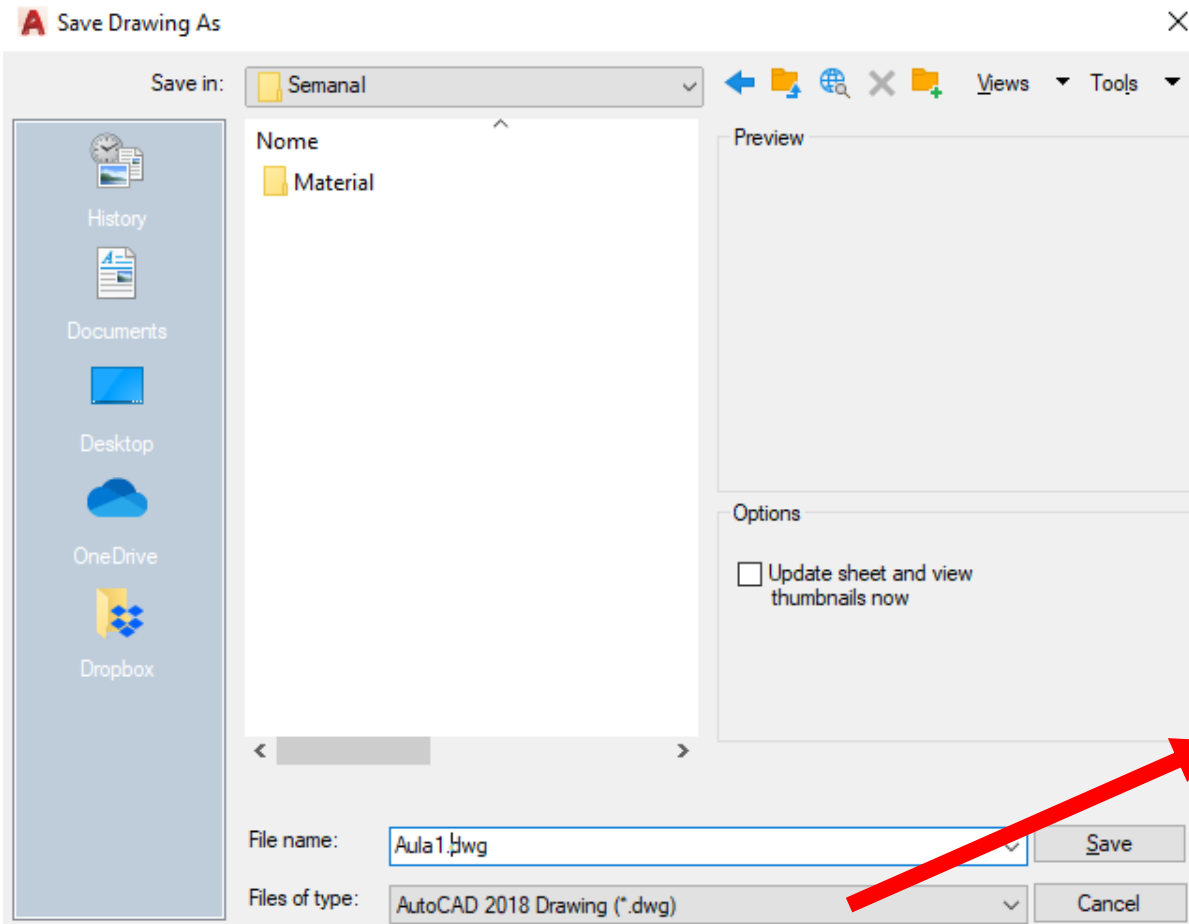
OU



# Salvar o desenho



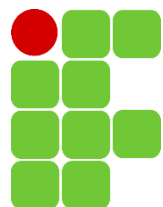
# Extensão do arquivo de desenho



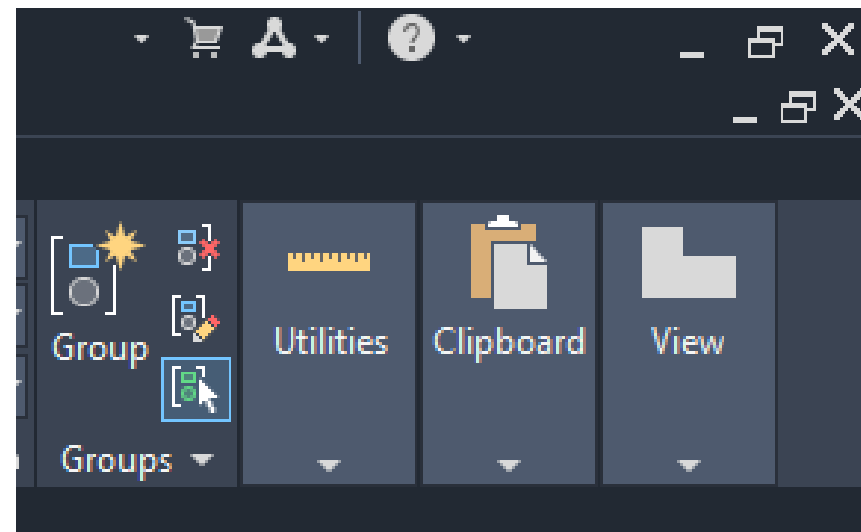
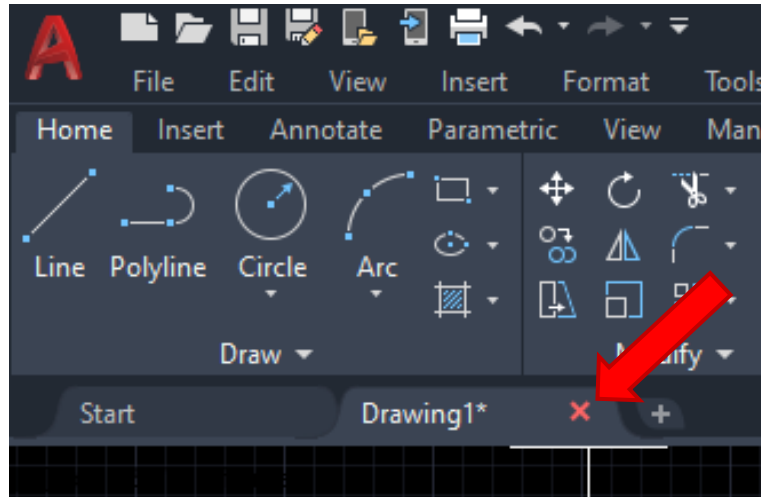


# Extensão do arquivo de desenho

- ✓ As extensões de arquivos são sufixos que nomeiam o seu formato e também a função que desempenham em um computador.
- ✓ Um formato de arquivo é um método através do qual informações são lidas, escritas e guardadas em computadores.
- ✓ Os desenhos elaborados no AutoCAD normalmente são salvos em arquivos com extensão **".dxf"** e **".dwg"**.
- ✓ Os arquivos com extensão **".dxf"** ocupam mais espaço em disco.



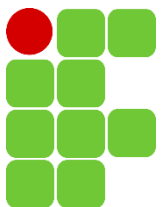
# Fechar o desenho e o programa



*Software*

Arquivo

**Comando: Quit**



**Obrigado!**