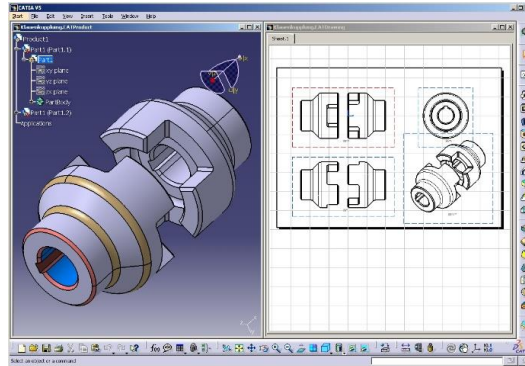


# BE 221

## Introduction to Computer Aided Design- Summer Session II



This course is a Hybrid course the lecture is taught online, with optional open lab times. We want to see student succeed in the class: Students should use their Lab times to do homework, get questions answered, and/or take required exams.

Students may attend any of or all of the scheduled lab times in one of two ways:

- In person Lab (times posted in UAccess and D2L), or by
- Online via “Zoom/Go-To-Meeting” , Lab (times posted UAccess and D2L), or make arrangements with instructor

### 1. Sketch Entities and Tools

Creating 2D sketches, Using the sketch tools, Creating complex shapes by combining individual sketch tools

### 2. Features

Feature tools, Drawing 3D objects, Using features to create objects.

### 3. Orthographic Views

Use two-dimensional views to define a three-dimensional model, ANSI standards and conventions, Drawing section and auxiliary views.

### 4. Assemblies

Creating assembly drawings, Create an exploded assembly drawings, creating a part list, Animation of assembly, and Edit title block. Using mates to assemble multiple parts.

### 5. Using the design library Tools: Threads, Fasteners and Gears

Thread terminology and conventions, Draw threads, Size both internal and external threads, Use standard-size threads, Use and size washers, nuts, and screws. Concept of power transmission, Fundamentals of gears, Drawing and animating gears

### 6. Dimensioning

Dimensioning objects, ANSI standards and conventions, Dimensioning different shapes and features, and Fundamentals of 3D dimensioning

### 7. 3D Printing

Developing a model for printing, Converting file format, Use the driver software, Filament types and use, Issues with 3D printing.