

Program Code: ET201	
Subject Code: 1ET2010104	Subject Title: CAD/CAM Software Practice
Pre-requisite Subject	Basic Knowledge of computer aided Drafting.

Course Objective:

1. Modeling software can be used for design, analysis and manufacturing. Students will be familiar with softwares and its capabilities in design.
2. Sketch and modify engineering product model.
3. Modify existing products and create new product model using software.

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture	Tutorial	Practical	Credit	Theory		Practical		Total
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
-	-	2	2			30	20	50

Subject Contents			
Sr. No	Topic	Total Hours	Weight (%)
01	Introduction to modeling software, User Interface Overview, File operations.	02	08
02	Sketch Operations Sketch Mode, Drawing a Sketch, Dimensioning a Sketch, Working with Constraints, Modifying Dimensions , Deleting, Trimming, Mirroring, Palettes Fillets, Splines, Text in Sketches, Importing Sketches Scaling and Rotating.	04	16
03	Solid Modeling Extrude, Revolve, Default Datum Planes Holes, Rounds, Chamfers Ribs, Editing Features, Sweep Features, Blend Features Shell, Datum Curves, Draft Features, Variable Section Sweep Swept Blend, Helical Sweep, Blend Section to Surface Blend Between Surfaces, Toroidal Bend, Spinal Bend, Warp, Patterns, Copying Features, Mirroring Geometry, Model Sections.	07	28
04	Assembly Modeling Assembly Files, Top-Down Method, Bottom-Up Method, Placement, Constraints, Packaged Components, Component Operations View States, Bill of Materials.	04	16
05	Drawings Drawing Files, Templates, Drawing Views, Drawing Sections, Drawing Options, Dimensioning Drawings, Reference Datum's, Geometric Tolerance, Note, Sketches in Drawings, Formats, Tables, Bill of Materials, Balloons.	02	08
06	Surface Modeling Style Feature, Boundary Blends, Mirror and Merge, Trim and Fill, Intersect and Offset, Thicken and Solidify.	04	16
07	Sheet Metal Modeling Sheet Metal File Sub-type, Walls, Adding Relief, Conversion, Cuts, Flat Pattern.	02	08

Course Outcome:

1. Students should be able to create components model in software packages.
2. Students should be able to modify the existing model s.
3. Students should be able to understand the models capabilities for manufacturing aspects.

List of References:

1. Geometric Modeling, Mortenson, M.E., John Wiley & Sons, NY, 1985.
2. Mastering CAD/CAM (SIE), Ibrahim Zeid, McGraw Hill

List of Experiments:

1. Introduction to modeling software.
2. Study of Sketch and making models using software.
3. Study of Solid Modeling and making models using software.
4. Study of Wire frame Modeling and making models using software
5. Study of Surface Modeling and making models using software.
6. Study of Assemblies and making models using software.
7. Making Model from drawing using software.