SOLID WORK SYLLABUS		
Module	**Session**	**Contents**
Introduction	**1**	**SOLID WORK as a CAD software: -** Concept of Parametric Modeling, Feature Based Modeling, User Interface, Mouse operations, File types and Management, drawing profiles. Major user industries of Solid Work. Why Solid Work is preferred?
Sketcher	**2**	**Sketcher**: Profile toolbar, operation (corner, chamfer, relimitations, transformations, project 3D element), constraints, types of constraints, workbench.
	3	**Sketcher:**- sketch tools, tools(Sketch solving status, sketch analysis, output feature), visualization toolbar, user selection fillter.
	4	**Modeling of Machined component**, Material Addition and Removal (Pad, Pocket, Shaft, and Groove), Sketch and Positioned Sketch, Types of Fillets, Types of Chamfer, Types of Hole.
	5	**Modeling of Machined component - 2. Pattern (Rectangular, Circular, User), Thread/Tap, Datum Features (**Plane, Axes, Points), Simple Draft. Frequently used commands for Machined components in Solid Work / Solid Work

Modelling of Machined Component (Part Modelling)	**6**	**Advance Design features :-** Axis System, Types of draft, Shell, Stiffener, rib slot, **Multisection solid, Removed multisection solid**, Apply Material, Measure, Render.
	7	**Introduction To Multibody concept:-** Copy Paste, Paste special, Insert body, Boolean Operations (Add, remove, Intersect), **Transformation** (Translation, Mirror, Scaling, Affinity).
	8	**Multibody concept:- standard example ,** Negative body concept (Boolean Operations)
	9	**Advance Features: -** Parameters, Formula, Relations, and Design Table.
Drafting	**10**	**Introduction To Drafting & Detailing Theory:-** (types Generative – Interactive), Initial Drafting setting, Sheet Background, Views (ortho, ISO), Dimensions (Types-Generate Dimension & Create Dimension).
	11	**Views:-** (Aux, Section, Details, Clipping, Broken), View properties, DATUMS & Tolerance
	12	**Annotations:-** GD & T, Symbols, Note, Leaders, Table, Symbols (Machining, Roughness, Welding, Custom), Dress-up Toolbar.

	13	**Surfacing Modeling based Plastic Component:-** Environment, Tool bars, Surface Creation (Extrude, Revolve, Sphere, Cylinder), Surface Modification, Surface Editing (Trim, Split, Shape Fillet, Close Surface, Thickness).
	14	**Surfacing:-** Offset(All 3 types), Fill, Blend, Join, healing, Project-Combine.
	15	**Advanced Surfacing:-** Adaptive Sweep, Sweep(ALL), Multisection Surface.
Wire-frame Modeling	**16**	**Wire-frame Modeling:-** Point, Line, Planes, Curves, Circle-Conic, STANDARD EXAMPLES. Use of wire frame modeling,
BIW Templates	**17**	**BIW Templates:-** What is BIW, Junction, Diabolo, Hole, Mating Flange, Bead, Blend Corner.
Assembly & Mechanism	**18**	**Introduction to Assembly:-** Types of assembly approach, Types of Constrains and DOF, placement of components in the Assembly, Manipulating Components, **BOTTOM UP Approach**
	19	**TOP DOWN Approach:-** Part, Product, Component, Space Analysis, Reuse Pattern, Save management.
	20	**Assembly Drafting:-** Scene(Exploded View), Bill of material, Ballon creation, Graph Tree Reordering.