KRISHNASAMY
College of
ENGINEERING & TECHNOLOGY
Approved by AICTE & Affiliated to Anna University
Anand Nagar, Nellikuppam Main Road, S. Kumarapuram, Cuddalore - 607 109, Tamil Nadu.
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DEPARTMENT OF MECHANICAL ENGINEERING

Date: 03.01.2024

CIRCULAR

Ref.: KCET/MECH/VAC/CIRCULAR/2023-24/01.

The following Value-Added Course will be conducted during the academic year 2023-2024. The course will be conducted for third year two phases from 11.01.2024 to 12.01.24 and 18.01.24 to 20.01.2024, and for second year classes will be conducted in two phases from 21.02.2024 to 24.02.24 and from 28.2.2024 to 29.02.24. Students are instructed to register their names in the course allotted to them.

Note: Students are instructed to attend the program without fail.

S. No.	Course Code	Name of the Course	Year / Sem	No. of Period	Course Coordinator
1	ME-VAC2301	Introduction to Solid Works	III / V	30	Dr. G. Magesh, Asst. Prof
2	ME-VAC2302	Basic 3D modelling using Fusion 360	II / III	32	Er. P. Prakash, Asst. Prof

For
HoD/MECH 3/1/24

Submitted to the Principal

31/1/24
Vice-Principal

3/1/24
Principal

KRISHNASAMY COLLEGE OF ENGG. & TECH ★ CUDDALORE 607 109.

Dr. G. ELANGO, M.E.,Ph.D
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COURSE CODE MEVAC2301

COURSE NAME INTRODUCTION TO SOLIDWORKS

OBJECTIVES:

- To apply the engineering design process to a design project.
- To apply rules of orthographic projection to create multi-view drawings.
- To create pictorials from orthographic views.
- To Use CAD software to create 3D models and assemblies.
- To create 2D engineering drawings, including component and assembly drawings.
- To Preparing standard drawing layout for model parts, assemblies with BoM.

UNIT I - INTRODUCTION TO SOLIDWORKS **6**

Sketcher - Solid modeling – Extrude, Revolve, Sweep, and, Loft, etc. Starting SOLIDWORKS, Building Your First Part, Create a Part Drawing, Create an Assembly, and Create an Assembly Drawing.

UNIT II - SOLIDWORKS ESSENTIALS - BASIC PART MODELING **6**

Copy, Edit, Pattern, Suppress, History, operations etc. Creating Your Part with Design Intent, Remove Material, Fillets, and Holes, Creating Drawings.

UNIT III - SOLIDWORKS ESSENTIALS - ASSEMBLY MODELING **6**

Getting Started, Adding More Components and Mates, Working with Assemblies, Constraints, Exploded Views, Interference check.

UNIT IV - SOLIDWORKS ESSENTIALS - BASIC DRAWINGS. **6**

Intro to Drawings, Types of Drawing Views, Drafting-Layouts, Standard & Sectional Views, Detailing & Plotting, Dealing with Part Configurations, Dimensions, Annotations.

UNIT V - SOLIDWORKS ESSENTIALS – DESIGNING **6**

Designing Moulded & Casted Parts, Introduction to Tapered and Drafted Geometries, Designing a Moulded Production-ready Part, Designing a Part for Injection Moulding,
CAD data Exchange formats- IGES, PDES, PARASOLID, DXF and STL.

TEXT BOOKS:

1. Engineering Design with SOLIDWORKS 2024: A Step-by-Step Project Based Approach Utilizing 3D Solid Modeling by David C. Planchard, 2022.
2. Parametric Modeling with SOLIDWORKS 2024 By Paul J. Schilling, Randy H. Shih, 2024.

REFERENCES:

1. Drawing and Detailing with SOLIDWORKS 2022, By David C. Planchard CSWP 2022.
2. A Hands-On Introduction to SOLIDWORKS 2023, March 2023 by Kirstie Plantenberg.
3. Official Certified SOLIDWORKS Professional Certification Guide, October 10, 2022 by David C. Planchard CSWP.
4. A Hands-On Introduction to SOLIDWORKS 2022, April 14, 2022 by Kirstie Plantenberg.
5. Official Guide to Certified SOLIDWORKS Associate Exams: CSWA, CSWA-SD, CSWA-S, CSWA-AM, October 17, 2022 By David C. Planchard CSWP

OUTCOMES:

At the end of this course, student will be able to use and appreciate the knowledge and skill had learned to:

- Prepare 2D and 3D drawing on Computer-Aided Design (CAD) for a single and multi-part.
- Understand the underlying concepts of 3D modeling.
- Create basic to intermediate solid models using Solid works software.
- Compose an assembly of multiple parts.
- Detail out blueprints based on solid models or assemblies.
- With Practise classes, it helps the students to get familiarized with the computer applications in design and preparing drawings for various mechanical components.

For L. Rathna 3/1/24

HoD/MECH