MODULE-WISE COURSE CONTENT AND OUTCOME				
SL.NO	MODULE NAME	MODULE CONTENT	MODULE LEARNING OUTCOME	DURATION (HRS)
1	About PLM	Introduction of PLM Introduction to the Windchill Environment	• Define PLM (Product Lifecycle Management) • Recognize the Benefits of PLM • Understand PLM Components	10
2	About Windchill UI	Locating Information Viewing Information	• Search for Data Efficiently • Browse the Database • Utilize Advanced Search Options • View Product Data • Understand Information Layouts • Navigate Linked Data • Use Visualizations	
3	About Visualization	Introduction to Visualization Using Creo View Lite to View and Annotate Information	• Navigate Creo View Lite Interface • Perform Basic Viewing Tasks: o Rotate, zoom, and pan 3D models for detailed inspection. • Open and navigate 2D technical drawings. • Use Markup Tools for Annotation: o Add comments, dimensions, and graphical annotations to CAD models or drawings. • Save and share annotations with team members for collaborative review.	
4	About Home page	Managing Your Work Participating in Processes	• Organize Assigned Tasks • Manage Personal Workspaces • Track Progress • Perform Basic Workflow Tasks • Understand Workflow Processes • Engage in Collaborative Processes • Execute Process-Related Tasks • Monitor Workflow Status	

5	About Document	Creating Documents Managing Documents Managing Lifecycle for Document Managing Revision for Document	• Gain confidence in creating, organizing, and managing documents in Windchill. • Understand and apply document lifecycle stages for structured management. • Effectively handle document revisions to maintain consistency and traceability. • Develop skills for integrating documents into broader workflows and ensuring their role in successful PLM operations.	8
6	About CAD Data Management	Windchill MCAD Data Management Process Overview Manage Design Data Manage Design Development Manage CAD Data Working With CAD Data Manage Family Tables	• Gain a comprehensive understanding of MCAD data management processes in Windchill. • Build skills to organize, control, and collaborate on CAD data effectively. • Understand and utilize advanced features like family tables for managing complex design variations. • Develop proficiency in integrating CAD tools with Windchill to enhance productivity and reduce errors.	15
7	About BOM	Windchill eBOM Creation Process Overview Create eBOM Edit BOM Manage eBOM Generate and Compare BOM Reports Sharing and exporting eBOM	• Develop a strong understanding of eBOMs and their role in managing product designs. • Gain the ability to create, edit, and manage eBOMs efficiently in Windchill. • Build skills in generating reports, analyzing BOM data, and sharing eBOMs for collaborative purposes. • Lay a foundation for integrating eBOMs into broader enterprise processes like ERP or manufacturing planning.	
8	About Change Managemen	Change Management Process	• Develop a clear understanding of the change management	12

	t	Overview Identify Need Investigate Need Change Planning Change Implementation Review and Audit Change	process and its significance in maintaining product and process integrity. • Acquire skills to identify, investigate, plan, implement, and review changes systematically using Windchill. • Enhance collaboration and decision-making through effective communication and stakeholder engagement. • Build proficiency in auditing changes and leveraging insights to improve organizational processes.	

LIST OF FINAL PROJECTS (20 PROJECTS THAT COMPREHENSIVELY COVER ALL THE LEARNING OUTCOME)	
SL.NO	**FINAL PROJECT**
1	Predictive Maintenance for Manufacturing Equipment
2	Optimization of Production Line Efficiency
3	Energy Consumption Reduction in HVAC Systems
4	Fault Detection and Diagnosis in Rotating Machinery
5	Quality Control in Manufacturing with Computer Vision
6	Supply Chain Optimization with Data Analytics
7	Process Control in Chemical Engineering
8	Real-Time Monitoring of Structural Health in Civil Engineering
9	Intelligent Traffic Management System
10	Waste Management Optimization
11	Automated Welding Quality Analysis
12	Smart Fleet Management
13	Tool Wear Prediction in CNC Machines
14	Air Quality Monitoring and Analysis
15	Heat Exchanger Performance Optimization
16	Inventory Management for Spare Parts
17	Hydraulic System Fault Diagnosis
18	Additive Manufacturing Process Monitoring

19	Renewable Energy Generation Optimization
20	Water Treatment Plant Analytics

COURSE ASSESSMENT RUBRICS (TOTAL MARKS: 70)			
Category	**Assessment Criteria**	**Performance Levels**	**Weightage (Marks)**
Practical Skills Proficiency	Demonstrates ability to perform job-specific tasks effectively, using relevant tools, techniques, or methodologies (e.g., Tally for accounting, consignment tracking).	Fair, Good, Excellent	20
Technical Knowledge Application	Applies theoretical concepts to practical scenarios with accuracy and relevance (e.g., compliance with GST laws, financial planning, or logistics protocols).	Fair, Good, Excellent	10
Project Execution	Completes assigned projects or use cases demonstrating innovation, thoroughness, and skill application relevant to industry standards.	Fair, Good, Excellent	30
Communication and Reporting	Clearly presents findings, solutions, or project outcomes using professional communication and documentation standards (e.g., reports, presentations).	Fair, Good, Excellent	10