



# SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

Approved by AICTE, New Delhi, Affiliated to Anna University, Chennai

Accredited by NAAC-UGC with 'A++' Grade (Cycle III) &

Accredited by NBA (B.E - CSE, EEE, ECE, Mech & B.Tech.IT)

COIMBATORE-641 035, TAMIL NADU



## 19MEE404 - Product Life Cycle Management (PLM)

### UNIT 3: DIGITAL LIFE CYCLE

#### 1. Collaborative Product Development (CPD)

- **Definition:** CPD is the process where multiple teams, often spread across various geographic locations, collaborate on the development of a product. This approach integrates different expertise, perspectives, and tools to create a product that meets market demands efficiently and effectively.
- **Detailed Explanation:** CPD is crucial in today's global market, where companies often have design, engineering, manufacturing, and marketing teams located in different parts of the world. This collaborative approach leverages the strengths of diverse teams to accelerate product development, improve innovation, and reduce time-to-market. CPD platforms facilitate real-time communication, version control, and data sharing, ensuring all team members are aligned with the project's goals and updates.
- **Example:** A multinational automotive manufacturer, developing a new car model, has design teams in Europe, engineering teams in the United States, and manufacturing units in Asia. Through CPD, these teams can work together seamlessly, sharing CAD files, design modifications, and feedback in real time, thus speeding up the development process and ensuring that the final product meets global standards.

#### 2. Mapping Requirements to Specifications

- **Definition:** This process involves translating the customer's needs and expectations into detailed and precise product specifications. These specifications guide the design, development, and manufacturing processes to ensure that the final product aligns with customer requirements.
- **Detailed Explanation:** The mapping process begins with gathering and understanding the customer's needs. These are often broad and conceptual, so they need to be broken



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down into specific, measurable requirements that can be incorporated into the design and development process. Each requirement is mapped to a corresponding specification, which is then used to guide product development. This ensures that all customer needs are met, and any potential issues are identified early in the process.

- **Example:** A company developing a new smartphone receives feedback from customers indicating a need for longer battery life and better camera quality. These needs are translated into specifications such as “battery capacity of 4500mAh” and “camera resolution of 108MP,” which are then used to guide the design and selection of components.
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