

# **Course: Product Design and Development**

**Course Code:** noc20-me69

**Session:** 2020-21

**Duration:** 4 Weeks

**Assessment procedures:** Weekly Assignment (25%) + proctored certification Exam (75%)

## **Curriculum of the Course:**

Week 1: Introduction to course, Product life cycle, Product policy of an organization. Selection of a profitable product, Product design process, Product analysis.

Week 2: Value engineering in product design; Advantages, Applications in product design, Problem identification and selection, Analysis of functions, Anatomy of function. Primary versus secondary versus tertiary/unnecessary functions, Functional analysis: Functional Analysis System Technique (FAST), Case studies.

Week 3: Introduction to product design tools, QFD, Computer Aided Design, Robust design, DFX, DFM, DFA, Ergonomics in product design.

Week 4: DFMA guidelines, Product design for manual assembly, Design guidelines for metallic and non-metallic products to be manufactured by different processes such as casting, machining, injection molding etc., Rapid prototyping, needs, advantages, working principle of SLA, LOM and SLS

## **List of students enrolled**

<b>S. No.</b>	<b>Name of Student</b>
1	Anshul Sharma
2	ADITYA SINGH
3	Sarthak Agarwal
4	Abhishek Sharma