

Course: Product Design and Development

Course Code: noc19-me21

Session: 2018-19

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 nonmetallic 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

S. No.	Name
1	Harsh Vardhan Chhipa
2	Tushar Bansal
3	Md Imran
4	Maninder Singh