

CERTIFICATE PROGRAM

ADVANCED AUTOMOTIVE PRODUCT INTERIOR & EXTERIOR TRIMS DESIGN

PROGRAM OBJECTIVE

Define Technical Specification Feasibility, Benchmark, VAVE, Car Class A Surface Analysis, DFMEA, Part Design Methods for Plastic Product, Aspects and Principles those underlay for launch of Product Design for Manufacturing.

PREREQUISITE

Mechanical, Production or Automotive Engineering Graduate
<2 Year Experienced Professional
Basic working knowledge on any CAD & FEA Software Tool.
Basic Product Knowledge.

FEA LAB SESSIONS

Recorded Lab Sessions are provided based on learning methodology of Ansys FEA tool to analyse & support the Plastic Product Design for Verification and Validation of the product.

LEARNING OUTCOME

Understand how to interpret the Customer Specification, Design Standards & Methods, Principles involve to design an Interior or Exterior Product considering functional Specs, Selection of materials, mfg. feasibility, Law & Regulations

PROJECT LEARNING

During the Program, apart from theory classes, assignment are provided on how to design a plastic products using CAD & FEA software tool and analyse the product design performance, durability & specifications.

PROGRAM MODULE

100% online interactive session
Collaborative Skill-set gain with CAD & FEA practices.
Courses are in-line to actual Automotive Tier-1 /OEM Work Methodology.
Recorded lecture are provided for reference.

TRAINER PROFILE

M.Tech Automotive Engineering - BITS Pilani WILP.

25 Years experienced professional in Automotive Industry & Technical Trainer.

Injection Tooling, CAD/CAM, Automotive Product Design, Engineering, Design, Development and Validation.

CREDENTIAL

Recognition with **Certificate of Completion** will be facilitated at the end of the program. **Certificate of Internship Completion** are provided after successful completion of Internship Live Project.





AUTOMOTIVE TECHNICAL ANALYSIS

MODULE-1

1 WEEK SESSION

CONTENT:

- Technical Feasibility Analysis
- Product Benchmarking
- VAVE Process
- Fit & Finish Identity
- Concept Report Submission
- **Technical Report Project**

PLASTIC PRODUCT DESIGN

MODULE-2

1 WEEK SESSION

CONTENT:

- Packaging & Feasibility Analysis
- CAS Homologation Check
- Master Sectioning & 3D Design
- DFMEA & DVP Workshop
- DFA & DFM Methods
- **Product Design Project**

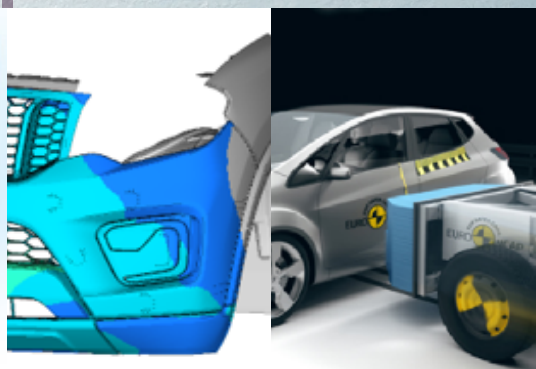
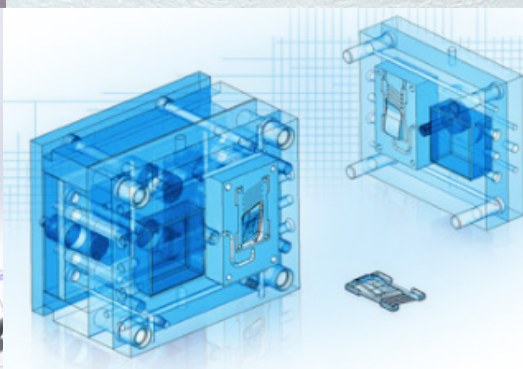
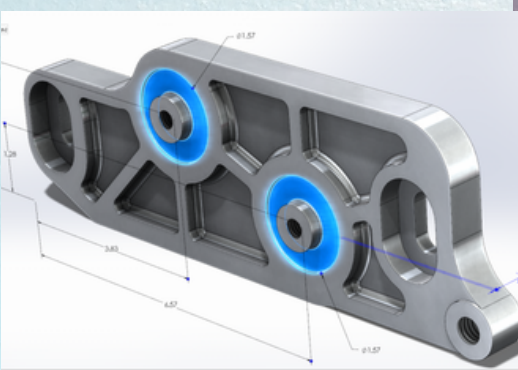
MATERIAL ENGINEERING

MODULE-3

2 DAYS SESSION

CONTENT:

- Automotive Materials & its Product Applications.
- Technical Data Sheet Interpret
- Plastic Material Properties
- Material Validation Analysis
- **Project on Material Selection**



DIMENSIONAL MANAGEMENT

MODULE-4

2 DAYS SESSION

CONTENT:

- GD&T Concepts
- GD&T on Product Design
- Product Qualification
- Stack-up Analysis Method
- Product Gap & Flush Study
- **Stack-up Analysis Project**

TOOL & CHECKING GAUGE ENGINEERING

MODULE-5

1 WEEK SESSION

CONTENT:

- Tool Design Concept
- MoldFlow Report Analysis
- Tool Graining Analysis
- Checking Gauge Design
- **Mini CG Design Project**
- **Mini Tool Design Project**

FEA ANALYSIS & REGULATIONS

MODULE-6

2 DAYS SESSION

CONTENT:

- FEA Lab Practise Session
- Basics Automotive Regulation
- Vehicle Test Regulations
- Mandatory Test Regulation
- EV Crash & Safety Aspects
- **FEA Analysis Project**

Duration: 4 Weeks / Daily 1.5 Hours Online & Classroom Interactive Training + Project / Internship

Project: Post completion of the course, an **Industrial oriented project** on **Body Trims Design** or **Structural Design in Composites** / **Pedestrian Safety Module Design** will be provided to gain Domain Expertise & Skill-set.