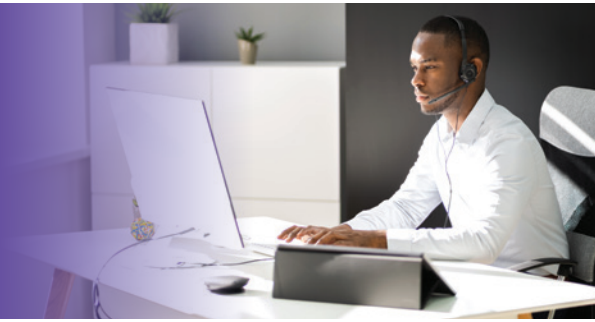# CATIA V5 Training
Composites Part Design

Course Length: 5 days

In this course, the students will learn how to design and prepare for manufacturing laminated composite parts for aerospace, automotive, and other industries. The course is divided into two sections: engineering design, and manufacturing detailed design.

Course Topics:

Composite Part Engineering
- Composite materials catalog
- Laminate definition (including laminate materials, directions, and importing laminates)
- Zone-based design (including creating constant thickness and transition zones, imposed thickness points, and checking zone connections)
- IML from zones (including solid and top surface from zones, and laminate analysis from zones)
- Automatic ply generation and control (including ply creation from zones, ply creation by slicing a solid, ply reordering, and ply staggering in transition zones)
- Manual ply creation (including manually creating ply groups, plies, and cores)
- Ply analysis and mock-up tools (including ply exploder, 3D section, core sample, mass and cost analysis, and checking ply contours for intersections and overlaps)
- IML from plies (including solid and top surface creation from ply stacking)
- Producibility analysis (including ply draping simulation, fiber deviation analysis, and ply splicing)
- Engineering documentation (including ply 3D annotations and drawings)
- DMU composites review (reviewing the composites design on assemblies)

Composite Part Manufacturing
- Manufacturing data structure (including OML surface swapping and synchronization with engineering data)
- Modifying ply stacking (including adding plies and cores manually, re-limiting existing plies, adding material excess for trimming, and ply mirroring)
- Ply information and analysis (including on-the-fly composites information and numerical analysis)
- Ply splicing (including 3D and 2D multi-splicing, butt-splice and no-splice zones)
- Producibility and flattening (including ply draping and flattening simulation, flat pattern optimization, and geometry transfer between 3D and flat pattern)
- Manufacturing documentation (including ply book, and ply and flat pattern export)

Prerequisites: CATIA V5 Introduction to Modeling, CATIA V5 Introduction to Surface Design
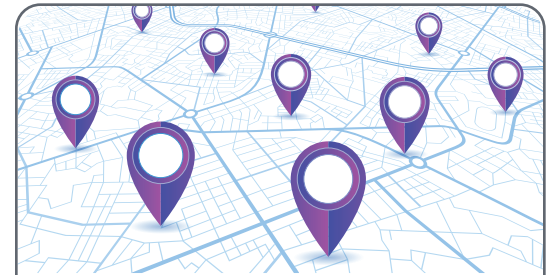
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- At your on-site training facility
- At a location of your choice (via our mobile training labs)

Contact us:
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877.726.3243

This curriculum is developed by Dassault Systèmes.