



Area of expertise: Composites

Academic studies: Aerospace  
Engineering



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**DYNAmore**

## Continuous Fibre Reinforced Composites

### Course Objective

Increasing requirements on resistance and durability in conjunction with weight reduction have advanced the development of composite materials very strongly within the last decades. It is increasingly important to know how to capture the complex behaviour of composite materials. This course covers:

- › Introduction to composite materials
- › Laminate theory
- › Structure modelling and model assumptions
- › Material modelling
- › Modelling of delamination
- › General effects by means of examples
- › Visualisation of simulation results

This course gives an overview on potential modelling techniques of this subgroup of composites. The strong anisotropy of these composite structure leads to a complex mechanical behaviour, which has to be captured in the simulation. Therefore, the available material models in LS-DYNA are introduced and discussed in-depth. Furthermore, different possibilities to model the phenomena of delamination are shown. The applicability and limits are demonstrated by means of small numerical examples.

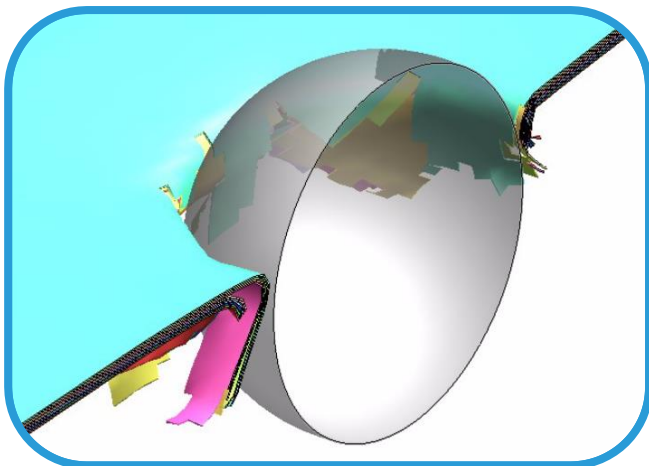
#### For who?

For engineers/designers who are looking at the design and manufacture of components using reinforced composite materials.

#### Extra details:

This course is provided by DYNAmore.

PRICE: £ 800 + VAT



**Location:** The Arup Campus, Blythe Gate, Blythe Valley Park, Birmingham, Solihull B90 8AE