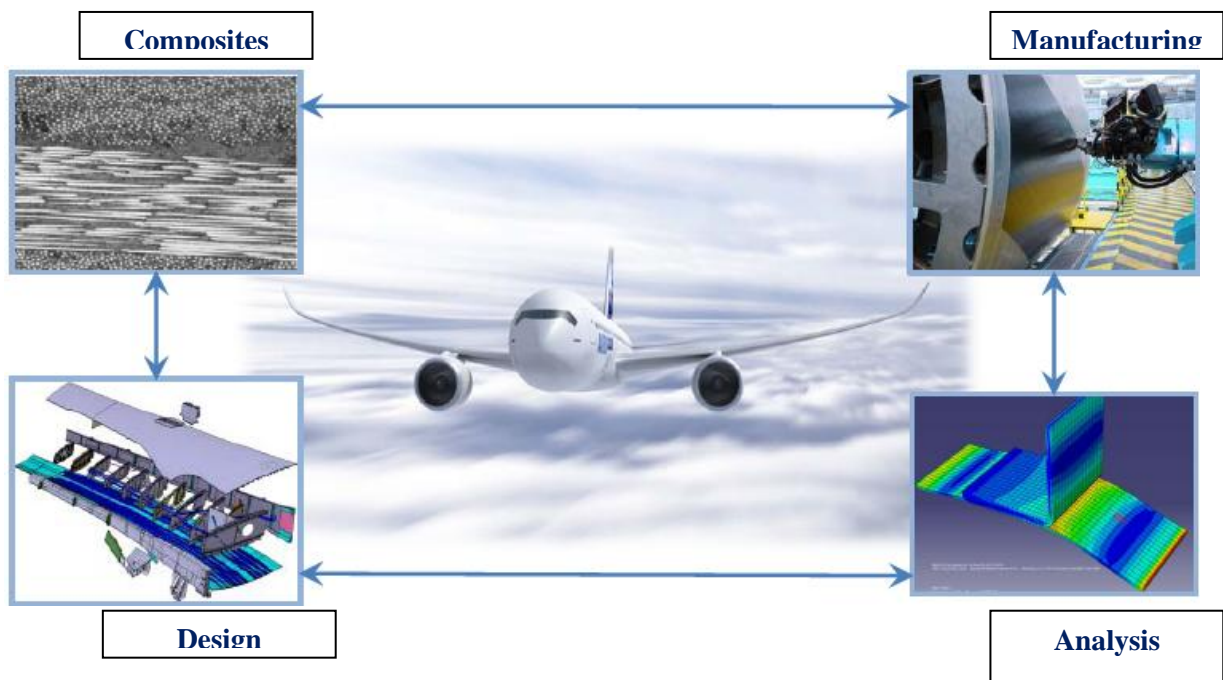


Master in COMPOSITES 6th Edition. 2015-2016

AIRBUS GROUP



Designed to Postgraduate to complement a previous university training, and to enable to the student in the practical aspects of the design, development and industrialisation of structures in composite materials



This Masters mainly is oriented to composite materials for the aerospace industry, although its content is equally applicable to other sectors of the high technology: naval industry, wind energy, railway transport high speed.

Who is the master for?

The Master focuses on the aerospace industry although the contents and processes are also applicable to other high tech industrial sectors.

Due to the growing importance of the wind energy industry, this years' edition offers a specific module on wind turbine blades

The course is oriented to graduates in engineering, materials science, physics or chemistry.

*Teaching Staff

Since the 80's, employees of different Airbus Group business units located near Madrid have accumulated a vast amount of practical experience in Composites and their expertise is internationally recognized

Teaching staff with an average of 15 years of experience on design, analysis and manufacturing of composite aircraft structures (e.g. A320, EFA, A380, A350, A400, etc):

- Experts from University
- Airbus Group business units
- GAMESA
- IMDEA Materials Institute
- Other aerospace industries

***Master's Structure**

- The Master may be completed in 1 or 2 years
- The Master is organized in Modules that last from 2 to 4 weeks
- Each Module is divided into several lectures taught intensively Monday thru Thursday in the afternoon (17:00 to 21:00)
- Lectures will be given mostly in English
- Handouts and other course materials are written in English
- Registration for independent modules is only accepted under special circumstances

***Group discussion and evaluations**

One of our main concerns is to promote the active participation of the students, not only for them to collect information

After each module is finished, a practical exercise is proposed to the students, which has to be solved individually or in groups and then discussed in the classroom

This approach requires the students to revise their notes, think about, get involved and to learn how to face real problems. More than 10% of the time is allocated to this activity

***Master Thesis**

To be done after the lectures completion.

Agreements have been reached with EADS and other industries and research centres, to do the Thesis at their facilities. Acceptance is done by the industry on a case by case basis.

***Modules**

Modules are taught sequentially, the exact dates can be found at our website:

- Constituents materials: Fibre, matrices, prepregs, cores
 - Manufacture of Polymer Matrix Composites
 - Design of Composite structures
 - Analysis of Composites structures
 - Simulation techniques and Virtual testing
 - Health and environment issues. Green composites
 - Certification of composite aerostructures
 - In-service behaviour
 - Production management. Lean manufacturing
 - Project management
 - Smart Composites
 - Non conventional composites CMC, MMC
-

- Nanocomposites
- Concurrent engineering
- Special considerations for Composites in Space applications
- Design and manufacturing of Wind Turbine blades

***Fees**

Total fees for the Master are 9.900 €

Internship time at Airbus: 7h/day

Grant: 875€/month

***Entry requirements**

Candidates must have by October 2015:

- A degree in engineering, technical engineering, chemistry or physics
- High level of English
- French and/or German will be taken into consideration

Information:

Noelia.perez-juana@airbus.com

www.aero.upm.es/departamentos/mmtc
