



Faculté des sciences appliquées

FSA

MAPR2671 Reinforced Composites Materials

[22.5h] 2 credits

This two-yearly course is taught in 2005-2006, 2007-2008,...

This course is taught in the 2nd semester

Teacher(s): Roger Legras, Ignace Verpoest
Language: french
Level: 2nd cycle course

Aims

The course is restricted to fibre reinforced composites, and specially to high mechanical resistant fibres systems used in advanced technologies. A global view of this domain will be given through the survey of different kinds of materials such as metals, ceramics, organic polymers.

Main themes

1. Mechanical properties: the phenomenon of stress transfer from the reinforcing agent to the matrix will be detailed. An example such as complex sandwiches structures will be examined.
2. The main reinforcing agents will be presented and a special focus will be made on the carbon fibres.
3. The role of the interfacial regions between fibre and matrix will be described using examples well chosen.
4. Different types of composites with organic thermoplastics or thermosets will be presented.