








MSE-401: Composite materials

Cross Sectional Shapes of Fibres

	Shape	Examples
Circular:		Glass, Carbon, Organic fibres, Alumina, Silicon Carbide
Elliptical:		Alumina, Mullite
Triangular:		Silk, Silicon Carbide whiskers

Cross Sectional Shapes of Fibres

	Shape	Examples
Hexagonal:		Sapphire (Al_2O_3) whiskers
Rounded Triangular:		Sapphire (Al_2O_3) single crystal fibre
Kidney bean:		Carbon
Trilobal:		Carbon, Rayon

Different cross-sectional shapes of fibres

Types of Fibrous Composites

Fibre and Matrix Systems:

I. Notation: fibre/matrix for examples:

1. carbon/epoxy,
2. glass/epoxy,
3. Kevlar/epoxy

II. proportion of contents must be mentioned (volume fraction) Examples:

1. AS4/PEEK,
 2. T300/5208
 3. T700/M21
 4. IM8/Epoxy
 5. Kevlar/Epoxy
 6. Boron/Al
 7. SCS-6/Ti-15-3
 8. S2 Glass/Epoxy
- Carbon Composites**