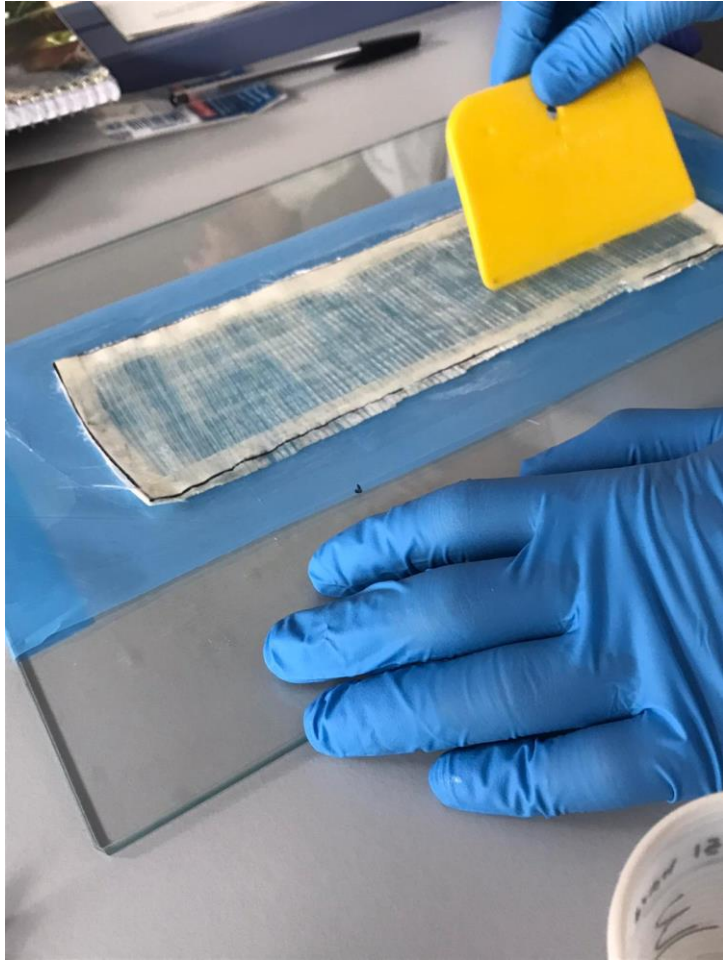


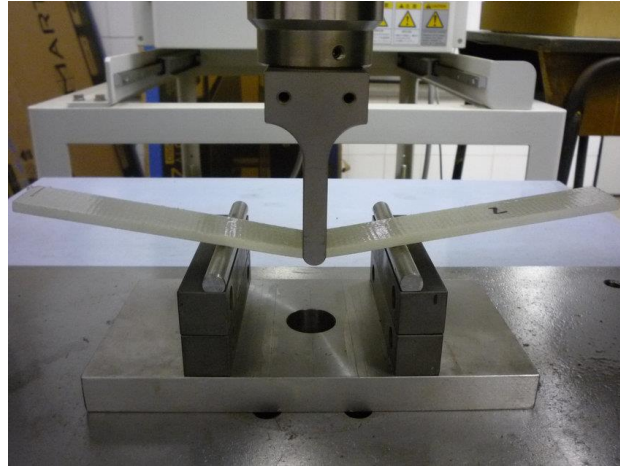
Lab activities in Materials for Advanced Manufacturing I (15h)

Activities/Experiences	Instrument	Student action
Thermal properties of matrix and curing process optimization	DSC	Evaluation of the DSC curves obtained, as a function of time, on the resin formulation that will be used in the lab to define the optimized curing process and the conversion degree
Preparation by hand lamination and vacuum bag impregnation of composites with glass and carbon fibers	Vacuum bag	Preparation of composite laminates by hand lamination or vacuum bag impregnation of glass and carbon fibers, unidirectional and 0/90, with epoxy system.
Flexural properties of the obtained samples		Acquisition of the flexural curves and determination, following the specific ASTM rule, of the main mechanical properties as a function of fiber typology, fiber orientation and composite preparation technology.
Microstructure of composites	Optical Microscopy	Polishing of the sample and evaluation of the microstructure by optical microscopy. Determination by image analysis of porosity and layer thickness

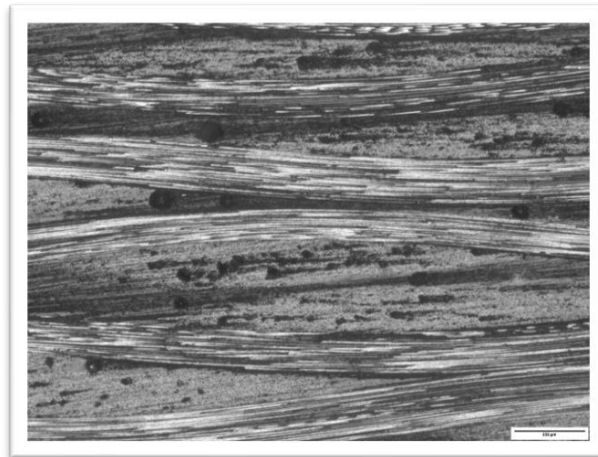
Images from the lab



Composite preparation by hand lamination



Flexural strength determination



OM image of a 0/90 composite sample

