1a. Aptly choosing advanced materials that can suit product or process needs

Functional Area: Op&Log / R&D

Assessment criteria	Knowledge
LO1a.1. Selects the material to be used in a mechatronic system, linking the technical and commercial characteristics with the product specifications to be obtained. • Prepare list of appropriate materials by interpreting detail drawings and determine correct quantities of such materials • Read and analyse the specifications to ascertain the material requirement, relevant tools, and machining /assembly /maintenance parameters	• Knowledge of laws of strength, deformation, kinematics, dynamics, plastic/inelastic deformation • Be familiar with the principles of QA in mechatronics • Be capable to perform as member of a team in collecting and interpreting experimental data • Be familiar with concept of basic science (e.g. Material science, mass, weight, density, speed, velocity, pressure, heat treatments, friction, etc)
	Skills
	• Capability to properly read and understand technical specifications and material description • Identify type of materials and components for machining/assembling or storing in appropriate environment • Identify and propose adequate types of material for product/process • Identify appropriate machining procedures • Identify relevant parameters (eg temperature, humidity, RPM, clean room level...) • Machine/construct components on the basis of relevant specification
	Transferable skills
	• Capability to communicate in English in a interdisciplinary / international team, in virtual and real modality • Understand descriptions, specifications, technical data and other info typical of the profession in English and prepare them for next phase of project/Customer in understandable manner

	- Be capable to interface/report with the R&D/Engineering/Maintenance departments in a logical and coherent manner