

5.0 credits	30.0 h + 30.0 h	1q
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Teacher(s) :	Debongnie Jean-François ; de Meester de Betzenbroeck Bruno ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	Basic principles of manufacturing by casting, sintering welding and cutting. Basic principles of computer aided manufacturing.
Aims :	To give a good understanding of the issues and challenges in manufacturing by casting, sintering, welding and cutting. Training students to the design and use of computer aided manufacturing. <i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i>
Content :	Complements of Mechanical Manufacturing - Casting : principles, casting sequence, mould design, main casting processes. - Sintering : powder production, powder conditioning, compaction, sintering, finishing. - Welding and adhesive bonding : definition, welded and adhesive bonded joints, main welding processes. - Cutting : classification of the processes. Computer Aided Design - General concepts of machine-tool numerical control. - ISO programming. - Machining with the non conventional processes. Electrical discharge machining. - Manufacturing dimension and tolerances, process simulation. Oral teaching and projects on the computer, one of those leading to manufacture a real workpiece.
Other infos :	- Prerequisite : MECA 1451 "Mechanical Manufacturing". - Evaluation : oral exam and practice reports.
Cycle and year of study :	> Master [120] in Mechanical Engineering > Master [120] in Electro-mechanical Engineering
Faculty or entity in charge:	MECA