

5.0 credits	45.0 h + 15.0 h	2q
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Teacher(s) :	de Meester de Betzenbroeck Bruno ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	<ul style="list-style-type: none"> - Elements of weldability. - Thermal transfer during welding. - Metallurgy of the fused zone. - Thermo-mechanical effects in the heat affected zones. - Cracking problems.
Aims :	Explain the phenomena controlling the weldability of materials from the basic laws and principles of physics and metallurgy. <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 :	<ul style="list-style-type: none"> - Definition of weldability. - The different zones in a welded joint. - The influence of the heat input. - The fused zone. - The metallurgical solid-state transformations in the welded joints. - Microstructural and properties evolutions in the transverse section of weldments in different types of alloys. - Thermal transfer during welding.
Other infos :	Recommended lectures : <ul style="list-style-type: none"> - S. Kou, Welding metallurgy, J. Wiley & Sons, 1987. - J. F. Lancaster, Metallurgy of welding, George Allen & Unwin, 3rd ed., 1980.
Cycle and year of study :	> Master [120] in Mechanical Engineering
Faculty or entity in charge:	MECA