









5.00 credits

30.0 h + 30.0 h

Q2

Teacher(s)	Bronchart Nicolas ;
Language :	English
Place of the course	Louvain-la-Neuve
Main themes	<ul style="list-style-type: none"> • Quality: definition & history • Where is Quality within an organization? How is Quality Strategy included in Global Strategy? • Quality Management & Quality Management Systems (QMS): principles, evolution and quality improvements methods • Extensions of Quality Management: Environment, Safety, CSR, Organizations,...
Learning outcomes	<p>At the end of this learning unit, the student is able to :</p> <p>With respect to the reference AA of the programme of studies "Masters degree in Mechanical Engineering", this course contributes to the development and acquisition of the following skills:</p> <ul style="list-style-type: none"> • AA2.3, AA2.5 • AA4.1, AA4.3, AA4.4 • AA5.1, AA5.3, AA5.6 • AA6.1, AA6.2 <p>1 Specific learning outcomes of the course:</p> <p>At the end of the course, the student will be able to</p> <ul style="list-style-type: none"> • Define what is Quality, how it impacts an organization (through products, processes, people), including historical and cultural aspects; • Illustrate the links between Quality Management and Strategy, including aspects such as HR Management, R&D Strategy, Investments' Strategy or in general Leadership aspects; • Choose a Quality Improvement tool and apply it to a specific situation • Define a long term Quality Management Strategy, and implement it through an enterprise simulation.
Evaluation methods	<p>The final grade will be based on:</p> <ul style="list-style-type: none"> • The participation to the enterprise simulation (50%) including the final group presentation and/or final group report – this portion will be noted as a group. • An examination (50%) – the examination will be either oral or written, depending on the number of students and general organization of the class. <p>• There is also the possibility to replace part of this final grade with a personal work on a given subject (book, theme,...) This possibility will be discussed on a case-by-case basis for specific situations.</p>
Teaching methods	<p>The course is based on lectures, illustrated by case studies and examples. Speakers from different companies will be invited to illustrate some topics as well as give views from varied and different backgrounds and industries (pharma, medical devices, automotive, services, food,...)</p> <p>During the exercise periods, students will get the opportunity to practice the concepts presented. They will participate in a business simulation game that will allow them to play the role of managers / leaders, as a management team.</p>
Content	<ol style="list-style-type: none"> 1. Quality: definition and historical perspectives. How did we reach the current situation, and where could we go next? Examples to show the impact of Quality Management going poorly or making a difference. 2. How is Quality integrated in a global company and a company strategy. How does it impact competitiveness, and the critical importance of the holistic view when taking strategic decisions. Roles & Responsibilities of Quality Control (QC), Quality Assurance (QA), Regulatory Affairs (RA), Release, and Continuous Improvements. 3. Quality Management, Ethics & Corporate (Social) Responsibility. How is leadership critical in moving companies in the right direction, through shaping a Quality Culture, or driving towards Customer Satisfaction. 4. Continuous Improvement: tools and techniques through history and applications. 5. Extending outside of Quality: Safety Management, Environmental Management, New Types of Organizations to support Company development,...
Inline resources	https://moodleucl.uclouvain.be/course/view.php?id=8305

Bibliography	<ul style="list-style-type: none">• « The Goal : A Process of Ongoing Improvement », E. M. Goldratt, 2014 (or previous editions)• « Processus et Entreprise 2.0 - Innover par la collaboration et le Lean management », Yves Caseau, 2011• «Quality Management for organizational excellence: introduction to total quality », David Goetsch & Stanley Davis, 2012
Faculty or entity in charge	MECA

Programmes containing this learning unit (UE)				
Program title	Acronym	Credits	Prerequisite	Learning outcomes
Master [120] in Mechanical Engineering	MECA2M	5		
Master [120] in Agricultural Bioengineering	BIRA2M	5		
Master [120] in Electro-mechanical Engineering	ELME2M	5		
Master [120] in Statistics: Biostatistics	BSTA2M	5		
Master [120] in Biomedical Engineering	GBIO2M	5		
Master [120] in Chemistry and Bioindustries	BIRC2M	5		
Master [120] in Mathematical Engineering	MAP2M	5		
Master [120] in Chemical and Materials Engineering [Version 2020]	KIMA2M	5		
Master [120] in Physical Engineering [Version 2020]	FYAP2M	5		