

3.0 credits	30.0 h	2q
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Teacher(s) :	Dochain Denis ; Dutrieux Alexis ;
Language :	Français
Place of the course	Louvain-la-Neuve
Inline resources:	<a href="http://icampus.uclouvain.be/claroline/course/index.php?cid=MECA2645">http://icampus.uclouvain.be/claroline/course/index.php?cid=MECA2645</a>
Main themes :	The course describes the nature of the major industrial hazards, introduces the physico-chemical modelling of the source term, the modelling of the dispersion of effluents, the design of safeguard systems, and the existence of the human factor. Moreover, it describes the context in which the engineer operates (economic, social and legal constraints), and introduces the safety culture and the quality culture.
Aims :	The course is aimed at increasing the students' awareness of the engineer responsibility in the design and operation of hazardous plants. <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 :	Lectures aimed at developing a global approach of the studied problems. External speakers are regularly invited. The list of topics hereunder is given as an example: Elements of risk analysis. Hazards of the process industries: reference accidents. Hazards of the electro-nuclear industry; introduction to the biological effects of radiation; reference accidents. Dispersion models Elements of risk management. The human factor. The biological risk. Runaway reactions.
Cycle and year of study :	<ul style="list-style-type: none"> <li>&gt; <a href="#">Master [120] in Environmental Science and Management</a></li> <li>&gt; <a href="#">Master [120] in Civil Engineering</a></li> <li>&gt; <a href="#">Master [120] in Computer Science and Engineering</a></li> <li>&gt; <a href="#">Master [120] in Mathematical Engineering</a></li> <li>&gt; <a href="#">Master [120] in Mechanical Engineering</a></li> <li>&gt; <a href="#">Master [120] in Computer Science</a></li> <li>&gt; <a href="#">Master [120] in Electrical Engineering</a></li> <li>&gt; <a href="#">Master [120] in Biomedical Engineering</a></li> <li>&gt; <a href="#">Certificat universitaire de contrôle physique en radioprotection (Classe I)</a></li> <li>&gt; <a href="#">Master [120] in Chemical and Materials Engineering</a></li> <li>&gt; <a href="#">Master [120] in Electro-mechanical Engineering</a></li> </ul>
Faculty or entity in charge:	MECA