

5.0 credits	30.0 h	2q
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Teacher(s) :	Descampe Antonin ;
Language :	Français
Place of the course	Louvain-la-Neuve
Main themes :	<p>Topics covered during the course are:</p> <ul style="list-style-type: none"> <li>--</li> <li>Current emerging technical devices, and historical perspective.</li> <li>--</li> <li>Understanding of key underlying technologies.</li> <li>--</li> <li>Terms of invention and innovation for the emergence of these devices.</li> <li>--</li> <li>Possible ways of appropriation and potential impact in terms of communication, mobility, work, health, ethics and community life.</li> </ul>
Aims :	<p>After the course, students should have:</p> <ul style="list-style-type: none"> <li>--</li> <li>Knowledge on emerging technology devices and basic understanding of the underlying technologies.</li> <li>--</li> <li>Knowledge on the conditions for the appearance of these devices and their societal consequences.</li> <li>--</li> <li>Ability to use such knowledge for the understanding and critical analysis of new devices.</li> </ul> <p><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></p>
Evaluation methods :	<ul style="list-style-type: none"> <li>--</li> <li>Oral evaluation on transmitted knowledge: underlying technologies of emerging devices, conditions of appearance, societal impact.</li> <li>--</li> <li>Evaluation of the research and analytical work carried out by the student on a chosen emerging device. This work will be presented and discussed during the course.</li> </ul>
Teaching methods :	<ul style="list-style-type: none"> <li>--</li> <li>Lectures by the teacher and by stakeholders directly involved in the analysis, design and / or marketing of emerging devices.</li> <li>--</li> <li>Analysis by the student of a specific device, according to a list of criteria provided by the teacher, and group discussion and presentation of the analysis outcomes.</li> </ul>
Content :	<p>The course is structured as a series of emerging technical devices studies (see partial list below). First, the keys to understand underlying technologies will be presented, including:</p> <ul style="list-style-type: none"> <li>--</li> <li>Basic operation of networks, Internet.</li> <li>--</li> <li>Digitalization, storage and dissemination of information, in particular images and videos.</li> <li>--</li> <li>Data mining and Big Data management</li> <li>--</li> <li>Communication encryption.</li> <li>--</li> <li>Basic principles of artificial intelligence.</li> </ul> <p>Secondly, a series of emerging devices making use of these technologies will be studied. The course will highlight, from these specific cases, the conditions for the emergence of such devices as well as a critical analysis of the potential impact of these devices on our way of life. Marginally, the course will study one or two cases of extinction of stillborn devices.</p> <p>Examples of emerging devices:</p> <ul style="list-style-type: none"> <li>--</li> <li>Assistance systems and automation of driving vehicles</li> <li>--</li> <li>Biometrics, body activity monitoring, and real-time capture of facial expressions, eye movements and gestures</li> <li>--</li> <li>Assistive devices for composition, creation, staging and execution of artistic and technical works</li> <li>--</li> <li>Perception assistance</li> <li>--</li> </ul>

	<p>Smart clothes                  --                  Assisted interfaces for users with sensory, cognitive or motor limitations                  --                  Internet of Things                  --                  Virtual or augmented reality                  --                  Social Robotics</p>
Other infos :	<p>Technological complement to the course "Digital Media and Education", centered on educational process rather than on the study of actual devices.</p>
Faculty or entity in charge:	<p>COMU</p>

<b>Programmes / formations proposant cette unité d'enseignement (UE)</b>				
Intitulé du programme	Sigle	Credits	Prerequis	Acquis d'apprentissage
Master [120] in Information and Communication Science and Technology	STIC2M	5	-	