

**Course Syllabus for
Industry 4.0 PhD
(XXXVII Cycle)**

Course title	Flexible and Stretchable Electronics
Scientific Discipline Sector	ING-INF/01
CFU (Hours)	2 (20)
Objective	<p>Flexible and stretchable electronics is fostering a paradigm shift in many application domains, enabling new mass-market products including wearable devices for e-health and fitness, smart systems for individualised human-machine interaction, and e-textiles. The scope of this course is to provide the participants with a general understanding of the interdisciplinary field of flexible and stretchable electronics.</p> <p>The course illustrates flexible/stretchable electronics through several examples and practical hands-on lab activates.</p> <p>No prerequisites are required.</p>
Syllabus	<p>General introduction to flexible/stretchable electronics</p> <p>Microcontroller-based electronic systems</p> <p>Flexible sensors and actuators</p> <p>Lab-on-skin technology</p> <p>Flexible and stretchable devices for human-machine interfaces</p> <p>Electronic Textiles</p>
Examination method	Oral Exam