

Course Syllabus for Industry 4.0 PhD (years 2023-24)

Course title	Physical Layer Security for wireless communication
Scientific Discipline Sector	ING-INF/02
Hours of instruction	20
CFU	2
Semester	Second semester
Goal	<p>The course will address different security techniques based on the physical layer, which are suitable to improve data security in wireless networks and in IoT (Internet of Things) applications. The course participants will achieve knowledge of Physical Layer Security techniques.</p> <p>The course will consist in theoretical lectures and numerical hands-on examples.</p>
Syllabus	<ul style="list-style-type: none"> - Introduction to Physical Layer Security (PLS) and applications - Secrecy notions - Secure array synthesis, beam forming and beam steering - Electromagnetic propagation models in indoor and outdoor environments - PLS keyless approaches - PLS key-based approaches
Bibliography	Scientific papers, slides and support material from lecturer.
Examination method	Final examination in class