Abstract Lecture 3:
Learning, Living and Working with Industrial Systems-of-Cyber-Physical System
(Training and Education Requirements)

After presenting the scientific and technical background behind Industrial Systems-of-Cyber-
Physical Systems (ICPS), their relationship to other frameworks like Systems-of-Systems
Engineering, Industry 4.0, Industrial Internet-of-Things (IIoT), and associated technology
standardization/normalization initiatives (such as e.g. RAMI4.0 and SGAM), this lecture offers an
overview of major requirements to educating, teaching, training people (workers with or without
decision-making responsibilities in an Industry 4.0 system, as well as students, technicians and
engineers) for learning, living and working with Systems-of-ICPS in a digitalized eco-system. The
audience/participants of the lecture will get a deep view about

➢ Which is the minimal necessary pre-existing Know-How for trainees, students and
teachers/lecturers in order to educate for learning, living and work (engineering, operating,
interacting with ISoCPS?
➢ What and How to learn ISoCPS? (Recommendations for graduated and post-graduate
students, as well as for industrialists)
➢ What and How to educate and teach ISoCPS? (Recommendations for trainees, educators,
teachers, etc.). Lessons learned from own experience educating ICPS at Master Degree
level.
➢ Which should be the essential and unavoidable body of knowledge for building an
educational curriculum for learning ISoCPS (presentation and discussion of an exemplary
curriculum for achieving a Master of Sciences in Industrial Informatics with Specialization
in Industrial Cyber-Physical Systems)?