

Module Description, available in: EN

Industrial Control

General Information**Number of ECTS Credits**

3

Module code

TSM_IndContr

Valid for academic year

2020-21

Last modification

2018-11-06

Coordinator of the module

Emanuele Carpanzano (SUPSI, emanuele.carpanzano@supsi.ch)

Explanations regarding the language definitions for each location:

- Instruction is given in the language defined below for each location/each time the module is held.
- Documentation is available in the languages defined below. Where documents are in several languages, the percentage distribution is shown (100% = all the documentation).
- The examination is available 100% in the languages shown for each location/each time it is held.

	Lausanne			Lugano	Zurich		
Instruction				X E 100%			
Documentation				X E 100%			
Examination				X E 100%			

Module Category

TSM Technical scientific module

Lessons

2 lecture periods and 1 tutorial period per week

Entry level competences**Prerequisites, previous knowledge**

n/a

Brief course description of module objectives and content

The Machine and Production Operations Control is the core of the module, with focus in PLC and CNC applied to manufacturing and practical laboratory and industrial experiences in logic and numerical control for manufacturing.

Aims, content, methods

Learning objectives and acquired competencies

- to understand tasks and generic architecture of a machine and production operations control system
- to learn which are the functions of a generic PLC and CNC necessary for manufacturing
- to learn configuring and programming PLC and CNC systems through standard languages
- to develop practical exercises on industrial PLC and CNC targets

Contents of module with emphasis on teaching content

The PLC and CNC places and roles in the production chain. The generic architecture of a PLC and a CNC. Configuration and programming of PLC and CNC systems. Examples and simulated part programming and logic control exercises

Teaching and learning methods

Frontal theoretical lessons.

Literature

Assessment

Certification requirements

Module does not use certification requirements

Basic principle for exams

As a rule, all the standard final exams for modules and also all resit exams are to be in written form

Standard final exam for a module and written resit exam

Kind of exam

written

Duration of exam

120 minutes

Permissible aids

No aids permitted

Special case: Resit exam as oral exam

Kind of exam

oral

Duration of exam

30 minutes

Permissible aids

No aids permitted