Module Description

Industrial Control

General Information

Number of ECTS Credits

3

Abbreviation

TSM_IndContr

Version

2016.03.17

Responsible of module

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Language

	Lausanne	Bern	Zürich	Lugano/Manno
Instruction	☐ E ☐ F	☐ D ☐ E ☐ F	☐ D ☐ E	☒ E
Documentation	☐ E ☐ F	☐ D ☐ E ☐ F	☐ D ☐ E	☒ E
Examination	☐ E ☐ F	☐ D ☐ E ☐ F	☐ D ☐ E	☒ E

Module category

☐ Fundamental theoretical principles

☒ Technical/scientific specialization module

☐ Context module

Lessons

☒ 2 lecture periods and 1 tutorial period per week

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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.

Prerequisites, previous knowledge, entrance competencies

n/a

Literature

Assessment

Certification requirements for final examinations (conditions for attestation)

Written module examination

Duration of exam :	120 minutes
Permissible aids:	none