GENERAL INFORMATION					
Course name	SP3. Vertical Integration in Production				
Semester	2	Character	Compulsory	Type of module	Spec.
ECTS	5		Modality	Blended	
Higher Education Institution(s)			FH Joanneum		
Lecturer(s)			Sergi Batalla		

LEARNING AND TEACHING	
ESCO Occupation(s)	Manufacturing engineer CTO
ESCO Skill & Competences (*no ESCO)	Understand Industry 4.0 Vertical Integration* Assure efficiency through the Automation Pyramid* Apply Information Systems relevant for the Digital Transformation* Improve analytical value via Business Intelligence solutions* Understand the impact of Process Mining within vertical integration*
Learning outcomes (Please refer to Appendix 4 for the interpretation of the acronym)	KU2, EP1, EP6, IN1
Teaching methods	Lectures. Workshops.
Assessment methods	Examinations. Short online quizzes Case studies Lab experiments
Previous requirements (if necessary)	
None	
Content index	

Industry 4.0 & Information Management:

- Information Management / Information Systems / IT
- Automation Pyramid
- Data Analytics types

Transactional Systems:

- Manufacturing Execution Systems (MES)
- Enterprise Resource Planning (ERP)
- AI in Transactional systems

Business Intelligence

- Operational Reporting
- Descriptive Analytics
- Diagnostic Analytics
- ESG strategy & Information Systems
- AI in Business Intelligence

Process Mining

- Streamline Business Processes via objective, fact-based insights, derived from actual data.
- Business process inefficiencies: discovering, monitoring, and improving.

SUPPORTING BIBLIOGRAPHIC REFERENCES

Script (Theoretical part)
No previous literature is required.

SOFTWARE

SAP S4/HANA (ERP)
SAP Analytics Cloud (BI)
Celonis (Process Mining)