

Module title Process Mining Fundamental				
Module code Tba.	Level Bachelor (B.Sc.)	Hours per week 3	ECTS credits 5	Duration 14 weeks
Module instructor Prof. Paolo Ceravolo Computer Science Department, Università degli Studi di Milano, Italy		Lecture type Lectures (onsite and virtual)	Prerequisite(s) Basic notions of Python are propaedeutic to the activities proposed in class.	Grading Assignment
Content				
<ul style="list-style-type: none"> • Introduction <ul style="list-style-type: none"> ○ Information Systems in Organizations ○ Development Lifecycle ○ Knowledge Uplift Model • Process Analytics <ul style="list-style-type: none"> ○ Performance Measures ○ Time Series Analysis ○ Frequent Pattern Mining • Process Mining <ul style="list-style-type: none"> ○ Event Logs ○ Data Preparation ○ Variant Analysis ○ Process Discovery ○ Conformance Checking ○ Performance Analytics • Conclusions <ul style="list-style-type: none"> ○ Knowledge Uplift in Process Mining ○ Advanced Process Mining Techniques 				
Upon the end of the module the students will have attained the following subject-matter competencies...				
<ul style="list-style-type: none"> • Understand some of the key issues in IS management. • Understand the fundamental Process Mining techniques. • Knowledge of several case studies in PM development and use. • Knowledge of the most relevant software libraries in PM. • A critical understanding of process analytics methods that can be applied to IS management. 				
Upon the end of the module the students will have attained the following personal and social competencies...				
<ul style="list-style-type: none"> • Read, write, and present in an academic environment in English language. • Interactively discuss subject-matter topics with other students and reflect their viewpoints letting emerging the pro and cons of different perspectives. • Organize themselves independently. • Create work results with certain boundary conditions set for a given due date. 				
Textbook/teaching material				
<ul style="list-style-type: none"> • Fundamentals of business intelligence di Grossmann, Wilfried; Rinderle-Ma, Stefanie Springer 2015 • Process mining: discovery, conformance, and enhancement of business processes di Aalst, Wil M. P.: van der 				

Springer 2011

- [PM4Py - Process Mining for Python](https://pm4py.fit.fraunhofer.de)
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Note: this is not the official course descriptor according to the "Studien- und Prüfungsordnung" (SPO)