Calendar of Training activities

University of Bologna - EIT4SEMM Program

Code	Lectures	Hours	ECTS/DCs	Instructors	Period
PY	Python for IoT Data Analytics	15	3	L. Sciullo	Feb 2026
CT	Communication technologies for sensor networks	5	1	A. Giorgetti	Feb 2026
ML	Machine Learning	10	2	M. Poggi	Feb 2026
GW	Guided waves inspections	5	1	A. Marzani	Feb 2026
VM	Vibration Monitoring	5	1	A. Palermo	Feb 2026
EV	Environmental Variables Monitoring: Satellite Products and Modeling Approaches	5	1	A. Domeneghetti	Feb 2026
GM	Geomatics	5	1	M. Dubbini/S. Gandolfi	Feb 2026

EIT4SEMM Training week 1 (2 - 6 Feb. 2026)

	Mon.	Tue.	Wed.	Thu.	Fri.
Room	**LAMC**	**LAMC**	**LAMC**	**LAMC**	**LAMC**
H. 9:30-12.30	**ML**- Poggi	**ML**- Poggi	**GW**- Marzani	**EV** -Domenegh.	**CT** - Giorgetti
H. 14:30-16.30	**ML**- Poggi	**ML**- Poggi	**GW**- Marzani	**EV** -Domenegh.	**CT**- Giorgetti

EIT4SEMM Training week 2 (9 - 13 Feb. 2026)

	Mon.	Tue.	Wed.	Thu.	Fri.
Room	**LAMC**	**Mura A. Zamboni**	**Mura A. Zamboni**	**Mura A. Zamboni**	**LAMC**
Morning	**GM** Dubbini 9.30-12.00	**PY** Sciullo 9:30-12.30		**PY** Sciullo 9:30-12.30	**VM** – Palermo 9:30-12.30
Afternoon	**GM** Gandolfi 14.00-16.30	**PY** Sciullo 14:30-17.30	**PY** Sciul. 14:30-17.30	**PY** Sciullo 14:30-17.30	**VM** – Palermo 14:30-16.30

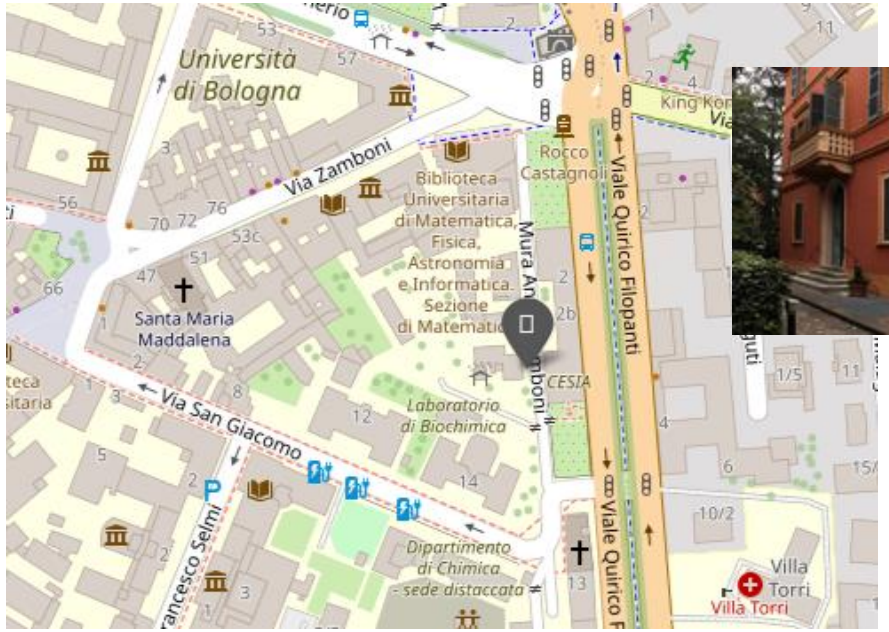
Course Title	Course content – TW1
Machine Learning	Machine-learning approaches for data processing, covering theory and practice of both basic and advanced learning frameworks.
Guided waves inspections	Introduction to the fundamental aspects of elastic wave propagation in periodic structures. Implementation of Inspection systems based on guided elastic waves.
Environmental Variables Monitoring: Satellite Products and Modeling Approaches	The course is designed to provide PhD students with essential skills and knowledge about key tools, models, satellite products, and datasets available for monitoring environmental variables. In this context, particular emphasize will be placed on models and techniques for assessing river dynamics, detecting floods, and estimating river flows based on satellite observations.
Communication technologies for sensor networks	Overview of key communication technologies (LPWAN, 5G, IoT) with application examples. Challenges in data transmission and collection for critical environments: coverage, energy consumption. Case studies and real-world applications: examples of wireless sensor networks for landslides monitoring and industrial/structural monitoring.

Course Title	Course content – TW2
Geomatics	Overview of importance of current geomatic techniques in the field of measurements to obtain geometric information in different contexts such as territorial, environmental, structural control and monitoring.
Python for IoT Data Analytics	The course introduces techniques and tools for the design of data analytics processes for IoT applications through the Python language. It reviews the main stages of an IoT data pipeline: i.e. data acquisition, visualization, pre-processing, knowledge extraction through Machine Learning (ML) algorithms.
Vibration Monitoring	This course will cover fundamental methods for dynamic structural identification and vibration-based health monitoring. Common strategies for anomaly detection and damage identification will be discussed.

Locations

- Mura A. Zamboni

DISI, Mura Anteo Zamboni 7 , 40126 Bologna



- **LAMC**

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