UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Foundational Models

2526-114R-1-03

Title

Foundational Models

Teacher(s)

Elisabetta Fersini, Matteo Palmonari, Alessandro Raganato

Language

English

Short description

Course Organization:
The course will be conducted in the second half of January (16th-23rd), 2026.

Course Overview:
The course aims to provide an in-depth understanding of foundational models, which represent the backbone of modern machine learning applications. Students will explore the theoretical foundations and practical implementations of these models, focusing on their development, scalability, and generalization capabilities. A particular emphasis will be placed on techniques for enhancing model performance using external knowledge

sources, and efficient methods that optimize resource utilization without sacrificing model effectiveness.

Course Materials:
Provided by the instructors.

Final Evaluation:
Students may choose one of two options for their final evaluation:

1. Hackathon Mode: Complete a simple project on a topic related to the topics of the course, which will be presented briefly on the final day of the course only.
2. Presentation Mode: Choose a research paper, in coordination with the lecturer, and deliver a presentation on it. This can be done at any agreed-upon time (up to 1 month after the last lecture), allowing students to dive deeper into a specific aspect of the topic presented during the course.

CFU / Hours

2 CFU / 20 hours

Teaching period

January 2026

Sustainable Development Goals

QUALITY EDUCATION