UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Artificial Intelligence

2627-2-F9202P024

Aims

The course aims to introduce students to the fundamental concepts of Artificial Intelligence (AI), with a particular focus on its applications in communication and cultural contexts.
The main objectives are:
• to understand the historical evolution and basic paradigms of AI;
• to acquire conceptual tools to interpret AI technologies in relation to communication;
• to learn and critically use generative AI tools for text, image, video, and audio production;
• to analyze the ethical, social, and cultural implications of AI;
• to explore new approaches such as Agentic AI and the future perspectives of AI in digital media.

By the end of the course, the student will have acquired the knowledge and skills necessary to understand the fundamental principles of Artificial Intelligence and critically evaluate its applications within the contexts of communication and culture. In particular:

Knowledge and understanding. The student will be able to:
understand the historical evolution of Artificial Intelligence and its main theoretical and technological paradigms; grasp the fundamentals of generative AI and Agentic AI; understand the key applications of AI in digital media and communication processes.

Applying knowledge and understanding. The student will be able to:
use generative AI tools consciously to produce text, images, audio, and video; apply the concepts learned to the analysis of case studies and application scenarios within the communication sector.

Making judgments. The student will be able to:
critically evaluate the opportunities and limitations of AI technologies; analyze the ethical, social, and cultural implications arising from the use of AI in communication and creative contexts; formulate reasoned judgments regarding the appropriate use of AI tools in various professional settings.

Communication skills. The student will be able to:

use terminology related to Artificial Intelligence appropriately; discuss and critically argue the characteristics, potential, and issues associated with AI technologies in interdisciplinary contexts.

Learning skills. The student will be able to:
independently explore the evolution of AI technologies and related tools; update their skills in a sector characterized by rapid technological change, developing a critical approach oriented towards lifelong learning.

Contents

The course covers the theoretical foundations and applications of Artificial Intelligence, with special emphasis on generative technologies.
After an introductory overview of paradigms and basic tools, the program explores the applications of AI in the production and circulation of communicative and multimedia content. Case studies from journalism, advertising, publishing, and social media will be analyzed.
Lectures will be complemented by hands-on activities with widely used platforms (ChatGPT, Copilot, Deepseek, Claude, and so on), in order to develop both critical and practical skills.
Special attention will be devoted to ethical and social issues, as well as to emerging approaches based on agents (Agentic AI) and the future role of AI in communication.

Detailed program

Introduction to Artificial Intelligence
• Definitions and historical overview.
• Main AI paradigms.
• Relations between AI and communication.
• First exercises with generative platforms.

Fundamental Concepts and Tools
• How AI systems work (conceptual approach).
• Focus on Large Language Models.
• Current limitations and potentials of AI.
• Popular platforms of generative AI and their critical use.

Generative AI and Languages
• Generative AI for text, images, audio, and video.
• Applications in assisted writing, storytelling, and translation.
• Aesthetic and narrative analysis of generated content.
• Practical labs: production and comparative evaluation.

AI in Communication and Digital Media
• Chatbots and virtual assistants.
• Recommendation systems and personalization.
• Computational journalism and assisted creativity.
• Case studies in media and social networks.

Ethical, Social, and Cultural Issues
• Bias and stereotypes in generative models.
• Intellectual property and copyright.
• Impact on creative industries and cultural labor.

• AI as a social actor in public communication.

New Approaches and Future Perspectives
• Introduction to Agentic AI.
• Social simulations and communicative applications.
• AI as a creative and cultural partner.
• Final discussion and student project presentations.

Prerequisites

Basic knowledge on the use of AI platforms

Teaching form

The course consists of lectures (totaling 28 hours) and laboratory sessions (totaling 24 hours); the latter involve projects to verify the knowledge acquired and constitute an integral part of the exam. The course is taught in Italian, though some teaching materials will be in English.

Lectures will be delivered as follows:
20 hours of in-person instruction.
8 hours of interactive in-person instruction, including sessions with guest experts.

24 hours of laboratory work featuring interactive in-person instruction and the participation of industry professionals.

Textbook and teaching resource

S.J. Russell, P. Norvig, “Intelligenza Artificiale: un approccio moderno“, 2a edizione, Pearson - Prentice Hall, 2010 (volume 1)

Gilad Abiri Generative AI as Digital Media (https://arxiv.org/abs/2503.06523)

Other materials:
All slides presented in class will be made available, and reference materials covering the topics discussed will be provided for each set of lessons.

Semester

First semester

Assessment method

The assessment is oral and involves a project developed entirely using generative AI techniques: a pitch (maximum 3 minutes) demonstrating proficiency with the tools learned, along with a PowerPoint presentation and a report (paper) created entirely using generative AI techniques.
The project may be carried out individually or in a group (maximum of 3 members).

The final grade will be based on:

Active participation (for attending students): 20%
Short in-class exercises (for attending students): 30%
Final project: 50%

For non-attending students, in addition to the project presentation, the assessment will verify the skills acquired through the study of the provided course materials and the ability to use the tools employed.

Office hours

On demand

Sustainable Development Goals

DECENT WORK AND ECONOMIC GROWTH