

# Introduction to Large Language Models: *from theory to practice*



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## Abstract

Large Language Models (LLMs) have rapidly transformed how text is produced, consumed, and trusted. Their ability to generate fluent and human-like language has blurred the boundaries between authentic and synthetic content, while simultaneously raising concerns about factual reliability, hallucinations, and human overreliance on generated outputs. This talk explores three interconnected perspectives: authenticity, capabilities, and reliability. We also focus on the capabilities and limitations of LLMs, particularly in multilingual contexts. Finally, we focus on trustworthiness evaluation of LLMs on domain-specific questions, particularly focusing on metrics assessing LLM output robustness.



## Course Schedule

### Lesson 1 – May 26, 2026

10:00 – 12:00

(Room 304/305 – 3rd floor)

**Duration:** 2 hours frontal lecture

**Topics:** Introduction to language modeling and LLMs; Overview of LLMs (open/closed, SLM)

14:15 – 17:00

(Room 304/305 – 3rd floor)

**Duration:** 3 hours frontal lecture

**Topics:** NLP tasks (and their evaluation); Introduction to Hugging Face; Hands-on: Hugging Face; NLP tasks in practice

### Lesson 2 – May 27, 2026

10:00 – 13:00

(Room 304/305 – 3rd floor)

**Duration:** 3 hours frontal lecture

**Topics:** Architectural elements of LLMs; Evaluation of LLMs; LLM trustworthiness

14:15 – 16:00

(Room 304/305 – 3rd floor)

**Duration:** 2 hours hands-on

**Hands-on:** Architectural concepts in practice

### Lesson 3 – May 28, 2026

10:00 – 12:00

(Room 304/305 – 3rd floor)

**Duration:** 2 hours frontal lecture

**Topics:** LLM lifecycle; Prompt Engineering; Post-tuning; RAG

14:15 – 16:00

(Room 193 – 1st floor)

**Duration:** 2 hours hands-on

**Hands-on:** Architectural elements of LLMs; Post-tuning



Registration is unnecessary; if interested, please message to [manuel.striani@uniupo.it](mailto:manuel.striani@uniupo.it)