UCLouvain

# lfial2630

*2026*

# Artificial intelligence for text data processing

The version you're consulting is not final. This course description may change. The final version will be published on 1st June.

| 5.00 credits | 22.5 h | Q2 |
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| Language : | French<br>> English-friendly |
| Place of the course | Louvain-la-Neuve |
| Main themes | Access to this course is restricted to students who have already succesfully credited a Python programming course.<br>The processing of large volumes of textual data is an increasingly frequent situation for linguistic specialists (e.g. analysis of large corpora, data from linguistic surveys, etc.).<br>This course explores various techniques from artificial intelligence and automatic language processing to leverage large volumes of textual data for various purposes, such as to extract information from a text, to assess the quality or the difficulty of a text, to translate it, to simplify it, to categorize it, to identify key concepts or ideas in it, to detect implicit messages, etc. |
| Learning outcomes | **At the end of this learning unit, the student is able to :**<br>1 To plan and develop a sequence of understandable instructions for a computing system to solve a given problem or to perform a specific task. (Programming, DigiComp 3.4)<br>2 To use digital tools and technologies to create knowledge and to innovate processes and products. To engage individually and collectively in cognitive processing to understand and resolve conceptual problems and problem situations in digital environments. (Creatively using digital technologies, DigiComp 5.3)<br>3 To organise, store and retrieve data, information, and content in digital environments. To organise and process them in a structured environment. (Managing Data, Information and Digital Content, Digicomp 1.3)<br>4 Understand the theoretical foundations of various AI and NLP algorithms and choose among them those adapted to problems encountered in order to solve tasks related to automatic language processing.<br>These learning outcomes refer to "The Digital Competence Framework for Citizens (DigiComp 2.2)". |
| Evaluation methods | • Continuous assessment during the semester, based on the completion of homework assignments (30% of the final grade);<br>• Programming project in automatic classification, the results of which must be both described in a written report to be submitted at the beginning of the exam session and presented during an oral examination (70% of the final grade) |
| Teaching methods | Lectures; exercises completed during the course and in the form of home assignments. |
| Content | Classes are divided between lectures presenting the tools and methods, and tutorials aiming to allow students to experiment with methods and software. |
| Inline resources | Course slides and supplementary readings are available on the Moodle platform. |
| Faculty or entity in charge | FIAL |

## Programmes containing this learning unit (UE)

| Program title | Acronym | Credits | Prerequisite | Learning outcomes |
|---|---|---|---|---|
| Master [120] in Multilingual Communication | MULT2M | 5 | | |
| Master [120] in Data Science : Statistic | DATS2M | 5 | | |
| Master [120] in Information and Communication Science and Technology | STIC2M | 5 | | |
| Master [120] in Translation | TRAD2M | 5 | | |
| Master [120] in History | HIST2M | 5 | | |
| Master [120] in Linguistics | LING2M | 5 | | |
| Advanced Master in Visual Cultures | VISU2MC | 5 | | |
| Master [120] in Ethics | ETHI2M | 5 | | |
| Master [120] in Philosophy | FILO2M | 5 | | |
| Master [60] in History of Art and Archaeology : General | ARKE2M1 | 5 | | |