UCLouvain

lfial2020

2026

Code et Culture: Python for digital humanities

5.00 credits	22.5 h	Q2

Teacher(s)	Gribomont Isabelle ;
Language :	French > English-friendly
Place of the course	Louvain-la-Neuve
Prerequisites	Access to this course is reserved for students who have already taken a programming course, preferably LFIAL2640 - Introduction to Python Programming for the Humanities.
Main themes	What kind of digital data is used in the human sciences (digital corpora, time series, databases, digital images, sound or video recordings, etc.) and, above all, how can their analysis be automated when the volumes of data become too large? Through programming projects, students discover how to manipulate data from the human sciences in the context of different fields of study. Python is a free, versatile programming language with a large community of users in both the academic and private sectors. With the proliferation of digital data in the humanities and social sciences, the use of IT is becoming essential for data collection, formatting, analysis and visualisation. In the context of the humanities, the Python language can be used to collect textual/multimodal data from the internet or social networks, to identify the networks formed by historical figures in a corpus of letters, to automatically recognise the authorship of a literary work through stylistic patterns, to contrast the feelings associated with certain concepts in a media corpus, or to map the places mentioned in a corpus from social networks. Python can be used to apply statistical analysis methods as well as machine learning and Artificial Intelligence methods. It is therefore a flexible tool that opens up a wide range of possibilities. As well as developing computer skills to automate the processing and analysis of human science data, we will reflect on the ethical challenges and dilemmas posed by the computational study of culture.
Learning outcomes	**At the end of this learning unit, the student is able to :** 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) 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) 'DigiComp' learning outcomes refer to "The Digital Competence Framework for Citizens#(DigiComp 2.2)".
Evaluation methods	The assessment includes the following three components: • Written assignment due at the end of term (50%). • Oral exam on the written assignment during the examination period (30%). • Continuous assessment of coursework (20%). The continuous assessment will still be taken into account for the August session. A student who fails this component will be offered the opportunity to resubmit the failed tasks or an assignment deemed equivalent. NB: Generative artificial intelligence (AI) must be used responsibly and in accordance with the practices of academic and scientific integrity. Scientific integrity requires that sources be cited, and the use of AI must always be reported. The use of artificial intelligence for tasks where it is explicitly forbidden will be considered as cheating.
Teaching methods	Lectures and hands-on workshops.
Content	This course offers an introduction to the uses of the Python programming language for research and data analysis in the field of digital humanities. The focus is on exploring tools and modules that are particularly suited to issues in the humanities, while developing critical thinking about their contributions and limitations. We work with textual datasets from contemporary press, social networks, literary works, and historical documents. Using these, we explore various information extraction tasks: converting scanned documents into usable files (optical character recognition), exploring social or intellectual networks, automatically detecting names of people, places, events, or dates (named entity recognition), or identifying linguistic and semantic trends.

	Beyond technical learning, the course focuses on interpreting results. We consider the representativeness of our data, the significance of our results, the questions they allow us to answer, and the limitations of their interpretations. We also examine how these methods relate to qualitative approaches. The goal is to equip students not only to use Python in their research, but also to develop a reflective and critical approach to data and its interpretation.
Inline resources	Moodle
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 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 [120] in Modern Languages and Literatures : German, Dutch and English	GERM2M	5		
Master [60] in History of Art and Archaeology : General	ARKE2M1	5		
Master [120] in Modern Languages and Literatures : General	ROGE2M	5		