

# Open Science: Powerful policies for Digital Humanities

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- Digitally-enabled research across the humanities.
- Wide, evolving and heterogeneous domain.
  - Covers material and immaterial culture.
  - Diversity of specializations (history, archaeology, philology, languages, etc.)
- Interdisciplinary domain.
- Significant:
  - Social and economic importance domain.
  - Necessary for the protection of the digital heritage internationally.



## • Organizers

- National and Kapodistrian University of Athens
  - Department of History and Archaeology
  - Department of Philology
  - Department of History and Philosophy of Science
  - Department of Digital Industry Technologies
- University of Cyprus
  - Department of History and Archaeology
- ATHENA Research Centre
  - Institute for Language and Speech Processing

<https://dh.arch.uoa.gr>



## • Aims

- Establish and structure an environment for the development of post-graduate studies and research in the Digital Humanities (DH) domain.
- Contribute to the domain.
- Cover horizontally the DH methods and organize them to four specializations:
  - Data Analytics
  - Text Encoding and Mining
  - 3D Technologies
  - Geographic Information Systems

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# 3D Technologies

1st Semester	2nd Semester
<b>COMPULSORY COURSES</b>	
Introduction to Digital Humanities	VR/AR Technologies
Human-Computer Interaction	Advanced 3D
Image Processing/Analysis	
Introduction to 3D Technologies	
<b>ELECTIVE COURSES (1 of the following)</b>	<b>ELECTIVE COURSES (3 of the following)</b>
Data Analytics	Data Visualization
Python Programming for Humanities	Database Systems
Introduction to GIS	Special Topics in 3D
	Data Analysis for Humanities with Python
	Advance GIS I: Geospatial Analysis and Modelling

# Augmented Textual Studies

1st Semester	2nd Semester
<b>COMPULSORY COURSES</b>	
Mathematics for Humanities	Linguistic Annotation
Python Programming for Humanities	Text Mining
Quantitative Methods for Textual Data	Databases and Tools in Ancient Greek Philology
Introduction to AI and Machine Learning	
<b>ELECTIVE COURSES (1 of the following)</b>	<b>ELECTIVE COURSES (2 of the following)</b>
Stemmatics and Textual Criticism	Special Topics in Text Encoding
Human-Computer Interaction	Computational Stylistics
Introduction to GIS	Data Analysis for Humanities with Python
	Data Visualization

- **Editing and Publishing**  
Digital innovation meets traditional methods, dive into content creation, and multimedia storytelling, shaping the future of how we consume literature and academic works.
- **NLP Processing**  
Step into the cutting-edge field of Natural Language Processing (NLP), that powers everything from voice assistants to content analysis tools; transform vast amounts of text into structured data, and develop technologies that understand, interpret, and generate human languages.
- **Cultural Heritage**  
Make an impact on cultural preservation and interpretation through digital technologies, engage in the digital transformation of Museums, Archives, and Historical sites, bringing the richness of the past to the global audience, and specialize in analyzing digitized artifacts, creating virtual tours, or developing interactive educational resources.
- **Employers: GLAM, Publishing Industry, Creative Industry**

- System change: The science is **data-centric**
- Humanities organize their material to datasets
  - Archaeology: huge geographic data, very large image collections, satellite data, etc.
  - Philology and History: large textual corpora
  - Interdisciplinary datasets of 3D objects and other multimedia
- The science evolution becomes inter-disciplinary
- Requirement for collaborations

## Set of policies

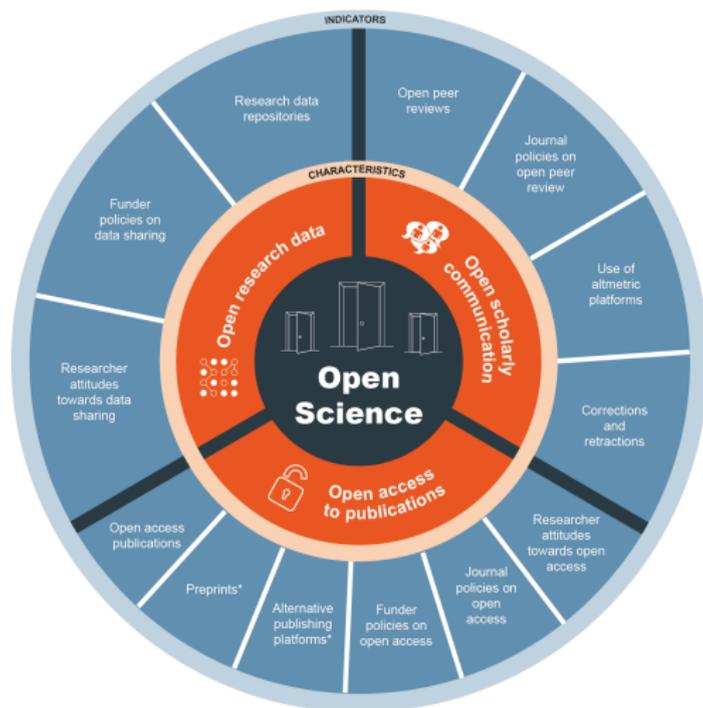
Allowing for better science through:

- **open** and **collaborative** ways of producing and **sharing** knowledge and data
- a new *paradigm* in the research process that brings new ways of evaluating research and rewarding researchers **transparently**
- increases the quality and impact of science by fostering **reproducibility** and **interdisciplinarity**

## Open Science

Makes science more:

- **efficient** through better sharing of resources
- **reliable** through better verification
- **responsive** to society's needs



Source: Opus Project, <https://opusproject.eu/>

- Open Scholarly Communication
  - Research Indicators and Next-Generation Metrics
  - Rewards and Incentives
  - Research Integrity (good research practices, define conditions by which work can be replicated or verified by others)
- Open Access
  - University policies on Open Access
  - Open Access Publications
  - Alternative publishing platforms
  - Researchers attitudes towards Open Access
- Open Research Data
  - Research Data Repositories - FAIR principles
  - Researchers attitudes towards data sharing
  - European Open Science Cloud
- Citizen Science

- Research Infrastructures
  - DARIAH, <https://www.dariah.eu/>
  - ARIADNE RI, <https://www.ariadne-research-infrastructure.eu/>
  - CLARIN Research Infrastructure for Language as Social and Cultural Data, <https://www.clarin.eu/>
- Open Access Journals
  - Directory of Open Access Journals, <https://doaj.org/>
  - Open Library for Humanities, <https://www.openlibhums.org/>

## The Important Role of Academic Libraries

- Data Repositories (HELIX-HARDMIN, <https://hellenicdataservice.gr/main/>)
- Green Road for Open Access - Publication Repositories
- Open Access Journals platforms
- Research integrity practices
- Science Communication policies
- Open Science Training for young Researchers ...