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Digital Paleography

Academic Year: (2023 / 2024)   **Review date: 08-05-2023**

Department assigned to the subject: Library and Information Sciences Department

Coordinating teacher: NAVARRO BONILLA, DIEGO

Type: Electives ECTS Credits : 6.0

Year : 4 Semester :

REQUIREMENTS (SUBJECTS THAT ARE ASSUMED TO BE KNOWN)
- History of Book and Writing
- Archival Science
- Information Management

OBJECTIVES
1. Correct reading, analysis and interpretation of handwritten historical documents included in the Spanish Historic Heritage.
2. Identification of the essential elements of the letter in each historical graphic system (x-height, proportion, ductus, pressure, angle, tools, writing surfaces, etc.)
3. Developement of calligraphic abilities in analogic and digital platforms.
4. Essential training in transcription and technological apps to develop the professional activity in archives and libraries with special collections.
5. Study, context and analysis of handwriting from early medieval age to modern age.
6. Identification, application and combination of digital resources to facilitate the capture and transformation of manuscript images.
7. Understanding manuscript as image and text to ensure the digital graphic management and its standardization description taking as basic element each handwritten letter.

DESCRIPTION OF CONTENTS: PROGRAMME
1. Introduction: objectives and professional applications for special collections curators.
1.1 Definitions and fields of action of digital paleography. HTR: Handwritten Text Recognition; READ: Recognition and Enrichment of Archival Documents; CER: Character Error Rate.
1.2 Digital palaeography and digital humanities.
1.3 Tradition, Innovation and experimentation: learning paleography through calligraphic practice, additive manufacturing technologies and design in written communication.

2. Paleography: foundations of the scientific method; transcription rules.

3. Paleography, calligraphy and digital typography: affinities, differences and future of the scientific study of the letter.

4. Definitory elements of the handwriting: from the module to the ductus; identification of graphic characteristics and morphologies in each scriptural cycle (precarolingian cycle to the humanistic one)

5. Projects of digital and diplomatic paleography: DIGIPAL; ESSENCE; Venice Time Machine, etc.

6. Projects of digitization of historical letters: repositories of variants and study of allographs; practical exercises
6.1 Programs and applications

7. Capture tools (GraphJ), management, design and transformation, organization, description, visualization and recovery of handwritten letters.

8. Factors, principles and indicators of manual calligraphic writing and its digitalization with a view to its normalization (digitized collection of ductus and automatic generation).

9. Normalization of the description of strokes and digitized handwritten forms

10. Artificial Intelligence and applications to the automated transcription of manuscripts and

comparison of patterns.
10.1 Automatic transcription: the Transkribus project.

11. Entrepreneurship and graphic design based on historical stroke patterns.

LEARNING ACTIVITIES AND METHODOLOGY
Workshops of calligraphic reproductions: introductory and advanced
Developement of digital calligraphy
Workshop with original documents

ASSESSMENT SYSTEM
Final exam with two parts (theory and practice)
Continous assessment (practical exercises of transcription, capture, transformation and groupment of letters from original documents).

% end-of-term-examination:	60
% of continuous assessment (assigments, laboratory, practicals…):	40

BASIC BIBLIOGRAPHY
- Stokes, Peter A. Digital Approaches to Palaeography and Book History: Some Challenges, Present and Future,, Frontiers in Digital Humanities 2:5 doi:10.3389/fdigh.2015.00005 , 2015
- Ciula, Ariana "Digital palaeography: What is digital about it?", Digital Scholarship in the Humanities, Volume 32, Issue suppl_2, 1 https://doi.org/10.1093/llc/fqx042, 2017
- T. Hassner, M. Rehbein, P.A. Stokes and L. Wolf (eds) Computation and Palaeography: Potentials and Limits, Dagstuhl Manifestos 2 doi:10.4230/DagMan.2.1.14, Schloss Dagstuhl, Leibniz-Zentrum fuer Informatik, 2013

ADDITIONAL BIBLIOGRAPHY
- Liang, Y., Fairhurst, M.C., Guest, R.M. & Erbilek, M. "Automatic Handwriting Feature Extraction, Analysis and Visualization in the Context of Digital Palaeography", International Journal of Pattern Recognition & Artificial Intelligence, vol. 30, no. 4,, 2016
- Wolf, L., Potikha, L., Dershowitz, N., Shweka, R. & Choueka, Y. "Computerized Paleography: Tools for Historical Manuscripts", 18th Ieee International Conference on Image Processing, 2011

BASIC ELECTRONIC RESOURCES
- Department of Digital Humanities at King's College London . DIGIPAL: http://www.digipal.eu/