University of Gdańsk

Subject card

Subject name and code	Digital and Virtual Heritage, PG_00215485						
Field of study	Historical Games and Digital Heritage						
Date of commencement of studies	October 2027		Academic year of realisation of subject		2027/2028		
Education level	Master's studies		Subject group		Obligatory subject group in the field of study Subject group related to scientific research in the field of study		
Mode of study	full-time studies		Mode of delivery		at the university		
Year of study	1		Language of instruction		English		
Semester of study	1		ECTS credits		6.0		
Learning profile	academic		Assessment form		credit		
Conducting unit							
Name and surname of lecturer (lecturers)	Subject supervisor		dr Robert Domżał				
	Teachers						
Lesson types	Lesson type	Lecture	Tutorial	Laboratory	Project	Seminar	SUM
	Number of study hours	0.0	40.0	0.0	0.0	0.0	40
	E-learning hours included: 0.0						
Learning activity and number of study hours	Learning activity	Participation in didactic classes included in study plan		Participation in consultation hours		Self-study	SUM
	Number of study hours	40		40.0		70.0	150
Subject objectives	The course aims to develop an understanding of digital documentation and heritage interpretation, their research potential, and their legal, ethical, and organisational contexts. Students develop research proposals and responsible approaches to making cultural heritage accessible to diverse audiences.						

Learning outcomes

Course outcome	Subject outcome	Method of verification
[GHDCMU2_W05] Discusses the legal, ethical, and social considerations surrounding the use of history and heritage in research and creative work, covering topics such as copyright, the provenance of resources, conflicts over memory, and the responsible use of artificial intelligence.	Discusses the legal, ethical and social considerations involved in digitally documenting, interpreting and providing access to heritage, taking into account copyright, the provenance of resources (also born-digital), contested memories and responsible use of artificial intelligence.	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
[GHDCMU2_K02] Proposes and co-organizes initiatives aimed at the responsible interpretation of history, as well as the protection and popularization of heritage, while taking into account a diversity of perspectives and accessibility for audiences.	Proposes actions for tangible and intangible digital heritage and identifies legal, ethical, and societal challenges.	[SK2] presentation/project/paper/ report [SK3] text preparation/written work
[GHDCMU2_W04] Compares theories and methods of digital heritage interpretation and the museum experience design in terms of their premises, applications, and limitations.	Explains the methods of digital documentation of cultural heritage, distinguishing among the causes of threats to the historic substance, the techniques of monument documentation, the methods of conducting provenance research, and treatments.	[SW2] presentation/project/paper/ report [SW5] implementation of a problem task
[GHDCMU2_W06] Explains the economic and organizational conditions surrounding research and development ventures and creative projects within the gaming and heritage sectors, including cross-sector collaboration, funding sources, and career paths.	Explains the economic and organisational conditions of digital heritage initiatives, taking into account institutional roles, cross-sector collaboration, funding sources and the conditions needed to sustain project outputs.	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
[GHDCMU2_U01] Independently develops research project concepts concerning historical games or digital heritage, including the definition of the research problem, questions, or hypotheses, the selection of methods, and a rationale for the approach to interpreting and verifying the results.	Independently develops a digital heritage research proposal by defining a research problem and questions, selecting sources and documentation or interpretation methods, and establishing procedures for assessing credibility and validating results.	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task

Subject contents

1. Digital and virtual heritage – key concepts, theories, authenticity, and the relationship between objects and representations.
2. 2D and 3D documentation – photography, photogrammetry, scanning, multispectral and X-ray imaging; uses and limitations.
3. Digital twins and “memory twins” – modelling, reconstruction uncertainty, and data provenance.
4. Immersive heritage – VR, AR, XR, interactive narratives, and educational games.
5. Preservation and access – repositories, metadata, sustainability, and accessibility.
6. Law and ethics – copyright, sensitive data, contested memory, and responsible AI use.
7. Project organisation – institutions, partnerships, funding, and sustainability.
8. Research design – questions, method selection, source criticism, and evaluation plans.

Prerequisites and co-requisites

<table>
<tr><td>Assessment methods and criteria</td><td colspan="2"><table>
<tr><th>Subject passing criteria</th><th>Passing threshold</th><th>Percentage of the final grade</th></tr>
<tr><td>Portfolio of practical assignments</td><td>51.0%</td><td>25.0%</td></tr>
<tr><td>Group project: digital heritage research and interpretation proposal</td><td>51.0%</td><td>75.0%</td></tr>
</table></td></tr>
<tr><td rowspan="3">Recommended reading</td><td>Basic literature</td><td>1. Ch'ng, E., Chapman, H., Gaffney, V. and Wilson, A. S. (eds) (2022). Visual Heritage: Digital Approaches in Heritage Science. Springer.
2. Champion, E. (ed.) (2021). Virtual Heritage: A Guide. Ubiquity Press.
3. Cameron, F. and Kenderdine, S. (eds) (2007). Theorizing Digital Cultural Heritage: A Critical Discourse. MIT Press.
4. Bentkowska-Kafel, A. and MacDonald, L. (eds) (2018). Digital Techniques for Documenting and Preserving Cultural Heritage. Arc Humanities Press.</td></tr>
<tr><td>Supplementary literature</td><td>1. UNESCO (2003). Charter on the Preservation of Digital Heritage.
2. The London Charter (2009). The London Charter for the Computer-Based Visualisation of Cultural Heritage, version 2.1.
3. Collections Trust (2022). Spectrum 5.1: The UK Museum Collections Management Standard.</td></tr>
<tr><td>eResources addresses</td><td></td></tr>
<tr><td>Example issues/ example questions/ tasks being completed</td><td colspan="2">1. Compare three methods of digitally documenting a selected heritage object. Which best serves the research objectives, and why?
2. Evaluate the credibility of a digital historical reconstruction. How can documented findings be distinguished from hypotheses and interpretative decisions?
3. Develop a proposal for providing digital access to a museum collection, considering accessibility, copyright, audience needs, and long-term sustainability.
4. Discuss selected examples of successful digital heritage projects that could serve as models for future work.</td></tr>
<tr><td>Work placement</td><td colspan="2">Not applicable</td></tr>
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