University of Gdańsk

Subject card

Subject name and code	Visual and Spatial Design, PG_00216097		
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
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	4.0
Learning profile	academic	Assessment form	credit
Conducting unit			
Name and surname of lecturer (lecturers)	Subject supervisor		
	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	30.0	30.0	100

Subject objectives

The module develops skills in visual and spatial analysis and design for historical games and digital representations of cultural heritage. Students learn the principles of composition, colour, form, lighting, spatial organisation, environmental storytelling and sound design. They use historical sources critically, develop spatial concepts and evaluate their designs for functionality, historical credibility and accessibility to different audiences.

Learning outcomes	Course outcome	Subject outcome	Method of verification
	[GHDCMU2_W02] Has an in-depth knowledge and understanding of concepts in historical and cultural game studies and their connections with historiography, particularly the relationships between game content, mechanics and technology, player agency and cultural context in the interpretation and representation of the past and the construction of historical knowledge.	Analyses how spatial organisation, interaction mechanics, navigation, and player agency shape historical meanings in games and immersive experiences.	[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
	[GHDCMU2_W03] Has an in-depth knowledge and understanding of the principles and methods of iterative game design and prototyping, particularly historical games as interactive models of the past informed by historical knowledge and source interpretation, and culturally themed games as forms of engagement with cultural heritage.	Explains the principles of spatial game design and iterative prototyping, including environmental storytelling, level structure, spatial orientation, and user experience.	[SW1] oral statement/ conversation/discussion [SW5] implementation of a problem task
	[GHDCMU2_W04] Has an in-depth knowledge and understanding of theories and methods of digital cultural heritage interpretation and museum experience design, particularly the application of historical knowledge and research methods to the interpretation and presentation of the past, taking into account the underlying assumptions, potential applications and limitations of the approaches used.	Compares methods of designing virtual and augmented historical environments, evaluating their interpretative potential, technological limitations, and applications in games and heritage experiences.	[SW1] oral statement/ conversation/discussion [SW2] presentation/project/paper/ report
	[GHDCMU2_U03] Independently develops and refines design solutions in the creation of games focused on history and cultural heritage, drawing on historical knowledge and critical source analysis, selecting appropriate methods and tools during concept development, prototyping, playtesting and iterative refinement, and collaborating within an interdisciplinary team to prepare the outcomes for dissemination to audiences.	Develops a visual and spatial concept for a selected part of a historical game based on case-study analysis, applying composition, environmental storytelling, and basic interaction principles, and refining the concept in response to feedback.	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task
	[GHDCMU2_U04] Independently selects, applies and adapts digital tools and methods for the analysis, documentation and interpretation of cultural heritage and for addressing complex problems related to researching and presenting the past, developing new solutions while taking into account project objectives, the quality of historical sources and data, technological capabilities and limitations, and requirements concerning the accessibility of the results.	Compares the use of different digital tools for creating spatial representations of heritage, taking into account technological limitations and accessibility requirements.	[SU2] presentation/project/paper/ report [SU5] implementation of a problem task
	[GHDCMU2_K02] Is prepared to initiate and co-organise activities promoting the responsible interpretation of history and the protection and popularisation of cultural heritage, taking into account the public interest, diverse perspectives and the accessibility of these activities to different audiences.	Proposes initiatives to support the responsible interpretation of history and the preservation and promotion of heritage, taking into account diverse perspectives in visual representations and recognising how visual elements can be adapted to meet the needs of neurodivergent people and people with disabilities.	[SK1] oral statement/conversation/ discussion

Subject contents	1. Space as a game system – architecture, navigation, orientation, and player agency. 2. Visual design fundamentals – colour, shape, form, contrast, lighting, composition, and visual guidance. 3. Environmental storytelling – history conveyed through space, objects, traces of the past, and sound. 4. Historical reconstruction – source criticism, authenticity, interpretation, and uncertainty. 5. Spatial design in games and VR/AR/XR – case studies of immersion, navigation, and interaction. 6. Sound design fundamentals – atmosphere, spatial audio, sound localisation, and auditory cues. 7. Accessibility and ethics – user comfort, inclusive navigation, and responsible historical representation. 8. Case studies and concept development – moodboards, sketches, storyboards, and feedback.
Prerequisites and co-requisites	

Assessment methods and criteria

Subject passing criteria	Passing threshold	Percentage of the final grade
Spatial Design Analysis & Documentation	51.0%	30.0%
Spatial Game Prototype	51.0%	70.0%

Recommended reading

Basic literature

Totten, C. W. (2019). *An Architectural Approach to Level Design*. 2nd ed. CRC Press.

Gillies, M. and Pan, S. X. (2026). *An Introduction to Virtual and Augmented Reality: Designing Impactful Experiences*. Chapman & Hall.

Liarokapis, F., Shehade, M., Aristidou, A. and Chrysanthou, Y. (eds) (2025). *Interactive Media for Cultural Heritage*. Springer.

Smith Nicholls, F. and Cook, M. (2025). 'Archaeological Gameworld Affordances: A Grounded Theory of How Players Interpret Environmental Storytelling'. *Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems*, Article 465. https://doi.org/10.1145/3706598.3714036

Champion, E. M. (ed.) (2021). *Virtual Heritage: A Guide*. Ubiquity Press. https://doi.org/10.5334/bck

Bandi, F. and Malaspina, R. P. (eds) (2025). *Real Space–Virtual Space: Aesthetics, Architecture, and Immersive Environments*. Milano University Press. https://doi.org/10.54103/milanoup.223

	Supplementary literature	Seif El-Nasr, M., Carstensdottir, E. and John, M. (2026). *Designing Serious Games*. MIT Press. Chapman, A. (2016). *Digital Games as History: How Videogames Represent the Past and Offer Access to Historical Practice*. Routledge. Klobucar, A. (2026). 'The Art of the Environment in Interactive Walking Simulation Narratives: How GenAI Might Change the "Game"'. *Humanities*, 15(1), 13. https://doi.org/10.3390/h15010013 Partarakis, N., Katsantonis, M. N. and Zidianakis, E. (2026). 'A Systematic Review of Extended Reality (XR) Applications in Cultural Heritage'. *Heritage*, 9(6), 215. https://doi.org/10.3390/heritage9060215 Jenkins, H. (2004). 'Game Design as Narrative Architecture'. In N. Wardrip-Fruin and P. Harrigan (eds), *First Person: New Media as Story, Performance, and Game*. MIT Press. Lupton, E. and Phillips, J. C. (2015). Graphic Design: The New Basics. 2nd revised and expanded ed. Princeton Architectural Press.
	eResources addresses	
Example issues/ example questions/ tasks being completed	**Environmental storytelling and historical reconstruction.** Design a space where architecture, objects and traces of past activity allow players to piece together part of its history without explanatory dialogue. Justify your design choices using historical sources and identify which elements are documented and which are interpretive. **Space as a game system.** How do routes, landmarks and sightlines affect what players notice, where they go and what they can do? Create a level blockout and design two routes to the same objective. **Design fundamentals:** Using a game or museum space as an example, analyse how composition, shape and colour guide the player's or visitor's attention. Explain how the form of one element helps communicate its function.	
Work placement	Not applicable	

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