

Course Code:

PIHV103

Session:

2017/18

1. Course Title:

Interactive Heritage Visualisation

2. Version

1.1

Date of Production

2015/16

Approval Date

16 September 2015 (PACAAG)

3. Level:

SCQF 11

4. Credits:

15

5. Lead School/Board of Studies:

School of Simulation and Visualisation

6. Course Contact:

Brian Loranger

7. Course Aims:

- Introduce and review recent applications in international heritage visualisation and simulation
- Encourage students to critically evaluate their practice in relation to recent applications within the fields of enquiry
- Introduce students to fundamental principles of design and development of interactive 3D visualisation/simulation systems using state-of-the-art input devices and display technology

8. Intended Learning Outcomes of Course:

On successful completion of the course the student will be able to:

1. demonstrate a critical understanding and knowledge of history and recent development of applications in heritage visualisation;
2. demonstrate self-direction and ability to work with others to design and develop interactive heritage applications to deal with complex issues using various Virtual (or Augmented) Reality devices and software;

9. Indicative Content:

Covering issues such as:

- Visualisation techniques (desktop, Virtual and Augmented Reality)
- Virtual Reality in Archaeology and Historical Research
- Background and history to heritage visualisation
- Virtual Reality, Augmented Reality, hardware & user interfaces
- Display technologies and methods (scale, 2D, 3D, immersive, remote)
- Motion tracking, image capture, haptics
- DDS Lab1 technology (stereo vision, haptics, motion tracking and how these relate to heritage visualization and future applications, sound as a navigation and guiding tool, laser scan data and presentation)
- Computer animation for heritage applications and Virtual Heritage
- Game technologies in cultural heritage
- Virtual museum applications (e-Museums and e-Exhibitions)
- Web-based cultural heritage applications
- Virtual environment and applications in heritage
- Integrating scan and landscape-scale data in interactive visualisation

10. Description of Summative Assessment:

No.	Assessment Method	Description of Assessment Method	Weight %	Submission week (assignments) or length (exam)
1	Essay	2000 word written essay	50	8 (indicative)
2	Coursework	Work in a small group to develop an interactive heritage simulation (80%), and provide an individual reflective report (20%)	50	12 (indicative)

10.1 Please describe the Summative Assessment arrangements:

The learning outcome 1 will be assessed through a 2000-word written essay (this could include examples of visual work, where appropriate, and a bibliography) in the areas of heritage visualisation.

The learning outcome 2 will be assessed through a group project to demonstrate competency in design and development of interactive 3D heritage applications using state-of-the-art devices and software and apply knowledge and understanding of key visualisation techniques. 20% of the group coursework mark will be based on an individual report and reflection, taking individual contributions to the group project into account

11. Formative Assessment:

Individual feedback is available during tutorials to provide formative assessment. Individual written work is formatively reviewed by submission of draft text.

11.1 Please describe the Formative Assessment arrangements:

Individual feedback is available during tutorials to provide formative assessment.
Group presentation of early prototype for feedback (around week 6)

12. Collaborative:Yes No **12.1 Teaching Institutions:****13. Requirements of Entry:**

None

14. Co-requisites:

None

15. Associated Programmes:

MSc Visualisation (International heritage)

16. When Taught:

Autumn semester

17. Timetable:

Timetable will be available in the induction week.

18. Available to Visiting Students:Yes No **19. Distance Learning:**Yes No **20. Placement:**Yes No **21. Learning and Teaching Methods:**

Method	Formal Contact Hours	Notional Learning Hours (Including formal contact hours)
Lecture	10	50
Studio		
Seminar/Presentation		

Tutorial		
Workshop	20	80
Laboratory work		
Project work		
Professional Practice		
E-Learning / Distance Learning		
Placement		
Examination		
Essay		20
Private Study	Not Applicable	
Other (please specify below)		
TOTAL	30	150

22. Description of "Other" Teaching and Learning Methods:

23. Additional Relevant Information:

24. Indicative Bibliography:

Journals:

Journal of Cultural Heritage, Elsevier, 1296-2074

ACM Journal on Computing and Cultural Heritage, ACM, ISSN 1556-4673, EISSN 1556-4711

International Journal of Heritage in the Digital Era, Multi-Science Publishing Company, ISSN 2047-4970

Books:

Proceedings of the Annual International Conference on Cultural Heritage (EuroMed), Springer

Digital Imaging for Cultural Heritage Preservation: Analysis, Restoration, and Reconstruction of

Ancient Artworks. Stanco, F. Battiato, S. and Gallo, G. (Eds.), CRC Press, 2011. ISBN 978-1439821732