Module Details

Module Title	Digital Worlds
Module Code	ARC7052-B
Academic Year	2021/2
Credits	20
School	School of Archaeological and Forensic Sciences
FHEQ Level	FHEQ Level 7

Contact Hours

Type	Hours
Lectures	20
Seminars	10
Practical Classes or Workshops	20
Directed Study	150

Availability

Occurrence	Location / Period
BDA	University of Bradford / Academic Year

Module Aims

This module provides a comprehensive understanding of approaches used in digital documentation - from 3D microscopy through to 3D landscapes. You will appraise the value and potential limitations of these approaches.

Outline Syllabus

Digital documentation approaches (terrestrial scanning; SFM photogrammetry; structured light scanning; CT imagery; 3D microscopy; use of SUA and other aerial imagery; geospatial information; multispectral imagery)
Handling digital data (data registration; segmentation; decimation; rendering; data archiving and sharing)
Analysis of digital data (3D volumes and metric information; comparison of datasets; artefacts and errors in data).
Presention using a range of visualisation tools (3D viewers; AR/ VR; 3D printing)

Learning Outcomes

Outcome Number	Description
O1	Demonstrate advanced knowledge in the selection of appropriate digital documentation approaches.
O2	Demonstrate a theoretical and practical understanding of methods of capture, their potential and limitations.
O3	Demonstrate capability in data handling - analysis and visualisation.

Learning, Teaching and Assessment Strategy

Lectures, seminars and workshops. Fundamental principles will be taught in lecture based sessions and through the use of worked examples. Practical classes will be used to develop practical skills and apply them in a wide range of challenging environments. Practical and communication skills will be used in seminars, workshops and practicals which will cover different aspects and which are progressively taught through the course. In-depth knowledge of the topics covered will be assessed by essay and portfolio. There will be written feedback with opportunity for discussion. Directed study will be used by students for reading literature detailed in the module documentation and with data handling. Teaching will utilise a combination of online and face to face activities.

Mode of Assessment

Type	Method	Description	Weighting
Summative	Coursework	Essay on a Digitalisation topic	50%
Summative	Coursework	Portfolio to demonstrate data capture, processing and visualisation	50%

Reading List

To access the reading list for this module, please visit https://bradford.rl.talis.com/index.html

Please note:
This module descriptor has been published in advance of the academic year to which it applies. Every effort has been made to ensure that the information is accurate at the time of publication, but minor changes may occur given the interval between publishing and commencement of teaching. Upon commencement of the module, students will receive a handbook with further detail about the module and any changes will be discussed and/or communicated at this point.