

CCTV and Video Forensics

Module Information

2022.01, Approved

Summary Information

Module Code	7111AMP
Formal Module Title	CCTV and Video Forensics
Owning School	Engineering
Career	Postgraduate Taught
Credits	20
Academic level	FHEQ Level 7
Grading Schema	50

Teaching Responsibility

LJMU Schools involved in Delivery
Engineering

Learning Methods

Learning Method Type	Hours
Lecture	20
Practical	25
Tutorial	5

Module Offering(s)

Display Name	Location	Start Month	Duration Number Duration Unit
JAN-CTY	CTY	January	12 Weeks

Aims and Outcomes

Aims	To provide students with a comprehensive understanding of the theory, processes and techniques in the field of Video Forensics To equip the student with knowledge and understanding to critically analyse, select and apply appropriate techniques to prepare, transcode, manipulate authenticate and report on forensic CCTV/Video investigations To foster an environment that promotes self-reflection, peer review and a keen awareness of the potential impact of various forms of bias can have on the interpretation of results within the evidence chain
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After completing the module the student should be able to:

Learning Outcomes

Code	Number	Description
MLO1	1	Critically appraise CCTV/Video materials obtained from a variety of common sources
MLO2	2	Transfer, store manipulate and investigate forensic CCTV/Video materials to recognised guidelines and standards
MLO3	3	Analyse and Process materials recognising the risks, implications and influence of the procedures they have undertaken on the outcomes of criminal investigations
MLO4	4	Prepare documentation and reports to the appropriate standards

Module Content

Outline Syllabus	Introduction to Forensics for CCTV/Video The Eye and the way we see Light and Colour theory Video Signal Chain theory Modern CCTV types. Lens Theory Working to ISO Guidelines for CCTV and Video Forensics Modern CCTV/Video capture and storage techniques Digital Video Coding and common compression techniques Benchmarking and Reference Equipment setup Forensic CCTV/Video Handling an Extraction Techniques Critical Viewing and Evaluation Risks of Bias in Video Forensic Procedures Video Processing for file analysis Techniques for enhancement, interpretation and calculations for Forensic CCTV/Video Forensic Video Processing techniques for identifying authenticity and continuity Evidence Reporting
Module Overview	This module will provide students with a thorough understanding of the relevant theory, skills, processes and procedures pertinent to their potential role as a CCTV Video Forensic Specialist. The focus will be on many common real-life situations although there may be scope to further specialise in specific areas of the field.
Additional Information	This module will provide students with a thorough understanding of the relevant theory, skills, processes and procedures pertinent to their potential role as a CCTV Video Forensic Specialist. The focus will be on many common real-life situations although there may be scope to further specialise in specific areas of the ifield. The Syllabus involves applying the Video Forensic process chain appropriately with a keen awareness of the risks and implications associated with the standards and processes required for each procedure: 1. Capture/ Duplication/ Handling of files from original format in professional manner 2. Transfer of files to digital analysis software 3. Authentication Assessment of files 4. Manipulation and Interpretation of Video files in Analysis Software for forensic investigation purposes 5. Safe storage and transfer techniques 6. Quality Assessment and Documentation for effectiveness, acceptability, impact accuracy and repeatability of the forensic CCTV/Video processes completed to a level of competence where the student is able to prepare materials for submission in court

Assessments

Assignment Category	Assessment Name	Weight	Exam/Test Length (hours)	Module Learning Outcome Mapping
Test	Test	30	0	MLO1, MLO2

Report	Practical and report	70	0	MLO1, MLO2, MLO3, MLO4
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Module Contacts

Module Leader

Contact Name	Applies to all offerings	Offerings
Colin Robinson	Yes	N/A

Partner Module Team

Contact Name	Applies to all offerings	Offerings
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