Liverpool John Moores University

Title: ADVANCED CCTV ANALYSIS
Status: Definitive
Code: **7008CCTV**   (118652)
Version Start Date: 01-08-2011

Owning School/Faculty: Computing and Mathematical Sciences
Teaching School/Faculty: Computing and Mathematical Sciences

Team	emplid	Leader
David Llewellyn-Jones		Y

Academic Level:	FHEQ7	**Credit Value:**	15.00	**Total Delivered Hours:**	28.00
Total Learning Hours:	150	**Private Study:**	122		

Delivery Options
Course typically offered: Runs Twice - S1 & S2

Component	Contact Hours
Lecture	12.000
Practical	10.000
Seminar	6.000

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Report	AS1	Critical Analysis of Video / Comparison techniques (4,000 - 6,000 words).	50.0	
Report	AS2	Case Study Analysis and Development Report (2,000 - 3,000 words).	50.0	

Aims

To further the student's knowledge and appreciation of Video Forensic procedures.
To understand multimedia presentation techniques and the importance of maintaining evidential integrity.
To advance the skills required to conduct Image comparisons between Video and

Image Material.

Learning Outcomes

After completing the module the student should be able to:

1   Deep understanding of the technical limitations of Analogue Video and methods of recording, playback and investigation.
2   Demonstrate knowledge of Image Comparison techniques utilising video and Image software.
3   Conduct a scene analysis for the purpose of creating a scene model. Assess, review and present an evidential multimedia presentation utilising computer software
4   Demonstrate an understanding of the reverse projection theory and its practical uses.
5   Select and apply appropriate tools for the basic recovery of corrupted or proprietary video data.

Learning Outcomes of Assessments

The assessment item list is assessed via the learning outcomes listed:

Report 1   1   2

Report 2   3   4   5

Outline Syllabus

The course outline includes:
Recovery, Capture and Analysis of Analogue Video and an introduction to Analogue Video surveillance recording methods.
Utilising other forms of multimedia evidence to support the surveillance footage and methods of presentation including VideoDVD and Flash Video.
Scene modeling to aid the presentation and understanding of surveillance video footage.
The methodology and practical uses of reverse projection and the considerations when conducting the procedure.
The use of software to rebuild video data from damage/corrupted media and to carve video material from large proprietary video streams.
Video and Image Comparisons, using Standard Video and Image software.
Video Forensic Workstations. Self built or specifically marketed hardware for the purpose of Video Forensics.

Learning Activities

Online Lectures, Video tutorials and practical based private study.
Online tutorials will aid the students to complete their private study.

References

Course Material	Book
Author	Constant, M. and Ridgeon, P.
Publishing Year	2000
Title	Principles and Practice of CCTV
Subtitle	
Edition	3rd Edition
Publisher	Tavcom Training
ISBN	0947665250

Course Material	Book
Author	Senior, A.
Publishing Year	2005
Title	Protecting Privacy in Video Surveillance
Subtitle	
Edition	1st Edition
Publisher	Springer
ISBN	1848823002

Course Material	Book
Author	Harwood, E. M.
Publishing Year	2008
Title	Digital CCTV:
Subtitle	A Security Professional's Guide
Edition	
Publisher	Butterworth-Heinemann
ISBN	0750677457

Notes

This module deals with the finer aspects of CCTV evidence processing and interpretation. It provides students with the skills required for image and video analysis, along with a critical understanding of the factors that influence CCTV evidential integrity and accuracy. This module is primarily intended for those working in security or law enforcement, with an organisational role in managing the handling of CCTV evidence.