

Liverpool John Moores University

Title: Geographic Information Science and Geo-computation for Public Safety
Status: Definitive
Code: **6106PSDL** (122843)
Version Start Date: 01-08-2019
Owning School/Faculty: Justice Studies
Teaching School/Faculty: Justice Studies

Team	Leader
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Peter Williams	
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Academic Level: FHEQ6 **Credit Value:** 20 **Total Delivered Hours:** 55
Total Learning Hours: 200 **Private Study:** 145

Delivery Options

Course typically offered: Semester 2

Component	Contact Hours
Online	55

Grading Basis: 40 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Essay	AS1	1500 Word Essay	40	
Report	AS2	3000 Word Report (the output of a mini individual project)	60	

Aims

This module seeks to provide an introduction to the field of crime analysis and crime mapping for student. It will cover some history, key concepts, data, as well as analytical methods and specific techniques used in the discipline of crime science. The module will focus on the practical application of fundamental Geographic Information Systems (GIS) concepts and how they can be adapted for understanding

and interpreting crime patterns.

Learning Outcomes

After completing the module the student should be able to:

- 1 Understand, explain and assess the core concepts underpinning crime pattern analysis.
- 2 Understand, differentiate and select appropriate techniques for analysing, mapping and interpreting crime data.
- 3 Demonstrate basic or intermediate level of proficiency in the use of at least one GIS software package to examine a chosen issue.

Learning Outcomes of Assessments

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

1500 Word Essay	1	
3000 Word Report	2	3

Outline Syllabus

- o Crime Analysis and the Policing Profession*
- o Crime Analysis: Why Geography Matters*
- o Theoretical Frameworks of Crime Pattern Analysis*
- o Geographic Information Science and Systems: An Introduction*
- o Geographic Data and Crime Mapping*
- o Adding Geography to Crime Data*
- o Spatial Statistics for Crime Analysis*
- o Identifying and interpreting Crime Patterns*
- o Hot-Spots Analysis*

Learning Activities

The module will adopt a reflective approach to the subject matter providing the tools required to develop student learning and independent on-line study. It will offer several on-line teaching strategies and digital resources in order to support practical application, for example the GIS software package and how that digital analysis can inform responses to criminality.

As well as the above there will be workshops supported by online learning materials and forums which will be used to promote small group discussions in which students and the lecturer can discuss information on a chosen issue. They provide an opportunity to explore topics by discussion, and to identify opportunities to share experiences, solve problems as well as to learn and practice new skills.

Notes

The module will expose students to a range of mixed-methodological techniques with a strong quantitative element. Students will also be trained to use at least one GIS software package, which will be available via Blackboard and will be encouraged to understand its interoperability with other software.