Liverpool John Moores University

Title:	RESEARCH METHODS AND GEOSPATIAL ANALYSIS
Status:	Definitive
Code:	**7001SCSUCR** (125672)
Version Start Date:	01-08-2019
Owning School/Faculty:	Natural Sciences & Psychology
Teaching School/Faculty:	Natural Sciences & Psychology

Team	Leader
Jason Kirby	Y

Academic Level:	FHEQ7	**Credit Value:**	24	**Total Delivered Hours:**	48
Total Learning Hours:	240	**Private Study:**	192		

Delivery Options
Course typically offered: Semester 2

Component	Contact Hours
Lecture	20
Practical	20
Workshop	8

Grading Basis: 50 %

Assessment Details

Category	Short Description	Description	Weighting (%)	Exam Duration
Portfolio	Portfolio	Portfolio of research work including critical review of literature, research project proposal and GIS/Remote Sensing practicals	100	

Aims

To train students in the process of planning and executing an independent research project using appropriate methodological design.
To familiarise students with qualitative, quantitative and mixed-methods of data collection and analysis.

To be able to utilise geospatial methods (e.g. GIS and Remote Sensing) to analyse and visualise geographical data.
To develop research reporting skills through written and oral methods.

Learning Outcomes

After completing the module the student should be able to:

1	Identify a research question, problem or hypothesis and establish appropriate aims, objectives and methods to support the investigation.
2	Collate and critically discuss the existing literature in a chosen field in a written review.
3	Source, collect and analyse relevant and original qualitative and/or quantitative data.
4	Demonstrate professional competency in the use of geospatial tools in the analysis and display of geographical data.

Learning Outcomes of Assessments

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

Research Portfolio	1	2	3	4

Outline Syllabus

Approaches to research design and planning. Formulating and testing research questions. Hypothesis setting. Sourcing, reviewing and referencing literature. Introduction to Geographical data - primary/secondary data, spatial/non-spatial, quantitative/qualitative data. Sampling design and error. Numerical methods appropriate for geographical datasets. Geospatial analysis methods using a variety of specialist software. Introduction to remote sensing (e.g. visible, altimetry and radar). GIS & Remote sensing applied to environmental topics.

Learning Activities

Lectures, problem solving, practical work, workshops and discussions.

Notes

This module will deliver the fundamentals of research and serves as the developmental bridge with the initial research methods module delivered in semester 1 at SCSU. This module will develop the practical skills to undertake research, and advance students' geospatial skills through delivery of GIS and remote sensing activities.