



<b>Course Code &amp; Title</b>	<b>LISS239 GIS: Environmental Geographical Information Systems / Environmental</b>				
<b>Convenor(s)</b>	Dr Kris Chan <a href="mailto:kristofer.chan@kcl.ac.uk">kristofer.chan@kcl.ac.uk</a> ; Dr Jo Wood <a href="mailto:joanne.wood@kcl.ac.uk">joanne.wood@kcl.ac.uk</a> Department of Geography, King's College London				
<b>Institution</b>	King's College London	<b>Department</b>	LISS DTP		
<b>Academic Year</b>	2018-19	<b>Term</b>	Spring		
<b>Number of sessions</b>	10	<b>Research Platform</b>	Quantitative Research	<b>Length of Session(s)</b>	2 hours each
<b>Day, Date</b>		<b>Start : End</b>		<b>Room Location</b>	
Thursday 17 January 2019 (Lecture)		0900 : 1100		<a href="#">Bush House (SE) 6.04, Strand Campus WC2B 4PJ</a>	
Tuesday 29 January 2019 (Practical)		0900 : 1100		<a href="#">Bush House (S) 4.02, Strand Campus, WC2R 1ES</a>	
Tuesday 05 February 2019 (Practical)		0900 : 1100		<a href="#">Bush House (S) 4.02, Strand Campus, WC2R 1ES</a>	
Tuesday 12 February 2019 (Practical)		0900 : 1100		<a href="#">Bush House (S) 4.02, Strand Campus, WC2R 1ES</a>	
Tuesday 26 February 2019 (Practical)		0900 : 1100		<a href="#">Bush House (S) 4.02, Strand Campus, WC2R 1ES</a>	
Tuesday 05 March 2019 (Practical)		0900 : 1100		<a href="#">Bush House (S) 4.02, Strand Campus, WC2R 1ES</a>	
Tuesday 12 March 2019 (Practical)		0900 : 1100		<a href="#">Bush House (S) 4.02, Strand Campus, WC2R 1ES</a>	
Tuesday 19 March 2019 (Practical)		0900 : 1100		<a href="#">Bush House (S) 4.02, Strand Campus, WC2R 1ES</a>	
Thursday 21 March 2019 (Lecture)		0900 : 1100		<a href="#">Bush House (SE) 6.04, Strand Campus WC2B 4PJ</a>	
Tuesday 26 March 2019 (Practical)		0900 : 1100		<a href="#">Bush House (S) 4.02, Strand Campus, WC2R 1ES</a>	
<b>Enrolment Links:</b>	<a href="https://goo.gl/59t2eC">https://goo.gl/59t2eC</a> You *will* be prompted to log into SkillsForge				

**Course Description:**

The course introduces students to spatial data management in the context of Geographic Information Systems (GIS). The role and functionality of GIS will be described theoretically and demonstrated practically using the most commonly used proprietary and open source GIS packages including ArcView, ArcGIS, SAGAGIS and QGIS. At the end of this course students should be able to: plan, capture and manage spatial GIS data from a variety of sources (e.g. digitising, GPS, remote sensing), assess spatial data quality, manage data within a GIS environment.

The course introduces students to spatial analysis in the context of Geographic Information Systems (GIS). The role and functionality of GIS will be described theoretically and demonstrated practically using the most commonly used proprietary and open source GIS packages including ArcView, ArcGIS, SAGAGIS and QGIS. At the end of the course students should be able to: carry out spatial analysis, spatial queries and spatial data modelling and understand the role of GIS in spatial planning and decision making processes.

The module is delivered in near-weekly 2-hour sessions, with the following schedule

- Thurs 17 Jan 9-11am (Bush House SE 6.04) [JW] Introduction to GIS (LECTURE)
- Tues 29 Jan, 9-11am (Bush House S4.02) [KC] Coordinate Systems, GPS & Digitization (PRACTICAL)
- Tues 5 Feb, 9-11am (Bush House S4.02) [JW] Working with GIS & Making Maps (PRACTICAL)
- Tues 12 Feb, 9-11am (Bush House S4.02) [JW] Rasters, Surfaces and Interpolation (PRACTICAL)
- Tues 26 Feb, 9-11am (Bush House S4.02) [JW] Elkhorn Slough Data Analysis (PRACTICAL)
- Tues 5 Mar, 9-11am (Bush House S4.02) [JW] Coursework 1 Workshop (PRACTICAL)
- Tues 12 Mar, 9-11am (Bush House S4.02) [KC] Digital Elevation Models & Terrain Analysis (PRACTICAL)
- Tues 19 Mar, 9-11am (Bush House S4.02) [KC] Using global databases & Georeferencing (PRACTICAL)



## London Interdisciplinary Social Science Doctoral Training Partnership

### Advanced Research Methods in Social Sciences

Thurs 21 Mar, 9-11am (Bush House SE 6.04) [KC] Advanced Multi-Criteria Analysis & Future of GIS (LECTURE)

Tues 26 Mar, 9-11am (Bush House S4.02) [KC] Coursework 2 Workshop (PRACTICAL)

#### Reading List:

Breslin, P. (199) *Getting to Know ArcView GIS*. 3<sup>rd</sup> Ed. ESRI Press.

Heywood, I., Cornelius, S., Carver, S. (2011) *An introduction to Geographical Information Systems*. Prentice Hall

Olaya, V. (2004) A gentle introduction to SAGA GIS. <http://switch.dl.sourceforge.net/project/saga-gis/SAGA%20-%20Documentation/SAGA%20Documents/SagaManual.pdf>

Ormsby, T. et al (2010) *Getting to Know ArcGIS Desktop*. 2<sup>nd</sup> ed. ESRI Press.

Price, M. (2003) *Mastering ArcGIS*. McGraw Hill

QGIS Development Team (2012) *Quantum GIS User Guide*. Version 1.7.0 'Wroclaw'  
[http://download.osgeo.org/qgis/doc/manual/qgis-1.7.0\\_user\\_guide\\_en.pdf](http://download.osgeo.org/qgis/doc/manual/qgis-1.7.0_user_guide_en.pdf)

#### Eligibility:

This is a Master's module that PhDs can audit. Students should be planning to collect georeferenced GIS data as part of their PhD. The data could be social or environmental. The course deals with generic techniques that could apply to any georeferenced data though many of the datasets we use are environmental.

#### Pre-course preparation:

None

**Number of students:** 6 maximum