

# KISS DTC

King's Interdisciplinary Social Science Doctoral Training Centre

## Advanced Research Methods in the Social Sciences

**TITLE** KISS319: PEACE, CONFLICT, QUANTITATIVE RESEARCH AND BIG DATA

**LEADER** Dr David Hammond (visiting convenor)

**DEPARTMENT** Institute for Economics & Peace (IEP)

**ACADEMIC YEAR** 2016/2017

**TERM** Spring

**TYPE OF EVENT** Short Course

**LOCATION** James Clerk Maxwell Building & Franklin-Wilkins Building, Waterloo campus

**NUMBER OF SESSIONS** 6

**LENGTH OF SESSION** 2 Hours

<b>TIME AND DATE</b>	Tuesday 07 February 2017, 2-4pm	FWB 4.174 – Classroom
	Thursday 09 February 2017, 2-4pm	FWB 2.49 – Computer room
	Tuesday 14 February 2017, 2-4pm	FWB 4.174 – Classroom
	Thursday 16 February 2017, 10-12 noon	JCMB B20 – Computer room
	Tuesday 21 February 2017, 2-4pm	FWB 4.176 – Classroom
	Thursday 23 February 2017, 10-12 noon	JCMB B20 – Computer room

### DESCRIPTION

This course is designed to give an introduction to quantitative analysis in peace and conflict studies and how this can be combined with more traditional qualitative research through various mixed methods approaches. Through a mixture of in class and computer sessions, students will gain practical quantitative skills and guidance on how to assess quantitative research from a non-technical view point.

Due to its recent surge in popularity and prominence, the free statistical package R is used to allow students to develop skills that will be useful in their chosen areas of research. Discussions of the big data revolution and how organisations such as the United Nations and the World Bank are using this to track and understand conflict will also be covered. The combination of practical data skills along with discussions of cutting edge developments in the field will equip students with skills useful in their degrees and highly sought after in the workplace.

In addition to practical data skills, students will perform critical analysis of the quality of quantitative research using skills and tips designed for students from a non-technical background. Special cases studies will be covered of the newly influential role data has played in major events such as Brexit and the US Election.

### COURSE OUTLINE

#### **Lesson 1: Peace and Conflict Studies Introduction – Classroom – 2 hours**

- Introduction to Quantitative Research in Peace and Conflict Studies
- Discussion of the Literature
- Examples of “Big Data” applications in the field of early warning systems

- Data: Where to get it?
- Introduction to prominent composite indices – The Human Development Index, the Global Peace Index, the Positive Peace Index, the Global Terrorism Index, The Corruptions Perception Index

### **Lesson 2: Quantitative Analysis Basics – Computer Lab – 2 hours**

- Explore online peace and conflict data sources
- Data handling in Excel
- Introduction to R

### **Lesson 3: Mixed Methods in Peace and Conflict Studies – Classroom – 2 hours**

- Examples of mixed methods in the literature
- How to interpret a quantitative study for qualitative research
- How to structure a research question that allows for qualitative and quantitative analysis to support each other

### **Lesson 4: Statistical Analysis – Computer Lab – 2 hours**

- Basic statistical analysis
- Correlation, Regression, Time Series
- Using Composite Indexes in Statistics

### **Lesson 5: The Role of Data in Major Events – Classroom – 2 hours**

- The role of data in the media in UK election 2014, Brexit, US Election etc...
- Polling – How did they get it so wrong?
- Quantitative Political Forecasting –Strengths and weaknesses.

### **Lesson 6: Summary and Conclusion Workshop – Computer Lab – 2 hours**

- Individual presentations on how quantitative support existing qualitative research
- What areas could benefit from the “big data revolution”?

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## **READING LIST**

### **Quantitative Research in Peace and Conflict**

1. Collier, P, 2007, *“The Bottom Billion: Why the Poorest Countries are Failing and What can Be Done about it”*, Oxford University Press, Oxford, available at: [Available as an e-book in King’s College Library]
2. Vasquez, J, 2009, *“The War Puzzle Revisited”*, Cambridge University Press [Available as an e-book in King’s College Library]
3. Bjørge, Tore, 2004, *“Root Causes of Terrorism : Myths, Reality and Ways Forward”*, Taylor and Francis, [Available as an e-book in King’s College Library]
4. World Bank, 2011, *“The Changing Wealth of Nations”*, Available at: <http://issuu.com/world.bank.publications/docs/9780821384886>
5. OECD Handbook on Constructing Composite Indicators: Methodology and User Guide, 2008, <http://www.oecd.org/std/42495745.pdf>
6. Hammond, D, 2015, *“Mapped: How the World Became more Violent”*, The Telegraph, <http://www.telegraph.co.uk/news/worldnews/big-question-kcl/11711266/Mapped-How-the-world-became-more-violent.html>
7. Hammond, D, 2016, *“Are we becoming more violent?”*, BBC Focus, Oct/Nov 2016.

### **Applications of Big Data**

1. United Nations Survey: My World Data, <http://data.myworld2015.org/>
2. United Nations Global Pulse, <http://www.unglobalpulse.org/>

3. Crisis Net: Mapping Violence in Syria <http://blog.crisis.net/syrian-social-media-journalists-secret-weapon-in-the-crisis-data-revolution/>
4. Hatebase: Tracking Racism on Twitter, <http://www.hatebase.org/>

### Composite Indexes

1. The Human Development Report, 2014, <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>
2. The Global Peace Index 2014: Measuring Peace and Assessing Country Risk, 2014, Institute for Economics and Peace, <http://www.visionofhumanity.org/sites/default/files/2014%20Global%20Peace%20Index%20REPORT.pdf>
3. The Positive Peace Index, Chapter 3 in The Global Peace Index 2013: Measuring the State of Global Peace, [http://www.visionofhumanity.org/pdf/gpi/2013\\_Global\\_Peace\\_Index\\_Report.pdf](http://www.visionofhumanity.org/pdf/gpi/2013_Global_Peace_Index_Report.pdf)
4. The Global Terrorism Index, 2014, Institute for Economics and Peace, <http://www.visionofhumanity.org/sites/default/files/Global%20Terrorism%20Index%20Report%202014.pdf>
5. Corruptions Perception Index, Transparency International, <http://www.transparency.org/research/cpi/overview>

### Quantitative Skills

1. Everitt, B., S., and Hothorn, T., 2014, "A Handbook of Statistical Analyses Using R", [http://cran.r-project.org/web/packages/HSAUR/vignettes/Ch\\_introduction\\_to\\_R.pdf](http://cran.r-project.org/web/packages/HSAUR/vignettes/Ch_introduction_to_R.pdf)
2. Short, T, 2004, "R Reference Card", <http://cran.r-project.org/doc/contrib/Short-refcard.pdf>

<b>PREPARATION</b>	Students should be familiar with statistical concepts such as mean, median, mode, standard deviation and correlation at a basic level. Basic familiarity in Microsoft Excel is assumed.
<b>ELIGIBILITY</b>	See preparation above. You must be a KCL PhD student.
<b>NUMBER OF STUDENTS</b>	15