School of Economics and Finance Pre-Sessional Overview

**Week 0: Monday 15\textsuperscript{th} – Friday 19\textsuperscript{th} September 2014**

Pre-sessional Support Classes 1, 2 & 3

Mathematics: **Matrix algebra**

- Idempotent matrix
- Rank of a matrix
- Determinant of a matrix
- A least squares problem
- Partition
- Characteristic vector
- Diagonalisation and spectral decomposition
- Trace of a matrix
- Calculus and matrix algebra
- Optimization

**Week 1: Monday 22\textsuperscript{nd} – Friday 26\textsuperscript{th} September 2014**

Pre-sessional Lectures 4 & 5

Topics covered:

- Probability and Distribution theory
- Random variables
- Cumulative distribution function
- Descriptive Statistics
- Probability distribution

**Pre-sessional Reference Materials**

- William H. Greene, Econometric Analysis, 7/E William H. Greene