**Title and Code of Course**: Logics of the Social Sciences ERPB-MTVN-9004

**Instructor’s Name**: Professor Dr László Pólos

**Instructor’s Email Address**: laszlo.polos@durham.ac.uk

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<tr>
<th>Credit Point Value:</th>
<th>Number of Lessons per Week:</th>
<th>Type of Course:</th>
<th>Method of Evaluation:</th>
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<td>6</td>
<td>2</td>
<td>Seminar ☒</td>
<td>Oral Examination ☐</td>
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<td>Lecture ☐</td>
<td>In-Class Presentation ☒</td>
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<td>Other ☐</td>
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Logics of the Social Sciences

This course offers a tender introduction into four different logics successfully applied within the social sciences: Classical First Order Logic, what in the last 25 years has turned out to be an unavoidable tool for clarifying concepts and argumentation; Modal Logics what has an amazing width of applications ranging from modelling decision making processes under the conditions of bounded rationality to the emergence of prejudice; Dynamic Logics, that allows for modelling argumentation within theories that are still in flux; and Bayesian Probabilistic models of cognitive processes, and the avenues of research opened up due to these models.

The course is organized into four three week long modules covering these topics. No knowledge of logic(s) is presupposed, but some might turn out to be useful. The ability and willingness to think a bit abstractly might offer an alternative route.
Bibliography:

Module 1  Arguments in Classical Logic


Module 2  Modal Approaches


2. LÁSZLÓ PÓLOS, MICHAEL T. HANNAN, GRETA HSU Modalities in Sociological Arguments Mathematical Sociology (2010)


Module 3  Dynamic Approaches


Module 4  A Bayesian / Cognitive Approach


Topics to be covered:

1. Semantic Spaces, Categorisation Probabilities Bayesian Updates
2. Conceptual interferences
3. Social Cognition and Reasoning