**Advanced Statistical Methods in Space and Time**

The following is an example of a structure for a course that might be delivered to statistics or mathematical graduate students who have an interest in spatio-temporal methods and how they might be applied in epidemiological analyses. Students would be expected to be familiar with Bayesian analysis.

Reference is given to the material in the chapters in the book together with suggested times that might be dedicated to that material.

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| **Chapter** | **Sections** | **Suggested timing** |
| CHAPTER 1 - WHY SPATIO–TEMPORAL EPIDEMIOLOGY? | All | 0.5 week plus background reading |
| CHAPTER 2 - MODELLING HEALTH RISKS | 2.1, 2.8 – 2.12 inclusive | 0.5 weeks |
| CHAPTER 3 - THE IMPORTANCE OF UNCERTAINTY | All | 0.5 week |
| CHAPTER 5 - THE BAYESIAN APPROACH IN PRACTICE | All | 1 week |
| CHAPTER 7 - IS 'REAL' DATA ALWAYS QUITE SO REAL? | All | 1.5 weeks |
| CHAPTER 8 - SPATIAL PATTERNS IN DISEASE | All | 1.5 weeks |
| CHAPTER 9: FROM POINTS TO FIELDS: MODELLING ENVIRONMENTAL HAZARDS OVER SPACE | 9.1 – 9.11, 9.13, 9.14 inclusive | 2 weeks |
| CHAPTER 10 - WHY TIME ALSO MATTERS | 10.1 – 10.8 inclusive | 1 week |
| CHAPTER 11 - THE INTERPLAY BETWEEN SPACE AND TIME IN EXPOSURE ASSESSMENT | 11.1 – 11.5 inclusive, | 1 week |
| CHAPTER 13 - BETTER EXPOSURE MEASUREMENTS THROUGH BETTER DESIGN | All | 1.5 weeks |
| CHAPTER 14 - NEW FRONTIERS | All | 2 weeks |