

數學系課程核心教材內容

課程名稱：(中文) 空間統計 (英文) Spatial Statistics				開課單位	統科碩士班
				課程代碼	2315716
學分數	3	必/選修	選修	開課年級	一
<p>教學目標： This course is directed towards graduate students who are interested in analyzing spatial data. This course will focus mostly on methods, although an understanding of concepts and of the underlying ideas will be stressed.</p> <p>課程概述： In this course, I will cover three topics in spatial statistics: spatial point pattern, lattice data, and geostatistical data.</p> <p>先修科目或先備能力： 機率論</p>					
建議參考書目	<ol style="list-style-type: none"> 1. Kaluzny, S.P., Vega, S.C., Cardoso, T.P. and Shelly, A.A. (1997). S+SpatialStats User's Manual. Mathsoft, Seattle. 2. Cressie, N. (1993). Statistics for Spatial Data. Wiley. 				

課程大綱

單元主題	內容綱要	上課週數
Spatial point pattern	Introduction of homogeneous Poisson processes, tests for complete spatial randomness, clustering and regularity.	6
Lattice data	Neighborhood structures, tests for spatial correlation, spatial regression models.	5
Geostatistical data	Variogram estimation, universal kriging models, data analysis	5