Programme	Semester 3	Course Code	GEOG-317	Credit Hours	3
Course Title	Geo Statistics				

Course Introduction

- To help students understand the use and application of geo-statistics in GIS and remote sensing Regression and Correlation

Learning Outcomes

On the completion of the course, the students will:

1. Statistics
2. Regression and Correletaion
3. Cross validation
4. Quantile-quantile plot

Course Content		Assignments/Readings
Week 1	Introduction to Statistic	
	Data analysis and transformation	
Week 2	Sets and Probability	
	Concept of Random Variables	
Week 3	Possibilities	
Week 4	Probabilities and expectations	
Week 5	Directional semi-variograms	
Week 6	Sampling Theory	
Week 7	Estimation Theory	
Week 8	Testing Hypothesis: One sample Tests, Two Sample Tests	
Week 9	Regression and Correlation	
Week 10	Analysis of Variance	
Week 11	The Chi-Square Distribution	
Week 12	Quantile-quantile plot	

Week 13	Spatial autocorrelation and directional influences	
Week 14	Cross validation	
Week 15	Statistics, data analysis and transformation.	
	Directional semi-variograms.	
Week 16	Quantile-quantile plot	

Textbooks and Reading Material

1. Peter J., Diggle, Paulo J., Ribeiro, Jr. (2007). Model-based geostatistics, Springer.
2. Remy, N., Boucher, A. and Wu, J. (2009). Applied Geostatistics with SGeMS: A User's Guide.
3. Roger S., Bivand, Edzer J., Pebesma and Gómez-Rubio, V. (2009). Applied Spatial Data Analysis with R (Use R).
4. Sarma, D.D. (2009). Geostatistics with Applications in Earth Sciences,
5. Webster, R. and Margaret A. Oliver (2007). Geostatistics for Environmental Scientists (Statistics in Practice).

Teaching Learning Strategies

1. Lectures
2. Written Assignments
3. Quizs
4. Lab Work

Assignments: Types and Number with Calendar

1. Practical
2. Quiz
3. Presentation
4. Assignment