

Course Outline

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| Course | Statistical Inference for Managers |
| Term | Spring, 2011, MBA(Evening) |
| Instructor | Name: Dr. Muhammad AZAM Phone: (021) 34987724-Ext: 315 Email: azam.m@iuk.edu.pk |
| Duration: 1 Week | <ul style="list-style-type: none"> ▶ Introduction to Statistical Inference for Managers ▶ Central Tendency (Mean Median and Mode etc...) ▶ Normal Distribution |
| Duration: 2 Weeks | <ul style="list-style-type: none"> ▶ Estimation of Population Parameter <ul style="list-style-type: none"> ◆ Point Estimation ◆ Interval Estimation ▶ General Procedure for testing Hypothesis ▶ Test Hypothesis <ul style="list-style-type: none"> ◆ Null and alternative hypothesis ◆ Formulation of null and alternative hypothesis ▶ One-sided and two-sided tests ▶ Test Statistic ▶ Acceptance and rejection regions |
| Duration: 2 Weeks | <ul style="list-style-type: none"> ▶ Testing of Hypothesis ▶ Test based on normal distribution and t-distribution <ul style="list-style-type: none"> ◆ Population mean ◆ Difference between two population means ◆ Population proportion ◆ Difference between two population proportion |
| Duration: 2 Weeks | <ul style="list-style-type: none"> ▶ F-Distribution ▶ Chi-Square Distribution <ul style="list-style-type: none"> ◆ Goodness of fit ◆ Test of Independence |
| Duration: 1 Week | <ul style="list-style-type: none"> ▶ Levels of Measurement ▶ Time Dimension in Research-Data Type <ul style="list-style-type: none"> ◆ Cross-Sectional Research ◆ Longitudinal <ul style="list-style-type: none"> ◆ Time-Series research ◆ Pooled data ◆ Panel study |
| Duration: 1 Week | <ul style="list-style-type: none"> ▶ Correlation analysis <ul style="list-style-type: none"> ◆ Karl Pearson's Correlation ◆ Spearman's Correlation/Rank Correlation |
| Duration: 2 Weeks | <ul style="list-style-type: none"> ▶ Regression Analysis <ul style="list-style-type: none"> ◆ Simple Regression ◆ Multiple Regression ▶ Analysis of Variance (ANOVA) |

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| Duration: 1 Week | ► Assumptions of Ordinary Least Squares(OLS) Method <ul style="list-style-type: none"> ◆ Autocorrelation ◆ Multicollinearity ◆ Heteroskedasticity |
| Duration: 3 Weeks | ► Statistical Software/tool- Computer Lab <ul style="list-style-type: none"> ◆ SPSS ◆ SAS |
| Reference Books | <ul style="list-style-type: none"> ◆ Statistical Inference by George Casella ◆ Introduction to Statistical Inference by E.S Keeping ◆ Principles of Statistical Inference by David Cox ◆ Essentials of Statistical Inference by R.L. Smith ◆ Foundations of Statistical Inference by Yoel Haitovsky |