

## Global Learning Semesters

### Course Syllabus

Course: IMG-386 Quantitative Methods

Department: Management and MIS

Host Institution: University of Nicosia, Nicosia, Cyprus



Course Summary		
Course Code	Course Title	Recommended Credit Hours
IMG-386	Quantitative Methods	3
Semester Offered	Contact Hours	Prerequisites
Please contact us	42-45	ECON-261, ECON-262
Department	Level of Course	Language of Instruction
Management and MIS	Upper Division	English

### Course Description

Study and application of Econometric and other quantitative techniques in business and economics, and evaluation techniques for projects. Evaluation of macroeconomics indicator.

### Prerequisites

ECON-261, ECON-262

### Topic Areas

General Topic Areas

1. Graphs and Charts
2. Regression Analysis
3. Forecasting Models
4. Time Series Analysis
5. Index Number

Specific Topics to be Covered

1. Graphs and charts: Bar Charts, Histogram, Frequency curves, Cumulative Frequency Curves, Lorenz Curve, Z Charts.
2. Averages and measures of dispersion.
3. Introduction to Regression Analysis, Curve fittings, Derivation of least squares.
4. Review of Elementary Statistics: random Variables, Estimation, Desirable properties of estimators, Probability distributions, Hypothesis Testing and Confidence Intervals.
5. The Two Variables Regression Model. The model, Best Linear, Estimators, Hypothesis Testing and Confidence Intervals, Analysis of Variance and Correlation.
6. The Multiple Regression Model: The Model, Regression Interpretation and Statistics, F Tests, R<sup>2</sup> and Corrected R<sup>2</sup>, Multi, Beta Coefficients and Elasticities. Using the multiple Regression Model.
7. Serial Correlation and activity. Serial Correlation.
8. Forecasting Models: Single equations, Simultaneous Equation Estimation.
9. Time Series Analysis.
10. Index Numbers.

## Readings and Resources

### Required Textbooks

- Berenson et al. (1998). Business Statistics: a First Course.
- Bancroft and O'Sullivan (1993). Quantitative Methods for accounting and Business Studies (3<sup>rd</sup> ed.).