INDEX
Faculty of Applied Social Sciences & Humanities
Bachelor of Business Administration (Financial Investment Analysis) - BBA (FIA)

SEMESTER-IV

DISCIPLINE SPECIFIC CORE (DSC) COURSES

DSC 10: BASICS OF ECONOMETRICS

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Basics of Econometrics DSC-10	4	3	1	0	Class XII	Basic knowledge of statistics

Course Objective:
- The primary objective of econometrics is to apply statistical methods to economic data.
- To learn estimation and diagnostic testing of simple, multiple regression models, panel data models, and dummy variable regression with qualitative response regression models.
- Students will learn various econometric techniques such as regression analysis, panel data analysis, and instrumental variable estimation.
- They will also gain basic knowledge in using statistical software packages like Stata, R, or Python to perform econometric analysis.

Learning Outcomes:
After studying this course, the student will be able to:
- Understanding the fundamental concepts of econometrics:
- Understanding the assumptions and limitations of regression analysis:
- Understand basic econometrics and its assumptions and impact of violations of classical assumptions. They should be able to assess the violation of these assumptions and understand the implications for the validity of the results.
- Students should be able to interpret regression results accurately. They should also understand how to assess model fit, using measures like R-squared and adjusted R-squared.
- Understand models using dummy variable and qualitative response regression models.

Unit 1:   **(12 hours)**
Introduction to Econometrics and an overview of its applications; Simple Regression with Classical Assumptions; Least Square Estimation and BLUE, Properties of estimators, Multiple

Regression Model and Hypothesis Testing Related to Parameters – Simple and Joint. Functional forms of regression models.

Unit 2: **(12 hours)**
Violations of Classical Assumptions: multicollinearity, heteroscedasticity, autocorrelation and model specification errors, their identification, their impact on parameters; tests related to parameters and impact on the reliability and the validity of inferences in case of violations of Assumptions; methods to take care of violations of assumptions.

Unit 3: **(9 hours)**
What is goodness of fit? Test/Statistics used for the goodness of fit. Understanding of R Square, Adjusted R Square, Standard Error of the model, AIC, BIC and SIC. Calculation and comparison of AIC, BIC, SIC. Explain the model selection process.

Unit 4: **(12 hours)**
Dummy variables: Intercept dummy variables, slope dummy variables, Interactive dummy variables, Use of Dummy Variables to model qualitative/Binary/Structural changes, Other Functional Forms, Qualitative Response Regression Models

Recommended Computer Package to be Used: Use of software like E Views, R and STATA solving real life problems and checking assumptions and taking care of assumptions violations and testing goodness of fit.

Essential Readings:
1. Dougherty, C. (n.d.). Introduction to Econometrics. Oxford University Press.
2. Gujarati, N. D. (n.d.). Basic Econometrics. New Delhi: McGraw Hill.
3. Gujarati, N. D. (n.d.). Econometrics by Examples. New Delhi: McGraw Hill.
Additional Readings:
1. Pindyck, R. S., & Rubinfeld, D. L. (n.d.). Econometric Models and Economic Forecasts. Singapore: McGraw Hill.
2. Ramanathan, R. (2002). Introductory Econometrics with Applications. Thomson South Western.

Examination scheme and mode:

Evaluation scheme and mode will be as per the guidelines notified by the University of Delhi.

DSC 11: INVESTMENT ANALYSIS & PORTFOLIO MANAGEMENT

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Investment Analysis and Portfolio Management DSC-11	4	3	1	0	Class XII	Financial Management and Statistics

Course Objectives

- To provide a conceptual framework for analysis from an investor's perspective of maximizing return on investment
- To provide a sound theoretical base with examples and references related to the Indian financial system.
- To emphasize on understanding of the forces that influence the risk and return of financial assets and related models and theories.

Learning Outcomes

Upon completion of the course a learner shall be competent to:

- Understand the concepts of risk and return, bonds and their valuation, technical and fundamental analysis, asset pricing and risk return of portfolio.
- Understand the process of calculating risk and return, pricing of bonds along with duration, valuation of shares along with trading strategies and portfolio risk and return, pricing research reports and advice of financial firms and brokers.
- Evaluate the best measures of risk and return, bond prices and sensitivity based on other variables, share valuation models and techniques of arriving at portfolio risk and return.
- Analyse the outcomes of evaluation to choose the best return risk asset, change in bond price based on changes in interest rate etc., execute buy and sell transactions based on fundamentals and trends in the respective asset and compare the risk return ratios of various assets and portfolios so as to choose the optimal portfolio.
- Create trading and investment strategies for maximising returns in the financial markets and also create a portfolio of investments to achieve the best risk return trade-off.

Course Contents:

Unit 1: Risk–Return Analysis, Bond Valuation & Fundamental Analysis   (12 hours)
Basics of risk and return: concept of returns, application of standard deviation, coefficient of variation, beta, alpha. Bonds: present value of a bond, yield to maturity, yield to call, yield to put, systematic risk, price risk, interest rate risk, default risk. Fundamental analysis: EIC framework; Economic analysis: Leading lagging & coincident macro-economic indicators,

Expected direction of movement of stock prices with macroeconomic variables in the Indian context; Industry analysis: stages of life cycle, SWOT analysis, Company analysis.

Unit 2: Share Valuation & Technical Analysis   (12 hours)
Share valuation: Dividend discount models – no growth, constant growth, and two stage growth model. Relative valuation models using P/E ratio, other ratios. Technical analysis: meaning, assumptions, difference between technical and fundamental analysis; Price indicators – Dow theory, advances and declines, new highs and lows, circuit filters. Volume indicators – Dow Theory, small investor volumes. Other indicators – institutional activity, Trends: resistance, support. Technical charts & patterns. Indicators: moving averages.

Unit 3: Portfolio Analysis and Management   (12 hours)
Portfolio analysis: portfolio risk and return, Markowitz portfolio model: risk and return for 2 and 3 asset portfolios, concept of efficient frontier & optimum portfolio. Market Model: concept of beta, systematic and unsystematic risk. Investor risk and return preferences: Indifference curves and the efficient frontier, Traditional portfolio management for individuals: Objectives, constraints, time horizon, current wealth, tax considerations, liquidity requirements, and anticipated inflation. Asset allocation: Asset allocation pyramid, investor life cycle approach. Portfolio management services: Passive – Index funds, systematic investment plans. Active – market timing, style investing.

Unit 4: Asset Pricing Models and Mutual Funds   (9 hours)
Capital asset pricing model (CAPM): Efficient frontier with a combination of risky and risk-free assets. Assumptions of single period classical CAPM model. Expected return, required return, overvalued and undervalued assets as per CAPM. Multiple factor models: Arbitrage Pricing Theory (APT), APT vs CAPM. Mutual Funds: Introduction, classification of mutual fund schemes by structure and objective, advantages and disadvantages of investing through mutual funds. Performance Evaluation of Managed Funds using Sharpe's, Treynor's and Jensen's measures.

Essential/recommended Readings
1. Reilly, F. K. & Brown, K.C. (2012) *Analysis of Investments and Management of Portfolios,* (12th edition), Cengage India Pvt. Ltd.
2. Singh, R (2017): *Security Analysis and Portfolio Management,* (2nd Edition). Excel Books.
3. Kane, A., Marcus, A., & Bodie, Z. (2014). *Investments Global Edition*. Pearson.

Suggestive Readings
1. Fischer, D.E. & Jordan, R.J. (2006) *Security Analysis & Portfolio Management,* (6th edition), Pearson Education.
2. Ranganathan, M., & Madhumathi, R. (2006). *Investment Analysis and Portfolio Management*. Pearson Education.

Note: Latest edition of the readings may be used.

Examination scheme and mode:

Evaluation scheme and mode will be as per the guidelines notified by the University of Delhi.

CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITES OF THE COURSE

Course title & Code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Lecture	Tutorial	Practical/ Practice		
Income Tax Law & Practice DSC-12	4	3	0	1	Class XII	NA

Course Contents:

Unit 1: Basic Concepts   **(12 hours)**
Origin of Tax System in India; Taxation – Voluntary practice to involuntary system, Kautilya's philosophy of Taxation;

Income, person, assessee, assessment year, previous year, gross total income, total income. Residential status of individual person and its effect on tax incidence.

Unit 2: Computation of Income   **(21 hours)**
Salaries, Income from house property, Profits and gains of business or profession (Only theory), Capital gain, Income from other sources.

Unit 3: Clubbing, Setoff and Deductions   **(6 hours)**

Clubbing of income (Only theory), set-off and carry forward of losses (Only theory), Deductions under Chapter VI-A, rebates and reliefs,

Unit 4: Total Income & Tax Liability   **(6 hours)**
Computation of total income and tax liability of individuals. E filing of income tax by individuals (Practical).

Essential Readings:
- Singhania V. and Singhania, M., *Students Guide to Income Tax*, Taxman Publications.
- Ahuja, G. and Gupta, R., *Systematic Approach to Income Tax*: Bharat Law House.
- Chandra, M. and Shukla, D.C., *Income Tax Law and Practice*: Pragati Publications.

Examination scheme and mode:

Evaluation scheme and mode will be as per the guidelines notified by the University of Delhi.