## M.Sc. (FINANCIAL ECONOMICS)

### COURSE STRUCTURE AND SYLLABUS

(Effective from academic year 2018-19)

(Approved by Board of Studies on 21-3-2018; Academic Council on 28-3-2018)

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Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
FE-A-101: MICROECONOMICS

Module 1: Theories of Consumer Behaviour

Module 2: Theory of Production and Costs
Types of Resources Used in Production, Production and Costs, Production Decisions, Analyzing Costs and Production, Alternative Theories of Firms’ Behavior, Cost Functions, Marginal cost pricing, Duality between production and costs, inferior inputs

Module 3: Risk Aversion
Approximate and Compare Risk Aversion, Certainty Equivalent and Risk Premium Utility Classification according to Arrow-Pratt Index, Utility Maximising Portfolio (static approach), Maximisation of Expected Utility, Behaviour of Optimal Portfolio, The Equilibrium Price of Risk, The Intertemporal Budget Constraint, Background Risk, The Arrow-Debreu Portfolio Problem, The Demand for Contingent Claims, Measures of Risk: Domar Musgrave Index, Roy’s Safety Index, Mean –Variance Index, Semi Variance Index, Baumol’s Risk Measure, Minimax regret criteria, Decreasing Absolute Risk Aversion (DARA), Constant Absolute Risk Aversion (CARA), Increasing Absolute Risk Aversion (IARA), Decreasing Relative Risk Aversion (DRRA), Increasing Relative Risk Aversion (IRRA), Constant Relative Risk Aversion (CRRA) etc. and their comparative statics

Module 4: Markets and Competition
Review of Perfect Competition, Non-Competitive Market Structures – Monopoly, Monopsony, Non-Competitive Market Structures, Monopolistic Competition, Oligopoly models of output, decision-making, Oligopoly models of price competition, Game Theory, Global Oligopoly, Pricing Practices, Pricing of Multiple Products, Price Discrimination and Dumping, Transfer Pricing, Pricing Practice like Cost-Plus Pricing

Module 5: Theory of Incomplete Markets
Markets securities and Incomplete Markets, Arrow Debru Theorem, Possible reasons for market incompleteness, Failure of standard complete markets model, Examples of incomplete markets

Module 6: Consumption and Saving
Time Separability, Exponential Discounting, The Demand for Saving, Precautionary Saving with an Endogenous Risk, Arbitrage Theory, Definition of Arbitrage, Asset Pricing through Replicating Portfolio, Asset Pricing, Fundamental Theorem of Asset Pricing, Introduction to Interest Rate Risk, Introduction to Credit Risk

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BASIC READING LIST
• Williamson, O. E. and Winter, Sidney G. (Eds) (1993), The nature of the firm; origins, evolution and development, Oxford University Press
• Jean Tirole (2014), The Theory Industrial Organization, Prentice Hall India, New Delhi

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FE-A-102: MACROECONOMICS AND FINANCE

Objectives: This course has been specially designed to provide understanding of macroeconomics by focusing on the relation between financial markets, monetary economics and macroeconomics. The subject is placed in the context of Indian macro economy and financial sector, aiming to show how theoretical and empirical knowledge of macroeconomics and financial markets provides ways to analyse the salient problems faced by macroeconomic policy makers. It also aims at giving insight into the role of macroeconomic variables, indicators and policy measures in decision making by businesses and investors.

Module 1: Global and National Trends in Macroeconomic Indicators:

Module 2-Macroeconomic Theory in Finance Perspective:
Theoretical Underpinnings of Macroeconomics and Finance- Modern macroeconomic thought – competing schools of macroeconomic thought-- neoclassical synthesis- macro financial linkages-contemporary macro financial theories from -Keynes, Tobin to Minsky, Bernanke, Mishkin, Shiller, Krugman

Module 3: Determinants of the Money Supply, Liquidity and Credit
Theoretical and Empirical Definitions of Money The debate relating to the definition of money Liquidity theory Gurley and Shaw Hypothesis The Reserve Bank of India’s Monetary and Liquidity Aggregates--Determinants of the Money Supply-bank credit Multiplier-Determinants of credit. Central Bank and Base Money -Sources of Base Money – RBI Balance Sheet – Factors that Affect the Monetary Base – Factors that add to the Monetary Base – Foreign Exchange Rate Intervention and the Monetary Base – Factors that Subtract from the Monetary Base – The Budget Deficit and the Monetary Base -The Monetary and Fiscal Interface.

Module 4: Money Transmission Mechanics
Monetary Transmission Mechanism Channels of monetary transmission mechanism, Impediments to monetary transmission mechanism in India.

Module 5: Theoretical Framework underlying the Monetary Policy formulation

Module 6: Structure, Framework and Instruments of Monetary and credit Policy in India:
Accountability and autonomy of Reserve Bank of India – Liquidity, credit and money management framework in India, Revisiting the Choice of Nominal Anchor for India’s Monetary Policy, The Choice of Inflation Metric in India, Monetary Policy Targets Rules vs Discretion – The Taylor Rule – Numerical Target and Precision Operating Targets, Instruments and Liquidity Management, Policy measures to address the issues with Monetary transmission mechanism in India
Module 7: Macroeconomic Policy in Global Financial Environment:

Reading List:
- Bain, Keith & Howells, Peter (2009), Monetary Economics: Policy and Its Theoretical Basis, Palgrave.

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FE-A-103: ACCOUNTANCY, IFRS AND FINANCIAL STATEMENT ANALYSIS

Objectives:
The course aims at providing a thorough understanding of various essential concepts of accountancy and preparation of financial statements using the IFRS framework. The course adopts a decision-maker perspective of accounting by emphasizing the relation between accounting data and the underlying economic implications for various security market and firm level portfolio management decisions.

Module 1: Basic Principles


Module 4: IFRS 3 Business Combination, IAS 27 Separate Financial Statements IAS 28 Investment in Associates and Joint Ventures


Module 6: IAS 39 Financial Instruments Recognition and Measurement, IFRS 2 Share Based Payment


Module 8: Analysis of Companies’ Annual Reports- Provisions of the Companies Act 2013 – Provision Affecting Preparation – Presentation & Analysis of Audit Reports & Directors’ Reports, Du Pont Analysis, Other important financial ratios, Non-financial (strategic) models used for analysis of company performance

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**Reading List**


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FE-A-105: FINANCIAL INSTITUTIONS, MARKETS AND REGULATIONS

Objectives: The objective of the course is to provide a comprehensive understanding of the nature and Economic functions of the several types of financial institutions that are present in the market. It is expected that students will develop critical skills in assessing the relevance of the principles of finance and financial intermediation to real world situations, and to better understand the role that financial markets play in the business environment that they will face in the future. The focus will be on the description of Indian financial markets, institutions, instruments and policies. The Financial Regulation Course is designed to provide with the background; rationale and regimes of financial regulation in India. This understanding provides an essential background for decision making and analysis of security market transactions or policies.

Contents:

Module 1: Financial System: Structure and Role

Module 2: Banking and Non-Banking Institutions

Module 3: Money Market

Module 4: Capital Market

Module 5: Financial Regulation- Reserve Bank of India
Reserve Bank of India as a Financial regulator and Financial Authority - Regulation and supervision of banking system - Basel Norms - Early Warning Signals of Credit Deterioration and Failure in banks -
The co-ordination between the financial sector regulators like SEBI, IRDA PFRDA and the RBI - Vulnerability of Small Private Sector Banks - The Board for Financial Supervision

**Module 6: Evolving areas for Financial Regulation**

**Module 7: Regulation of Capital Market - Securities Exchange Board of India**

**Reading List:**
- Mishkin, Frederic S. Find all the books, read about the author, and more.
- Barth, James R., Caprio, Gerard, and Levine, Ross (2008), Bank Regulations are Changing: For Better or Worse?, Association for Comparative Economic Studies.

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FE-A-106: CORPORATE FINANCE AND CAPITAL BUDGETING

Objectives: The course aims at providing understanding of capital budgeting techniques, the advantages of using Net Present Value versus Internal Rate of Return to calculate the value of financing decisions or projects, when and how to use payback periods and risk analysis to rank financing decisions, identify the formulas for calculating cash flows resulting from investments and their use to determine the profitability of a financing decision or project for a business.

In terms of corporate finance best practices, students will also learn about the financial and strategic basis for financing decisions, various public and private techniques and products available for both short term and long term financing, techniques for cash flow management, forecasting and planning, and best practices of cash flow management as it applies to real life examples.

Contents:
Module 1: Introduction

Module 2: Working Capital Management

Module 3: Capital Budgeting

Module 4: Patterns of Financing

Module 5: Capital Structure & Financing of Long Term Capital

Module 6: Use of Derivatives and Corporate Finance
Reading List:


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FE-A-107: SECURITY ANALYSIS & PORTFOLIO MANAGEMENT

Objectives: This course aims at providing an in depth understanding of the theories, principles, and techniques of security valuation, analysis and portfolio management of fixed income securities, equity and derivative securities as well as portfolio management of index funds and insurance companies.

Module 1: Valuation of Equity Shares

Module 2: Valuation of Equity Shares - Fundamental Analysis

Module 3 Valuation of Equity Shares - Technical Analysis
Theory of Technical Analysis – Dow Theory– Bar Charts – Point and Figure Charts – Contrary Opinion Theories – Relative Strength Analysis – Moving Average Analysis – MACD, Oscillator, Elliot Wave Theory Evaluation of Technical Analysis

Module 4 - Portfolio Theory – Models of Risk Reward Relationship


Module 6: Evaluation of Portfolio Performance and Risk adjusted Measures

Module 7: Valuation of Fixed Income Securities
Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018


Bond Portfolio Management – Duration, Shift and Immunization – Passive and Active Strategies

Reading List:


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FE-A-108: COMPUTATIONAL FINANCE

Objectives
This course aims at providing an introduction to the computational issues in financial problems. The focus is on an understanding of the concepts and tools in computational techniques with R software. In addition, the course introduces numerical techniques for valuation, pricing and hedging of financial investment instruments such as fixed income securities and options.

Module 1: What is R
Communication with R, R software, R interfaces, R syntax, R code, R help, R packages, basic operations in R- vectors, matrices and lists in R, vector algebra, matrix algebra, computing asset returns-- Functions in R Creating functions, calling functions, computing yields, bisection method, Newton-Raphson method, computing price volatility --Graphics in R -Ggplot, spot rates, extracting spot rates from yield curves, spot rate curve and yield curve

Module 2: Data Frames in R
Organizing values into data frames, loading frames from files and merging them, working with real-world data- testing for correlation between data sets, linear models and installing additional packages, Basic R statistics, Covariance, correlation, autocorrelation, linear combinations of random variables, descriptive statistics- histograms, sample means, variances, covariances and autocorrelations

Module 3: Basic R probability
Univariate random variables and distributions, characteristics of distributions, the normal distribution, linear function of random variables, quantiles of a distribution, value-at-risk

Module 4: Computational Finance: Basic Financial Mathematics:
Time Value of Money, Annuities, Amortization, Yields ,Bonds , Bond Price Volatility .

Module 5: Computational Methods for Fixed Income Securities:

Module 6: Computational Methods for Option Pricing:

Module 7: Numerical Methods for Finance:

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Reading List:
- Financial engineering and computation by Yuh-Dauh Lyuu
- R Cookbook by Paul Teetor, O’Reilly

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Objective: The objective of this paper is to introduce some of the statistical and econometric techniques that are widely used in empirical work in economics and other related disciplines to students. It covers the problems faced in estimation and inference in the context of the single-equation linear regression model. The main objective of the paper is to teach students how to apply relevant econometric methods to analyse data and interpret the results from such analyses.

The focus is on conceptual understanding and ‘hands on’ applications using economic data drawn from real-world examples, rather than on formal theoretical proofs. By the end of the paper, students should be able to appreciate and interpret the econometric and statistical analysis reported in many studies in economics and be able to carry out and interpret their own econometric analysis.

Module 1: Review of Basic Statistical and Mathematical Concepts: Random variables and distribution, characteristics of distributions (expected value, variance, conditional expectation), sample and sampling distributions: Normal Distribution and related distributions (chi-squared, t- and F-distributions), Central Limit Theorem, estimators and estimation, properties of estimators, elements of Matrix Algebra, nature and scope and need for study Econometrics

Module 2: The Classical Linear Regression Model: Estimation and Inference: Ordinary least squares (OLS) estimation, the Classical assumptions, the Gauss-Markov theorem and properties of the OLS estimators, interval estimation and hypothesis testing and prediction, reporting and interpreting regression results, Maximum Likelihood techniques, Restricted Least Square estimation, Likelihood Ratio (LR), Wald and Lagrange Multiplier (LM) Test, Minimum Variance Bound (Rao-Cramer Inequality Theorem)

Module 3: Non-linear regression: Conversion of non-linear forms into linear forms, testing linear verses non-linear functional form, appropriateness and relevance of the choice of functional form

Module 4: Binary (or Dummy) Variables: Exogenous Dummy Variable- Formulating and interpreting coefficients on dummy explanatory variables, interactions involving dummy variables and use of dummy variables in seasonal analysis, piece wise regression analysis, the dummy variable alternative to chow test, Dependent Dummy variable - Linear Probability Model, Problems relating to LPM, Logit and Probit Model, Multinomial Choice Models: Ordered Response Model; Unordered Response Model, Censored and Truncated Regression Model

Module 5: Violation of the OLS Assumptions: Introduction, Consequences of violation of OLS assumption, GLS Estimation- Aitken’s generalization of Gauss Marks Theorem, Estimation of \( \sigma^2 \). Heteroscedasticity & Autocorrelation: Causes and consequences and remedial procedural, diagnostic test

Module 6: Multicollinearity: Introduction, perfect verses imperfect Multicollinearity, Consequences, tests for detection and remedies for Multicollinearity.

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Module 7: Lagged Variables and Distributed- Lag Models: Introduction, Consequences of applying OLS, Almon’s lag approach, Koyak Transformation: Partial adjustment hypothesis and adaptive expectations hypothesis, estimation of distributed lag models etc.

Module 8: Simultaneous Equation Models (SEM): Introduction, Structural, reduced form and final form model, Rational behind the use of SEM - simultaneous bias and inconsistency of the OLS estimator, Problem of Identification: Rank and Orders conditions, Methods of estimation: ILS, 2SLS, Instrumental Variable, LIML (LVR), Mixed estimation Method, 3 SLS and FIML methods

Note: Students will be taught software packages for performing econometric applications.
BASIC READING LIST:


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FE-A-110: FINANCIAL ECONOMETRICS
Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
Objectives: The course intends to familiarize students with the principal techniques in Financial Econometrics. The basic econometric techniques for finance like regression analysis, time series analysis, Co integration & error correction methods are covered. It should provide an understanding of the use of these techniques in financial economics.

Unit 1: Financial Econometrics: Scope and Methods

Unit 2: Modeling Univariate Time Series

Unit 3: Testing for Trends and Unit Roots
Unit Root Processes, Testing for Unit Roots- Dickey Fuller Test, Augmented Dickey Fuller Test, Phillips- Perron Test, KPSS Test, Structural Change, Problems in Testing for Unit Roots

Unit 4: Time-varying Volatility Models

Unit 5: Multivariate Time Series Analysis

Unit 6: Co integration and Error Correction Models
Linear Combinations of Integrated Variables, Co-integration and Common Trends, Co integration and Error Correction, Testing for Co integration- Engle- Granger methodology, Johansen Test

Unit 7: The Evaluation and use of Foreign Exchange Rate Forecasting Services
Introduction, Construction of the Portfolio, Different approaches to the evaluation of forecasting services, the portfolio, Composite forecast approach.

Unit 8: High-Frequency Data Analysis and Market Microstructure

**Unit 9: Introduction to Panel Data Analysis:** Fixed Effect Vs Random Effect Model- Dynamic Panel data analysis.

**Note:** Students will be trained in software packages for performing econometric applications.

**Reading List:**

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Objectives: The objective of the course is to provide an understanding of both the key features of foreign exchange markets and the actual problems of financial decision making within an environment of free flows of foreign capital and floating exchange rates. The course focuses on the nature of foreign exchange exposure and risk and its management, arbitrage, speculation, hedging, the types of foreign exchange operations, spot, forward, foreign exchange swaps, currency swaps, futures, and options.

Contents:


Reading List:

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FE-A-113: FINANCIAL DERIVATIVES

Objectives: This course provides an in depth understanding of various derivative securities and markets. It covers options, futures, forwards, swaps, interest rate forwards and options, commodity derivatives. It aims at giving the conceptual understanding as well as practical knowledge about derivative markets in India.

Contents:
Module 1: Derivative Markets

Module 2: Forwards and Futures

Module 3: Options

Module 4: Swaps

Module 5: Interest Rate Forwards and Options
Forward Rate Agreements – Interest Rate Options – Interest rate Swaptions and Forwards – Interest Rate Derivatives Strategies

Module 6: Commodity Derivatives

Reading List:
Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
• Hull, John, C. (2009), Options, Futures, and Other Derivatives, Pearson Prentice Hall.

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Objectives
The course combines applications of various financial corporate and valuation models with excel. It also provides an in depth understanding of various types of derivative structured financial products. The focus is on using Excel and VBA for pricing and valuation of derivatives, equity linked products and understanding of the latest developments.

Module 1: Corporate Finance Models with Excel

Module 2: Excel applications for Portfolio Valuation:
Introduction to portfolio models, Calculating efficient portfolios, Computing Variance Co variance Matrix, Estimating Betas and Security Market Line, The single index model, Black Littermen approach to portfolio optimization, Event Studies

Module 3: Excel applications for Option Valuation:

Module 4: Excel applications for Fixed Income Valuation:
Discount factors, spot rates, forward rates, and yield to maturity, Modelling Term structure, Arbitrage and the Law of One Price, Hedging and immunization

Module 5: Monte Carlo Methods with Excel:
Monte Carlo Simulation of the Investment Problem, Using Monte Carlo Simulation for Option Pricing, Monte Carlo plain Vanilla Call pricing convergence to Black Scholes

Module 6: Value-at-Risk (VaR): Calculation with Excel
Applied to stock, currencies, and commodities , Applied to linear and non-linear derivatives, and securities with embedded options , Structured Monte Carlo, stress testing, and scenario analysis , simulating data, Bootstrapping , Limitations as a risk measure , Coherent risk measures , Volatility Models

Module 7: Excel applications for Credit Derivatives
Credit Derivative Products – Credit Linked Notes/Collateralized Debt Obligations – Credit Derivatives/Default Risk – Pricing and Modelling – Credit Derivatives – Applications/Markets.

Module 8: New Markets

Module 9: Derivatives Trading and Portfolio Management in practice:

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**Reading List:**

- Stefano, Caselli, Stefano, Gatti (2005), Structured Finance: Techniques, Products and Market, Springer.

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Objectives: The objective of this course is to introduce financial risk management concepts and techniques that are widely used. The focus is on market risk and credit risk. The course covers the conceptual understanding and practical methods of risk identification, assessment and measurement. It also covers the risk management and control applications with real world examples. By the end of the course, students should be able to use risk measurement techniques and interpret risk profile of a firm.

Content
Module 1: Introduction to Financial Risk Management
Terminologies/Basic tenets of risk management, The meaning of risk, Types of risks – Market, Credit, Operational, Reputational, Legal & Compliance risks, like fixed income, foreign exchange, credit and equity. Risk Identification and assessment need to quantify their risk- For example Capital allocation, Economic Capital Vs Regulatory Capital, implementing suitable risk management strategies etc.

Module 2: Market Risk- Risk identification and assessment
Analysis of the organization’s portfolio and reviewing the asset classes which form a part of this portfolio. Identity the risk factors (eg: interest rate, inflation, equity prices etc.) pertaining to each of the asset classes in the portfolio. Study/Analyse the factors (eg: market liquidity, transaction costs, counterparty risk etc.) which have to be looked into before making the decision to hedge an exposure, Mean variance framework for an organization’s portfolio risk, Importance of normal distribution in finance, set correlations and their contribution to portfolio risk, Relation between the increasing number of assets and its contribution to reduction of portfolio un-systematic risk.

Module 3: Market Risk - Risk measurement
Risk measurement parameters commonly used/monitored in market risk management: Portfolio Beta, PV01, Portfolio duration (Macaulay duration, modified duration, effective duration), Key rate duration, Convexity, Spread analysis (Z-spread, Option adjusted spread), Yield curve analysis (concepts of bootstrapping of the yield curve), forward rates, Growing importance of OIS curve. Introduction to modelling in MS Excel: construction of the zero curve, forward rates, basis adjustments to swap curves etc.

Module 4: Volatility and Market risk measurement models
Understanding volatility, Definition and insight into portfolio volatility, Volatility smiles, Introduction to volatility surfaces, Popular methods to measure portfolio volatility followed in the financial industry, Concept of Value at Risk, Types of VaR measures (VaR, incremental VaR, stressed VaR, etc.) Methodologies for measurement of VaR: Variance-Covariance VaR, Historical VaR, Monte-carlo VaR, Calculation of a portfolio VaR, VaR reporting to RBI, Measuring risk using Value-at-Risk, Marginal and relative VaR, Stress testing and back-testing VaR, Conditional VaR and its relevance, Comparison between VaR and cVaR.

Module 5: Extreme Values, Quantiles, and Value at Risk

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**Module 6: Market Risk - Market Risk Management/Control**
Role of derivatives in market risk management, Forward contracts, Futures contracts, Options contracts, Swaps contracts, Using interest rate derivatives (Cap, Floor, Collar etc.) Greeks Analysis: Definitions of various Greeks, Greeks measurement and analysis (Delta, gamma, theta, rho), Concept of delta hedging using options, introduction to gamma hedging and vega hedging

**Module 7: Credit Risk**
Risk identification and assessment: Introduction to credit risk, Credit risk management process, Risk measurement: Credit risk management strategies – Credit VaR, Analysis of counterparty credit ratings and adjustment of credit spreads in the valuation etc., Market Risk management/control: Introduction to Credit Value Adjustments (CVA) in financial instrument valuations, Credit default swaps (CDS), collateral management

**Module 8: Continual monitoring and feedback for market and Credit Risk Management**:
Overview of organizational level policies/procedures, Internal risk reporting, Regulatory risk reporting, Typical MIS reporting in an organization

**Reading List:**
- Advanced Financial Risk Management: Tools and Techniques for Integrated Credit Risk and Interest Rate Risk Management (Wiley Finance) by Donald R. Van Deventer, Kenji Imai & Mark Mesler

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**FE-A-116: PROJECT APPRAISAL AND FINANCE**

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
**Objectives:** The objective of this course is to familiarise the students with the project appraisal types, risk analysis, project financing costing and valuing; it also provides an overview of global project appraisal issues. The course aims at providing an understanding of practical aspects like, project administration, negotiation and preparation of project report.

**Contents:**

**Module 1: An Overview of Project Finance**
Introduction to project finance and overview of the project finance, market, project life cycle and its impact on the feasibility – Project identification and formulation – Different types of needs leading to different types of projects under BMRED (Balancing, Modernization, Replacement, Expansion and Diversification) – Considerations involved in decision under each of these types – Macro parameters in project selection – Different considerations for project under private, public and joint sectors – Project formulation: preparation of project profile, project report and detailed project report – Broad criteria for pre-investment decisions.

**Module 2: Project appraisal**

**Module 3: Project Risk Analysis**

**Module 4: Global Projects - Issues**

**Module 5: Project Financing**

**Module 6: Project Cost Systems**
- Direct measurement of work quantities – Labour cost analysis – Equipment accounting – Activity-based cost accounting – Production rates for estimates – Control of cost – Computer application to cost control – Concepts and uses of Project Evaluation and Review Techniques (PERT) – Cost as a function of time – Project evaluation and reviews techniques/cost mechanisms – Accountant’s role in project evaluation and review techniques/cost budgeting – Determination of least cost duration – Post project evaluation.

**Module 7: Valuing Projects**
Appraising a Project by Discounting and Non Discounting Criteria – Appraising Projects with Special Features – FCF Approach – ERR Approach – Real Options – Issues in valuing long term projects.

**Module 8: Project Administration**
Progress payments – Expenditure planning – Project scheduling and network planning – Use of Critical Path Method (CPM) – Schedule of payments and physical progress – Time cost trade off – Cash flow preparing – Cash forecast and monitoring of fund and other resources – Control of groups of projects under one administration and associated problems in sharing resources.

**Module 9: Project Negotiation**
Multiple Projects and Constrains – Conflicts in Ranking of Projects by Different Criteria – Resolution of the Conflict in Ranking – Techniques for Selection of more than One Project from a Group

**Module 10: Detailed Project Reports**

**Reading List:**
- Grundy, Tony (2003), Strategic Project Management, 1st ed. PA (I) Pvt. Ltd.

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**FE-A-117: STATISTICS AND OPERATIONS RESEARCH**
Objective
The objective of this course is to familiarize students with statistical theory and its application as the foundations for data analysis, as well as to acquaint them with basic and intermediate techniques from the field of operations research. Students at the end of the course should be familiar with the analysis and interpretation of data, along with hands on training in both of these fields.

Module 1: Testing of hypothesis: Simple versus composite hypothesis, critical region, type I and type II errors, power of a test, The Decision Rule, trinity of classical tests (Wald test, Lagrange multiplier, likelihood ratio), application of hypothesis testing with known and unknown variances, test for correlation,


Module 4: Bivariate Distributions; Contingency tables, joint and conditional distributions, odds ratio, test of independence, Analysis of Variance (ANOVA), analysis of covariance.


Module 6: Introduction to OR; Basic algorithms; Linear programming (LP), Graphical and Simplex; LP Formulation and LP with solver and sensitivity analysis; Transportation and transshipment models; Simulation; Decision Analysis

Module 7: Advanced algorithms in OR; Goal Programming; Queuing Theory; Networking Models; Markov chains; Data Envelopment Analysis (DEA); Analytical Hierarchical processing (AHP)

Reading List

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
• Quantitative Analysis for Managerial Decision Making By Render and Stair
• Operations Research by Hiller and Liberman
• Operations Research by Hamdy and Taha

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FE-A-118: BUSINESS ANALYTICS

Description:

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
This Learning path enables participants to gain three critical skills: data analysis and problem solving framework, the ability to perform descriptive analytics and visualization, and the expertise to build and implement the most widely used data science and machine learning algorithms in use today, with R.

**Module 1: The need for Analytics and Understanding Analytics**
1. Decision Making – Heuristics and Biases
2. The need for analytics
3. Impact of analytics on business
4. Being analytically competitive
5. The difference between analytics and BI
6. Introduction to the business Analytics model
7. Types of analytics
8. Models and algorithms in Analytics
9. The Analytics Methodology

**Module 2: Tool and Tech Landscape**
1. A review of technology used in data storage, data processing, and data science
2. Popular tools used in Data Science and when to use each

**Module 3: Descriptive Analytics with excel and Tableau**
1. An introduction to Tableau
2. Using descriptive statistics in analysis and reporting
3. Advanced reporting with Tableau

**Module 4: R programming**
1. An introduction to R
2. Importing and exporting data in R
3. Data Manipulation with R
4. Advanced Data Manipulation with R
5. Data Visualization with R

**Module 5: Data Preprocessing**
1. Data Exploration and Assessment for Data Science
2. Identifying and dealing with noise in Data
3. Preparing data for Data Science Modeling

**Model 6: Predictive Models in R**
1. Linear Regression Models and their applications
2. Logistics Regression Models and Their applications

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
3. Time Series Forecasting

Model 7: ML Models in R

1. Clustering Algorithms and application
2. Decision Tree Algorithms and applications
3. Random Forest Algorithms and applications

Model 8: Storytelling with Data

1. Communicating data science results
2. Effective presentation skills
3. Using Data visualizations for storytelling

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FE-B-101: INTERNATIONAL FINANCE - II

Objectives: This course offers a comprehensive discussion of principles of financial economics to explain how international corporate finance decisions are made in the real world. It particularly tries
to address the issues and problems of the international investment management & financing by the firms and multinational corporations in the global financial markets. This course also covers firm level decision making problems like valuation techniques and financing decisions in a cross-border setting, the cost of capital around the world, evaluation of investments in emerging markets, capitalizing on market imperfections while making financial and investment decisions.

Contents:
Module 1: Long Term Debt and Foreign Exchange Exposure

Module 2: Economic Foreign Exchange Exposure

Module 3: Global Finance and the Cost of Capital

Module 4: International Asset Portfolios

Module 5: Financial Management in a Multinational Firm

Module 6: International Financial Market Regulation
Regulations of FII s – Foreign Exchange Derivatives and Hedging – Financial Stability and Regulation of Foreign Exchange Flows in India.

Reading List:
• Choel, S. Eun and Bruce, Risnick (2001), International Financial Management, Tata Mc Graw Hill.

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FE-B-102: BEHAVIOURAL FINANCE

Objectives: This course examines the behavioural strategies that investors rely upon to make decisions, the structure and speculative dynamics of returns in world equity markets (from a psychological perspective), and the practical implications of behavioural finance.

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
Contents:

Module 1: Foundations of Behavioural Finance

Module 2: Investor Biases

Module 3: Asset Pricing under Prospect Theory
Basics of Prospect Theory – Prospect Theory’s Application to Finance – The Cumulative Probability Version of the Prospect Theory – Cumulative Prospect Theory and Asset Pricing – Does Prospect Theory Work

Module 4: Overconfidence and Optimism

Module 5: Theories of Overreaction and Underreaction

Module 6: The Psychology of Financial Markets

Module 7: Stock Valuation and Style Investing

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
Module 8: Efficient Markets Hypothesis and the Behavioural Finance

Reading List:

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FE-B-103: COMMERCIAL BANKING

Objectives: Introduction of financial sector reforms have drastically changed the structure of Indian banking and induced competition which not only improved profitability and efficiency of banks but also led to innovation in products and services that the banks offer. The objective of this course is to
acquaint the students with the whole gamut of banking operations and also help them become a very successful bank manager, in case they choose banking as a career.

**Module 1: Overview of workings of Commercial Banks:**
Types of Banks and their Functions, Scheduled banks, Commercial banks, Public sector banks, private sector banks (old and new generation banks), Co-operative banks, RRBs, Local area banks, NBFCs, Mutually aided co-operative societies], Deposit Products - services rendered by Banks, Fixation of Bench mark Prime lending Rate; and New Base Rate Mechanism, Concepts of Retail Banking, Corporate Banking, (Wholesale Banking); SME Banking, Retail Loans segment and Requirements of SMEs, Rural Banking, Cooperative, Nationalized Banks, RRBs, NABARD Micro Finance, Wealth Management (Private banking), Treasury management, Cash management services, Merchant banking, International banking, Fund based and Non Fund based Activities, Letters of credit and types of LCs, Bank guarantees, Solvency certificates, etc. Sources and uses of funds in banks, Basic structure of Bank Balance sheet

**Module 2: Analysis of Corporate Financial Statements**

**Module 3: Credit Risk Management & Credit Rating**
Meaning of Credit Risk, Factors Affecting Credit Risk, Steps taken to Mitigate Credit Risks, Credit Ratings, Internal and External Ratings, Methodology of Credit Rating, Use of Credit Derivatives for Risk Management, Credit Default/Stressed Assets/NPAs, Wilful Defaulters, Options Available to Banks for Stressed Assets, RBI Guidelines on Restructuring of Advances by Banks, Corporate Debt Restructuring (CDR) Mechanism

**Module 4: International Banking**

**Module 5: Risk Management**

*Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018*
Module 6: Treasury and Asset Liability Management

Reading List:
- Freixas, Xaviar, Microeconomics of Banking, 2nd Ed. MIT Press.

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FE-B-104: DEVELOPMENTAL FINANCE

Objectives: This course aims at providing an in depth discussion of various aspects and issues related to development finance. It provides an understanding of project appraisal and social cost benefit

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
analysis. The focus is on the latest sources of developmental finance including microfinance and sovereign wealth funds.

Contents:
Module 1: Overview of Development Finance

Module 2: Project Appraisal for a Developmental Project
Social cost Benefit analysis – How it differs from the private cost benefit analysis – Issues and problems – shadow pricing – methods of social cost benefit analysis.

Module 3: Government Financing of Development
Resources – Taxation – Public expenditure and deficit – Public debt – Issues related to India

Module 4: NGOs as Financing Agencies, Fundamentals of NGOs
Meaning and Definition – Role of NGOs – Types of NGOs and History of NGOs in India – NGOs and the State: Withdrawing of the State and Expanding Role of NGOs – Role of NGOs in Socio-Economic Development – Sustainability of NGOs and Globalisation – Non-Profit Financing Sources – Structure and Management – Sustaining the Social Development Partnership – International Agencies Supporting NGOs and NGOs of India Donor Agencies – World Bank, Asian Development Bank, Melinda and Gates Foundation, SEWA, PRADHAN, Disha, Asha, CINI, Seva Mandir, MYRADA.

Module 5: Inclusive Credit Policies for Developing Economies

Module 6: New Sources of Developmental Finance
Sovereign Wealth Funds and Foreign Reserve Accumulation

Reading List:
• Stiglitz, Joseph (2000), The Economics of Public Sector, W.W. Norton & Co.
• Atkinson, A. B. (Editor) (2004), New Sources of Development Finance, Nuffield College, Oxford University.

FE-B-105: STRATEGIC FINANCE & INVESTMENT BANKING

Objectives: The objectives of this course are to provide a comprehensive background of financial restructuring and mergers and acquisitions. The course aims at imparting a strong conceptual
foundation in investment banking with focus of various modelling techniques like cash-flow, LBO modelling and mergers and acquisitions modelling, it also provides an understanding of investment banking processes and best practises. The focus is on strategic perspectives, valuation methods and financing structures.

Contents:


Module 2: Broad Overview of Financial Restructuring: Changing shape of the corporates Forms of Business Alliances – Strategic Choice of Type of Business Alliance – Merger and Acquisition and Takeover – Introduction to restructuring problems – Types of mergers – Reasons for Mergers and Acquisitions: Vertical, Horizontal, Conglomerate, Concentric Mergers – Circumstances in which financial restructuring takes Place - Factors Governing the M&A Process in India - Developments in the competitive environment History of Mergers – The first to the fourth wave and causes thereof


Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
Reading List:

- Reed and Reed Lajorex (1999), The Art of Mergers & Acquisitions, McGraw Hill.
- S. Ramanujam (2000), Mergers et al., Tata MacGraw Hill.
- Sridharan and Pandian (2002), Guides to Takeover and Mergers, Wadhava Publications.
- Weston, Sen and Johnson (2003), Takeovers, Restructure and Corporate Governance, Prentice Hall.
- Stowell, David (2010), An Introduction to Investment Banks, Hedge Funds, and Private Equity: The New Paradigm, Elsevier

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**FE-B-106: MARKETING OF FINANCIAL SERVICES**

**Objectives:** The objective of this course is to introduce students to the concepts and techniques of service marketing. The course is designed to cover all-important aspects of marketing of services,
increase students understanding of marketing practices and strategies as applied in the service sector.

Contents:

**Module 1: Financial Products and Services**
Introduction to the entire product spectrum of financial services – Business logic, and how they converge and compete with one another and the value addition by specific financial services – Classification of financial products into Core Product — Banks’ savings/current accounts, term deposits, insurance- life and general insurance, pension, all other value added services as unique selling points (USP’s).

**Module 2: Marketing the Financial Products and Services**
Difference between Marketing financial services and marketing physical goods and marketing other services – Transfer of Information vs. Transfer of Physical Goods – Role of IT in marketing financial services - Relational Transactions vs One-Time Transaction

**Module 3: Regulatory Environment and Evolution of the Financial Services Industry (FSI)**
The issues and environmental forces that shape the financial services marketplace – Main features and sectors of the FSI – Marketing norms and regulations for various financial sector entities like insurance companies, NBFCs, Banks etc Regulatory guidelines by SEBI,IRDA and RBI for marketing of respective financial products in India.

**Module 4: Market Segmentation, Targeting and Positioning in the FSI**

**Module 5: Consumer Behaviour in the FSI**

**Module 6: Financial Product Designing and Launching in the FSI**

**Module 7: Distribution of Financial Products and Services**

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
Reading List:

- Estelami, Hooman (2006), Marketing of Financial Services, Dog Ear Publishing LLC.

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FE-B-107: TAXATION

Objectives: This course offers an understanding of tax implications for the managerial decisions. The focus is on various direct and indirect taxes in India and their relevance in corporate decision making.

Contents:

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018

Module 2: Tax Considerations Arising with Regard to Specific Management Decisions: Such as - Make or buy – Own or lease – Retain or replace – Repair of scrap or return – Export versus local sale – Shut down or continue – Expand or contract – Merger and acquisition – New capital investment – Tax exemptions – Various deductions under chapter VI.


Module 8: Sales Tax Act: Central Sales Tax – Definitions – Goods, dealer, business, interstate sale, sale inside a state, sale during the course of import or export, declared goods – Exemptions for High Seas Sale, Penultimate Sale, Subsequent Inter-state sale by Transfer of Documents, Branch Transfer – Liability under CST – Procedural aspects regarding registration, records, returns, payment, assessments, interest, penalties, refunds and appeals – Rates of tax under CST.

Module 9: Maharashtra Sales Tax: Liability for tax – Provisions for purchase tax, turnover tax, resale tax – Calculation of set-off – Procedural aspects regarding registration, Maintenance of records,

**Reading List:**
- Date, V. S., Indirect Taxes (Latest Edition).
- Bare Acts and rules of the relevant taxes.

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**FE-B-108: INSURANCE ECONOMICS**

**Objectives**
This course aims at providing a comprehensive understanding of economics of life assurance including the concept of risk, legal aspects of life insurance, life insurance mathematics, construction of life tables, asset management by life insurance firms, underwriting and reinsurance. This course also aims at providing a comprehensive understanding of various aspects of general assurance. The focus is on the concept of risk, legal aspects of general insurance, various classes of general insurance.

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
insurance, pricing and financing, general insurance underwriting and reinsurance

Contents

Module 1: Practice Insurance – Life and General

Module 2: Legal Aspects of Life Assurance & General Insurance

Module 3: Mathematics of Insurance

Module 4: Financial management of Life Assurance & General Insurance
Bonus / Malus methods of premium calculation – Return of premium – Premium funds – Investments – Reserves – Surplus – Valuations of Surplus

Module 5: Insurance Underwriting

Module 6: Investments – Life Office Valuations
General principles – Policy values – Retrospective and prospective methods of valuation of liabilities

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 28-3-2018

Module 8: Reinsurance
Concept and Methods – Reinsurance in India

Reading List:
• Bates, Ian & Atkins, Derek (2009), Management of Insurance Operations, Global Professional Publishing.
• Insurance Institute of India, Books on various aspects of Life Insurance (IC-22 to IC 26, IC-81, IC-85), Insurance Institute of India (latest Editions).
• Insurance Institute of India, Books on various aspects of General Insurance. IC51 to IC54, IC-71, 72, 73, 74, 77), Insurance Institute of India, (Latest Editions)

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FE-B-109: LAW AND ECONOMICS - I

PREAMBLE:
The hallmark of the new interdisciplinary field of law and economics is the application of the theories and empirical methods of economics to the legal system across the board, for example, the common law fields such as torts, contracts, property, etc. In fact, Ronald Coase's paper on "The Problem of Social Cost" (1960), Guido Calabresi's article on "Some Thoughts on Risk Distribution and the New Law" (1961), and the work of Alchian on "Some Economics of Property
Rights” (1961) had applied the methods of economics to some of the areas of law. One endeavor, which is gaining momentum and respectability, is the application of economic analysis to legal problems. The works of Richard Posner’s book on Economic Analysis of Law (1972) widely contributed to the introduction of the Law and Economics course. In addition, the economic analysis of law has extended to non-market behaviour, particularly influenced by the theoretical framework of Gary Becker on the economic analysis of crime, racial discrimination, and marriage and divorce.

Economics provides a scientific theory to predict the effects of legal sanctions on behavior. In addition to a scientific theory of behaviour, economics provides a useful normative standard for evaluating law and policy. Laws are not just arcane technical arguments. They are instruments for achieving important social goals. In order to know the effects of laws on those goals, judges and other law-makers must have a method of evaluating effects of laws on important social values. Economics predicts the effects of policies on efficiency and distribution. Economic analysis often takes for granted such legal institutions as property and contract, which dramatically affect the economy. For instance, the absence of secure property and reliable contracts paralyses the economies of some nations in third world. Economist, besides substance, can learn techniques from lawyers. For example, economists frequently support the merits of voluntary exchange, but they do not have a detailed account of what it means for exchange to be voluntary. In case of contract law, it has a complex and well-articulated theory of violation. So the economists, to find their models closer to reality, will have to listen to what the law has to teach them.

The benefits of interdisciplinary study can be had only when lawyers learn economics and economists learn something about law. Module 1 is an introduction to the concepts of economics as well as law. Modules 2 to 6 will focus on economic analysis of property law, contract law, tort law, and criminal law. Finally, Module 7 will put emphasis on competition law. Overall the course deals with the explanation of established links between the subjects of Economics and Law, and development of efficient rules and regulations.

**Module 1: Introduction to Law and Economics**

Economic Analysis of Law: An Introduction
Why do economists need to be concerned about law? - Relationship between law and economics
Economic Concepts and their relevance to Law

**Module 2: Economic Analysis of Contract Law**

Introduction - Economic Theory of Contract - Perfect Contracts, Imperfect Contracts
Economics of Remedies for Breach of Contract - Expected Damages, Opportunity Cost, Reliance Damages, Restitution, Specific Performance
Differences between Contracts and Torts - The Foreseeability Rule in Contract Law, Pure Economic loss in Torts

**Module 3: Economic Analysis of Tort Law**

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018

**Module 4: Economic Analysis of Property Law**
Introduction, An Economic Theory of Property, Economics of Property Law - Market strategies, Non- market strategies, Allocation of Property Rights - First come first served, Good faith purchase, Title to Land, Establishment of entitlements - Property Rule, Liability Rule, Inalienability Rule

**Module 5: The Coase Theorem**
Externalities, Transaction Costs, Efficiency Hypothesis & Invariance Hypothesis.

**Module 6: Economic Analysis of Criminal Law**

**Module 7: Economic Analysis of Competition Law**

**Module 8: Competition Policy in India**
Monopolies and Restrictive Trade Practices Act, and Competition Policy Report, Divestment of Public Sector Units and Deregulation, Regulated Competitions and Regulatory Authorities (Power, Telecom, Insurance, Banking)

Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
BASIC READING LIST

- Friedman David D. – Law’s Order (2000)

Further Readings

- Bouckaert, B. & De Geest, G., Encyclopedia of Law and Economics

Articles:


Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018


Additional Reading List.


Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018


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Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
FE-B-110: LAW AND ECONOMICS - II

PREAMBLE

The primary aim of this enlargement is to develop greater applied research of legal system from economic view point and also build up the Indian experience based slant to the discipline of “Law and Economics”. This course will provide not only deeper and more complex view of the subject, but also afford to take up meaningful researches in specific type of law that has immense economic bearing and implications. In particular, this course will be dealing with Indian Environmental Laws, land related legislations (including land acquisition, town-planning, SEZ) and corporate laws. This will enable more all-round perspective of the subject with rich empirical analysis. It also deals with vital areas of concern, namely economics of litigation, economic costs of “administering or not administering justice”, question of backlog of cases, alternative procedures of administering justice. Similarly, the economic analysis of law making process, machinery and its efficiency will be a distinguishing feature of this course.

Module 1: Economic Theory of Legislation: Legislative process, Delegated legislation, Precedents, Rules v/s Standard, Interpretation of Statute

Module 2: Economic Analysis of Litigation: Rules of procedure, Rules of Evidence, The adversarial and inquisitorial trial mode, Alternative dispute resolution (ADR), Lok Adalat, Arbitration, Conciliation and mediation, Settlement, Appeals and error correction, Cost of litigation, Case load and Court Delay Crisis

Module 3: Economic approach to Contract law in India: Contract Act, Specific Relief Act, Court approach to formation, validity, performance, interpretation, breach of contract and remedies for breach

Module 4: Economic Approach to Environmental Protection Laws: Environmental protection laws and Court decisions, Principles and doctrines evolved by Supreme Court for protection of Environment, Air pollution, Water pollution, Sound pollution, Automobile and industrial pollution, Climate change, Carbon credits – emerging market

Module 5: Economic Approach to Issues in Land Acquisition Laws: Acquisition of land for public purpose, Acquisition for companies, Purpose and suitability, Market value and compensation

Module 6: Town Planning Laws: Allocation of land – for residential, industrial, commercial, agricultural purposes, Reservation of land for public purpose

Module 7: Special Economic Zones: Concept, Law, Policy and Problems

Module 8: Intellectual Property Rights: Patents, Copyrights, Trademark, Trade secrets, Plant varieties & Farmers’ Rights, Salient features of Indian Laws

Module 9: Economic Analysis of Corporate Law Issues: Formation of a company, share capital and fund raising, Separation of ownership and control, Majority power and minority protection, Corporate governance, Regulation of security markets and protection of investors and SEBI, Management of foreign investment and foreign exchange under FEMA

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Syllabus: M.Sc. (Financial Economics) w.e.f. AY 2018-19. Approved by Board of Studies 21-3-2018; Academic Council 28-3-2018
FE-B-111: COMPANY LAW

Objectives: This course provides detailed exposition to legal aspects of the firm in Indian environment. The focus is on the characteristics of company as a legal entity, legal financial powers of various parties like shareholders, directors and provisions regarding multinational companies.

Module 1: Company

Module 2: Incorporation

Module 3: Shareholders

Module 4: Directors

Module 5: Dividends, Debentures, Borrowing Powers

Module 6: Majority Rule
Module 7: Other Allied Aspects

Module 8: Law and Multinational Companies
Collaboration Agreements for Technology Transfer – Control and Regulation of Foreign Companies – Taxation of Foreign Companies – Share Capital in Such Companies.

Module 9: Winding Up

Module 10: Winding Up Proceedings
Appointment of liquidator – Powers and duties of official liquidator – Liability of past members – Payment of liabilities – Preferential payments – Unclaimed dividends – Winding up of unregistered company

Module 11: Law and Economics of Corporate Law

Reading List:
• Singh, Avatar, Company Law, Eastern Book Company, Lucknow.
• Raman, Anantha, Lectures on Company Law, Wadhwa and Company.
• Majumdar, Company Law, Taxman Publications.
• (Note: The latest editions of each of the books should be referred.)

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FE-B-112: LINEAR ECONOMICS – I

Preamble

This course exposes students to developments in economic theory that have been inspired by the classical economists like Adam Smith and David Ricardo. The course begins by an exposition of the fallacies in the neo-classical theories of value and distribution and the limitations of standard general equilibrium theory. It then proceeds to cover input-output analysis and its empirical applications. Finally it covers alternatives to the neo-classical theories such including the Kaldor Pasinetti theory of income distribution and the Sraffa and Von Neumann models. Finally an alternative general equilibrium model is covered which determines prices, outputs, growth and income distribution.

Model 1


Module 2


Module 3

The Von Neumann model. The Sraffa system and its properties Standard Commodity. Reduction to dated labour.

Module 4

Alternative theories of income distribution. The Kaldor Pasinetti model and its developments.

Module 5

Closure for the Sraffa system. An alternative general equilibrium model and its empirical relevance.
Reading List:

Books:

Hadley, G(1961), Linear algebra, Addision-Wesley Massachusetts

Namboodiri, Krishnan (1984), Matrix algebra: An introduction, Sage publication, Volume -38

Lipachutz, Seymour, Linear Algebra, Third Edition, Schaum Outlines Series


Yan, Chiou Shaung (1969), Introduction to -Input-output economics, Holt, Rinehart, and Winston


Carter & Brody (1972), Applications of Input-output analysis, North Holland/Elsevier, Amsterdam United Nations, Input-output and analysis


Mathur P.N. & Bharadwaj R. (1968), An application with dynamic Input-output model for planning

Mathur P.N. & Kulkarni A.R. etc., An inter industry capital coefficient Matrix for India


**Article:**


FE-B-113: LINEAR ECONOMICS – II

Preamble

This course is a continuation of Linear Economics – I whose purpose is to expose students to alternative theories of international trade and to monetary general equilibrium theory.

Module 1

Critique, of the Heckscher-Ohlin-Samuelson trade model. ‘Two-ness’ in trade theory. Non-viability of reduction of reality to $2 \times 2 \times 2$ models. Critique of exchange rate theories: the demand supply diagram, the purchasing power parity theory, etc.

Module 2

Frank D. Graham’s theory of multicountry multicommodity trade. Extensions of the theory to tariffs, intercountry transfers and taxation. Trade in intermediate and final goods.

Module 3


Module 4

The Static Keynesian economy with money. Critique of ISLM model. Possibility of unemployment equilibrium. Fiscal Policy. General ineffectiveness of monetary policy instruments including TARP, etc.

Module 5

Dichotomy in the theories of the level and theories of the term structure of interest rates. Integrated model of the level and structure of spot interest rates.

Module 6

The dynamic Keynesian economy with money and several financial assets. General disequilibrium. Role of fiscal and monetary policies.
Reading List:

Books:

Graham, F. D. (1948), The theory of International Values; Princeton University Press


Article:


R.W. Jones (1979), International Trade: Essays in Theory, North-Holland, Amsterdam,


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