4 Year Undergraduate Course in BSc Economics

Gokhale Institute Of Politics & Economics

Gokhale Institute of Politics and Economics (GIPE)
Syllabus for the 4 Year Undergraduate Course in BSc Economics,
The semester-wise breakup of Credits

Courses BSc (Economics) (4 Years Programme) Batch 2023-2027				
Sr No	**Semester**	**Subject**	**Coding**	**Credits**
		Semester I		
1	1.1	Introduction to Calculus for Economics	C_1	4
2	1.2	Introduction to Statistics (STATA/ SPSS)	C_2	4
3	1.3	Basic Financial Methods	C_3	4
4	1.4	Principles of Economics	C_4	4
5	1.5	Indian Film Music and Indian Drama	M_1	2
6	1.6	Yoga & Mental Wellness	M_2	2
		Total		**20**
		Semester II		
7	2.1	Principles of Microeconomics	C_5	4
8	2.2	Intermediate Statistics (With STATA/ SPSS)	C_6	4
9	2.3	Intermediate Calculus for Economics	C_7	4
10	2.4	Principles of Macroeconomics	C_8	4
11	2.5	Introduction to Cost and Management Accounting	S_1	2
12	2.6	Economic Geography	In_1	2
		Total		**20**
		Semester III		
13	3.1	Intermediate Microeconomics	C_9	4
14	3.2	Introduction to Theory of Econometrics	C_10	4
15	3.3	Operations Research	C_11	4
16	3.4	Intermediate Macroeconomics	C_12	4
17	3.5	Communication Skills and Public Speaking	PS_1	2
18	3.6	Introduction to R Language	ICT_1	2
		Total		**20**
		Semester IV		
19	4.1	Intermediate Econometrics (with STATA/ R/Python)	C_13	4
20	4.2	International Trade: Pure Theory	C_14	4
21	4.3	Accounting and Financial Statement Analysis	C_15	4
22	4.4	Money Banking & Financial Markets	C_16	4
23	4.5	Demography	In_2	2
24	4.6	Database Management System	S_2	2
		Total		**20**
		Semester V		
25	5.1	Development Economics	C_17	4
26	5.2	Urban Economics	C_18	4
27	5.3	Indian Public Finance	C_19	4
28	5.4	Behavioral Economics	C_20	4
29	5.5	The Interplay of Economic Theory and Data	ICT_2	2
30	5.6	Socio Economic Supervised Learning	O_1	2
31	5.7	Summer Internship (On Job Training)		4
		Total		**24**

		Semester VI		
32	6.1	Strategy and Game Theory	C_21	4
33	6.2	Introduction to Energy and Environment Economics	C_22	4
34	6.3	Indian Economy	C_23	4
35	6.4	Multivariate Analysis	C_24	4
36	6.5	Introduction to Sociology	In_3	2
37	6.6	Academic Writing / Decision Making	PS_2	2
		Total		**20**
		Semester VII		
38	7.1	S_1		4
39	7.2	S_2		4
40	7.3	S_3		4
41	7.4	Advance Econometrics (Panel Data and Time Series)		4
42	7.5	Business Analytics (Using R and Python)		4
		Total		**20**
		Semester VIII (Honours)		
43	8.1	S_4		4
44	8.2	S_5		4
45	8.3	S_6		4
46	8.4	History of Economic Thought		2
47	8.5	Indian Economic History		2
48	8.6	Analytics Project Work		4
		Total		**20**
		Semester VIII (Honours with Research)		
43	8.1	Course on Evaluation and Monitoring		4
44	8.2	Research Project		12
45	8.3	History of Economic Thought		2
46	8.4	Indian Economic History		**2**
		Total		**20**
	Grand Total			**164**

C	Core Course
M	Multidisciplinary Course
S	Subsidiary Course
In	Inter disciplinary Course
PS	Personal Skills
O	Other Course
ICT	ICT Knowledge

Contents

Syllabus:

1.1 Introduction to Calculus for Economics

Learning Outcomes

1. To acquaint students with the basic building blocks of calculus (Module I)
2. To introduce to the students the concepts of differential calculus (Module II)
3. To familiarize students with the idea of thinking analytically about optimization (Module III)
4. To introduce the concept of integral calculus (Module IV)

Module I: An Introduction to Differentiation

- The Derivative
- Rules of differentiation,
- Increasing and Decreasing Functions
- The Chain Rule
- Concavity
- Convexity
- The Mean Value Theorem,
- L'Hospital's Rules,
- Implicit Differentiation

Module II: Differential Calculus

- Partial Differentiation,
- Taylor's Theorem
- Taylor series,
- Maclaurin Series,
- Exponential Series,
- Taylor's theorem for several independent variables.
- Applications of exponential and logarithmic functions

Module III: Optimization

- Unconstrained optimization and applications
- Single variable
- Multivariate optimization
- Local and global minima and maxima
- Constrained optimization
- The Lagrange Multiplier

Module IV: Integral Calculus

- Calculus as the antiderivative
- Area under the curve
- Basic formulae
- Definite Integrals
- Integration by Parts
- Integration by Substitution

Suggested Readings:
Books:

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1. B. Thomas and R. L. Finney, 1998, Calculus and Analytic Geometry (9th Edition), *Addison-Wesley/Narosa*.
2. R. Courant and F. John, 1999, Introduction to Calculus and Analysis Volume-1, (Reprint of the 1st Edition), *Springer Verlag, New York*.
3. Robert G. Bartle and Donald R. Sherbert, 2002, Introduction to Real Analysis (3rd Edition), *John Wiley and Sons*.
4. Tom M. Apostol, Calculus Volume I, Second Edition, *John Wiley and Sons Inc.*
5. W. Rudin, 1976, Principles of Mathematical Analysis (3rd Edition), *McGraw-Hill*.

1.2 Introduction to Statistics (STATA/SPSS)

Learning Outcomes:

1. To familiarize students with basic statistical tools and their applications (Module I)
2. To train students intensively in the building blocks of statistical concepts (Module II)
3. To introduce to them basic concepts and methods in probability theory and related areas (Module III)
4. To introduce to them the concept of, and some applications of, regression analysis (Module IV)

Module I: Basic Statistical Tools

- Definition and Importance of Statistics
- Types of Data: Nominal, Ordinal, Interval and Ratio Scale
- Variables: Discrete and Continuous Variables
- Case Study: Interpret Questionnaires
- Basic Analysis of Data Types
- Understanding the Difference Between Factors and Levels (in the Context of SPSS)
- Construction of Tables (With One or More Factors and Levels)
- Diagrammatic and Graphical Representation of Data (Bar Chart, Pie Chart)
- Frequency and Cumulative Frequency Distribution and Their Applications
- Histogram
- Frequency Polygon
- Frequency Curve
- Ogives
- Stem and Leaf Charts
- Box Plot: Examples and Problems

Module II : Moments in Statistical Theory

- Concept of Central Tendency and Its Measures
- Partition Values
- Dispersion and Relative Dispersion
- Coefficient of Variation
- Moments Up to Fourth Order and Their Measures, Uses and Limitations
- Linking of Data, Their Graphs, Their Interpretations and Relevant Applications

Module III: An Introduction to Probability

- Principle of Counting
- Permutation
- Combination
- Sample Space and Events and Random Variable
- Generating a Random Variable
- Elements of Probabilities
- Classical and Statistical Definition of Probability
- Additive and Multiplicative Theorems of Probability
- Conditional Probability and Bayes Theorem
- Standard, Discrete and Continuous Distributions Such as Binomial, Poisson and Normal Distributions with Their Properties and Applications
- Elementary Idea of Probability Mass Function
- Probability Density Function and Distribution Function

Module IV: An Introduction to Regression

- Bivariate Data: Scatter Diagram, Correlation, Regression Lines and Their Uses
- Concept of Error in Regression
- Principle of Least Square
- Fitting of Linear Regression and Related Results

Suggested Readings:
Books:

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1. Aczel, A. D., Sounderpandian, J., Saravanan, P., & Rohit, J., 2012, Complete Business Statistics (7th Edition*), McGraw-Hill.*
2. Andy Field, 2019, Discovering Statistics using IBM SPSS Statistics (4th Edition), *Sage Publication*
3. Wayne Winston, 2016, Microsoft Excel 2016 - Data Analysis and Business Modeling, *Prentice Hall India.*

1.3 Basic Financial Methods

Learning Outcomes:

1. To familiarize students with basic concepts in financial theory (Module I)
2. To introduce to students the concept and the importance of time value of money (Module II)
3. To introduce to them the idea of the trade-offs between risk and return in finance (Module III)
4. To familiarize them with the theory of the bond markets (Module IV)

Module I: The Building Blocks of Financial Theory

- What is Money?
- What is Finance?
- Difference Between Stock and Flow (Income, Wealth, Black Money, Investment)
- Monetary Assets Vs Financial Assets
- Financial Intermediaries
- Financial Systems
- Interface of Financial Management with Other Functional Areas
- Basic Financial Statement Analysis: Balance Sheet Analysis, P&L Account
- Ratio Analysis: Liquidity, Leverage, Turnover and Profitability Ratios

Module II: Time, Money and Value

- Time Value of Money: Why the Time Value of Money
- Simple Interest and Compounded Interest
- Nominal and Real Rates of Interest
- Future Value: Single Cash Flow, Multiple Cash Flows and Annuity
- Present Value: Single Cash Flow, Multiple Cash Flows and Annuity
- Growing Annuity
- Perpetuity and Growing Perpetuity
- Loan Amortization

Module III: Risk, Return and Finance

- Risk and Return: Concepts
- Relationship Between Risk and Return
- Risk Diversification
- Systematic and Unsystematic Risk
- Measuring the Risk: Variance and Standard Deviation

Module IV: Understanding the Bond Market

- Financial Securities- Bonds and Equities: Features, Types
- Interest Rates and Yields
- Current Yield
- Yield to Maturity
- Duration

Suggested Readings:
Books:

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1. Drake P.P and Fabozzi, F.J., 2010, The Basics of Finance: An Introduction to Financial Markets, Business Finance, and Portfolio Management (Frank J. Fabozzi Series), *John Wiley & Sons.*
2. Pandey, I.M., 2018, Financial Management (11th Edition), *Vikas Publishers.*
3. Shim, J.K and Spiegel, J.G., 2009, Financial Management (3rd Edition), *Schaum's Outlines Mcgraw-Hill Education.*

1.4 Principles of Economics

Learning Outcomes:

1. To teach students to think like an economist (Module I)
2. To introduce to students the concept of trade, and its importance in economics (Module II)
3. To familiarize students with the concept of market failure, and related concepts (Module III)
4. To introduce basic concepts in macroeconomic theory (Module IV)

Module I: The Art and Science of Thinking Like an Economist

- Choices
- Menu of Choices
- Thinking About Choices
- Defining a Choice Set
- Costs
- Opportunity Costs
- Sunk Costs
- Incentives
- Understanding Incentives
- Designing Incentives
- Limitation Of Incentives
- Negative Incentives
- Limitations of Negative Incentives
- Horizons
- Thinking About Long Vs Short Term Horizons
- An Introduction to Concepts in Economics: Meaning, Etymology, Definition, Limitations

Module II: Trade and its Importance to Economic Theory

- Trade
- Games
- Zero Sum Games
- Non-Zero Sum Games
- Economics as a Non-Zero Sum Game
- Importance of Markets
- Evolution of Markets
- Evolution of Trade
- Prices, Information and Action
- Importance of Property Rights

Module III: Market Failure and Why it Matters

- Externalities
- Unintended Consequences
- Shadow Pricing
- The Role of Government
- The Theory of Second Best
- What are the Alternatives?
- Information Asymmetry
- Moral Hazard
- Adverse Selection
- Competition

- Monopoly
- Network Effects
- Technology and Economics

Module IV: The Building Blocks of Macroeconomics
- Money
- Evolution of Money
- Debt, Trade and Money
- Inflation: Its Measurement and Problems
- Unemployment: Types, Measures and Problems
- Measuring Growth: The Difficulty and the Necessity

Suggested Readings:
Books:

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1. Cowen, T., 2008, Discover Your Inner Economist: Use Incentives to Fall in Love, Survive Your Next Meeting, And Motivate Your Dentist, *Plume*.
2. Deodhar, S. Y., 2016, Day to Day Economics, *Random Business*.
3. Frank, R. H., 2008, The Economic Naturalist: Why Economics Explains Almost Everything, *Virgin*.
4. Graeber, D., 2014, Debt: The First 5000 Years, *Penguin Books.*
5. Mcmillan, J., 2003, Reinventing the Bazaar: A Natural History of Markets, *Norton*.

1.5 Indian Film Music and Indian Drama

Broad Outline

SESSION No.	TOPIC	VIEWING MATERIAL
1-2	Introduction to the Course, What is Film Appreciation? What do we watch when we watch Films?	-Luck by Chance Title Sequence -One accessible short film for discussion
3-4	Cinema as a Audio-Visual, Spatio-Temporal Medium	-After Dawn (short), etc.
5-6	Editing in Films	-Kuleshov Effect Clips -Pudovkin's Montage theory Clips -Clips from Grand Budapest Hotel, Secret in their Eyes, City of God, Midnight in Paris, etc.
7-8	Understanding Mise-En-Scene	-The Undream (short) - Meat (short)
9-10	Film Sound	-Requiem for a Dream
11-12	Visual Literacy in Cinema	-Analysis and breakdown of the first scene of Inglourious Basterds
13-14	History of Global Film Movements - Early Soviet Cinema, French New Wave, German Expressionism, Dogma95, etc.	-Clips from Battleship Potemkin, Breathless, Day for Night, etc.
15-18	Music in Films	-Clips from West Side Story, For a few Dollars More, TBD
19-20	Film Adaptations from novels, biographies, historical events	-TBD

1.6 Yoga & Mental Wellness

Paper I – theory – 5 hours
Paper II – Practical – 15 hours

Topics for Paper I

1. Human biology
2. Schools of Indian Philosophy and Different tradition in Yoga
3. Science of Yoga
4. Introduction to Yoga sutra of Patanjali
5. Applications of Yoga and its relevance in the modern world (Yoga for individual growth, self-development, health, wellness)

Topics for Paper II

1. Asana
Utthita Sthiti (Standing asanas)
Upavishta Sthiti (Sitting asanas)
Paschima pratana (Forward bending asanas)
Purva pratana (Backward bending)
Parivritta Sthiti (Lateeral extension)
Viparit Sthiti (Interventions)
Udara akunchanasan (Abdominal asana)

2. Introduction to Pranayama

References

1. Light on Yoga (1963) : Yogacharya B.K.S. Iyengar – Harper Collins, India
2. Yoga shastra (2012) Tome 4 & Tome 5 – RIMYI, Pune & YOG, Mumbai
3. Yoga – Path to Holistic Health – D.K Publications
4. Preliminary Course book (2000) by Geeta S. Iyengar – Yog, Mumbai

2.1 Principles of Microeconomics

Learning Outcome:

1. To introduce to the students the basic economic principles (Module I)
2. To acquaint students with concepts of market demand and supply (Module II)
3. To introduce to the students the concepts of consumer theory (Module III)
4. To familiarise the students with the concepts of producer theory (Module IV)
5. To train the students to apply the concepts in real life scenarios (Module III and Module IV)

Module I: Basic Economic Principles

- Scope and Method of Economics
- Production and Distribution
- Scarcity and Incentives
- Reading and Understanding Graph

Module II: Demand and Supply

- Individual Demand and Supply
- Market Demand and Market Supply
- The Concept of Equilibrium
- Elasticity of Demand/Supply
- Studying Demand Curve and Supply Curve

Module III: Consumer Theory

- Budget Constraint
- Demand for Goods and Price
- Indifference Curve
- Income Effect and Substitution Effect
- Hicksian and Slutsky method of Decomposition

Module IV: Producer Theory

- Behaviour of Profit Maximizing Firms
- Concept of Iso-quant
- Firm's Equilibrium
- Concept of Costs
- Fixed Cost, Variable Cost and Average Cost

Suggested Readings:

Books:

1. Cohen, K.J. and Cyert, R.M., 1964, Theory of the Firms: Resource Allocation in a Market Economy, *Prentice Hall.*

2. Ferguson, C. E. and Gould, J.P., 1980, Microeconomic Theory, *Aitbs Publishers and Distributors.*

3. Hal R. Varian, 2010, Intermediate Microeconomics, a Modern Approach, *W.W. Norton and Company/Affiliated East-West Press (India).*

4. Karl E. Case and Ray C. Fair, 1993, Principles of Economics, *Pearson Education Inc.*

5. N. Gregory Mankiw, 2008, Economics: Principles and Applications (India Edition), *South Western, a part of Cengage Learning, Cengage Learning India.*

2.2 Intermediate Statistics (With STATA/SPSS)

Learning Outcome:

1. To introduce the applications of moments (Module I)
2. To familiarise students with the basics of hypothesis testing (Module II) (Module III)
3. To introduce the concepts and applications of time series analysis and index numbers (Module IV)

Module I: Applications of Moments

- Moments in terms of Expectation
- Random Variables and its Expectations
- Probability Generating Function
- Convergence in Probability and its Distribution

Module II: Hypothesis building

- Estimator and Estimate
- Null and Alternative Hypothesis
- Type I & Type II Error
- Level of Significance

Module III: Test of significance

- Normal Distribution
- Z-test, F-test & t-test
- P-value Approach

Module IV: Index numbers and Time series analysis

- Time Series and its Components
- Methods of Trend Estimation and Smoothing
- Measurement of Seasonal Variations
- Index Numbers - Laspeyere's, Paarsche, Splicing and Linking

Suggested Readings:
Books:

1. Anderson, Sweeney and Williams, 2014, Statistics for Business and Economics, (12th Edition), Cengage India.
2. A. Aczel and J. Sounderpandian, 2017, Complete Business Statistics (7th Edition), McGraw Hill Education.
3. Andy Field, 2019, Discovering Statistics using IBM SPSS Statistics (4th edition), Sage Publication.
4. Wayne Winston, 2016, Microsoft Excel 2016 - Data Analysis and Business Modeling, Prentice Hall India.

2.3 Intermediate Calculus for Economics

Learning Outcome:

1. To introduce to the students the fundamentals of matrix and vector algebra (Module I) (Module II)
2. To familiarize the concepts of differential equations along with its applications (Module III)
3. To introduce the students to the concepts of difference equations. (Module IV)

Module 1: Matrix and Vector Algebra

- Introduction to matrices and vectors
- Matrix Operations
- Types of Matrices
- Basic principles of matrix multiplication
- Matrix multiplication – the general case
- The matrix inverse and the solution of simultaneous equations
- Determinants and Non singularity
- Minors, cofactors and the Laplace expansion
- The transpose matrix, the adjoint and the matrix inverse formula
- Solving system of linear equations using inverse of the matrix.
- Cramer's rule
- Application to Market and National -Income Models
- The Leontief Input-Output Models

Module II: Matrix and Vector Algebra continued

- Dot product, cross product of vectors.
- Norm of a vector, Vector triple product
- Linear combinations, Linear dependence and linear independence of vectors
- Row operations
- Augmented Matrix
- Gauss Elimination method
- Rank of a matrix
- Eigen roots and eigenvalues and their interpretations from the point of view of economic theory
- Special Determinants and matrices and their application in Economics- The Jacobian
- Second-order conditions and the Hessian matrix
- Constrained optimization and the bordered Hessian

Module III: Differential Equations

- Introduction, Solutions of Differential Equations
- Non-linear differential equations of the first order and first degree
- Case I- Variable separable case,
- Case II- Differential equation with homogeneous coefficients,
- Case III- Exact differential equations;
- Linear differential equation of first order
- Linear differential equation of second order with constant coefficient
- Characteristic Roots,

- General Solution of Differential Equations Complementary function and particular integral.
- Domar Growth model

Module IV: Difference Equations

- Introduction of Difference Equations
- Solutions Homogeneous linear difference equation with constant coefficients,
- Geometric interpretation of solutions,
- Particular solutions of nonhomogeneous linear equations,
- Solving a First order difference equation
- Lagged Income determination model
- The Cobweb Model
- The Harrod Model
- Second order linear difference equations with constant coefficients
- Samuelson Multiplier-Accelerator Model

Books:

1. Alpha C. Chiang and Kevin Wainwright, Fundamental Methods of Mathematical Economics, McGraw-Hill Education, 2005
2. Alpha C. Chiang and Kevin Wainwright, Fundamental Methods of Mathematical Economics, 4th Edition, McGraw-Hill, INC.
3. An Introduction to Mathematical Economics Part 1: Michael Sampson
4. Bittinger, Ellenbogen, Surgent, Calculus and its Applications, Tenth Edition, Pearson Publication.
5. Dowling T Edward (1992), Introduction to Mathematical Economics, 2nd edition, McGraw-Hill, INC.
6. Edward T. Dowling, Introduction to Mathematical Economics, Schaum's Easy Outline, McGraw-Hill Education, 2020
7. G.F. Simmons , Differential Equations with Applications
8. Mike Rosser, Piotr Lis, Basic Mathematics for Economists, 2016, Routledge
9. Peter Hammond, Knut Sydsaeter, Arne Storm, Andrés Carvajal, Essential Mathematics for Economic Analysis. Fifth Edition, Pearson.
10. Taro Yamane (1975), Mathematics for Economists: An Elementary Survey, 2nd edition, PHI, Tokyo

2.4 Principles of Macroeconomics

Learning Outcomes

1. To familiarize the students with the basic concepts in macroeconomics (Module I)
2. To introduce students to the basics of Keynesian economics (Module II)
3. To introduce to students the building blocks of monetary economics (Module III)
4. To acquaint students with the aggregate demand-aggregate supply framework (Module IV)

Module I: An Introduction to Macroeconomic Theory

- The Data of Macroeconomics- Measurement of National Income
- Measuring the Cost of Living
- The Real Economy in the Long Run- Production and Growth
- Saving, Investment, and the Financial System
- The Basic Tools of Finance
- Unemployment

Module II: The Basics of Keynesian Economics

- Keynesian Cross
- Basic Keynesian Concepts
- An introduction to the General Theory of Interest
- Unemployment and Money

Module III: The Building Blocks of Monetary Theory

- Money and Prices
- The Monetary System
- quantity theory of money
- Measures of money supply
- credit creation
- Introduction to transmission mechanism for money

Module IV: The AD-AS Framework

- Aggregate Demand and Aggregate Supply
- The Influence of Monetary and Fiscal Policy on Aggregate Demand
- The Short-Run Trade-off between Inflation and Unemployment Economic Fluctuations

Suggested Readings:
Books:

1. Case, K. E. Fair, R. C. & Oster, S.E., 2014, Principles of Macroeconomics (10th Edition), *Pearson Education*.
2. Gupta, S. B., 2012, Monetary economics: institutions, theory and policy, *S. Chand & Company.*
3. Mankiw, N. Gregory 2008, Principles of Macroeconomics (5th Edition), *Cengage Learning.*
4. Nellis, G. Joseph and Parker, D 2004, Principles of Macroeconomics, Financial Times Prentice Hall, *Pearson Education*.
5. R. Dornbusch, S. Fischer, R. Startz., 2012, Macroeconomics (11th edition)., *Tata McGraw Hill.*

2.5 Introduction to Cost and Management Accounting

Module -1

- Management Accounting and Cost Accounting – Meaning and relevance in Economics
- Financial Accounting – Introduction and basics
- Direct and Indirect Costs, Fixed, Variable Costs and Semi Variable Costs
- Total Costs and Unit Costs, Prime Cost and Conversion Cost, Overtime Premium and Idle Time

Module -2

- Overhead Costs and their allocation
- Cost Sheet
- Job Costing and Process Costing – Introduction
- Economic Order Quantity

Module – 3

- Contribution Margin and Gross Margin Method
- Break Even Point

Module – 4

- Cost Plus pricing, Target Rate of Return pricing
- Pricing Strategies: Penetration Pricing, Skimming Pricing, Entry Preventing Price and Charm Pricing

Suggested Reading

1. Charles T. Horngren, Shrikant Datar, George Foster, Madhav Rajan, Christopher
   Ittner., 2008, Cost Accounting: A Managerial Emphasis, Pearson.
2. Joel Dean, 1951, Managerial Economics, Prentice Hall.
3. M. Y. Khan & P. K. Jain, 2006, Management Accounting, Tata McGraw Hill.

2.6 Economic Geography

Learning Outcomes

1. To acquaint the students with the basic concepts of economic geography
2. To introduce the students to the role of various resources in global economic development.
3. To familiarise the students with concepts in international trade.
4. To sensitise students to regional disparities and the impact of location on development.

Module I: An Introduction to Economic Geography

- Introduction to Economic Geography
- Introduction to globalisation
- Feudalism to capitalism

Module II: Population

- Distribution of population, density, demographic transition and development.
- Migration and its impact

Module III: Resources and their limitations

- Resources and population, resources and reserves, food resources. Renewable and non-renewable sources, The geography of energy.
- Theoretical considerations: Factors of Location, Weberian Model, Evaluation of Industrial location theory

Module IV: International Trade and Investment:

- Introduction to trade pattern, composition and economic geography,, Evolution of trade and economic geography: 1600 to 1817, 1817 to 1945, 1945 to 1991 and 1991 onwards
- International Investments and geography, economics of agglomeration and location, core and periphery arguments, Trends from 1991 onwards

Module V: Underdevelopment

- Location and Problems: major perspectives on development.
- Regional disparities.

Suggested Readings:

Books:

1. The World Economy: Geography, Business, Development. (Sixth Edition) . Frederick Stutz, Barney Warf
2. Prisoners of geography: Tim Marshall

3.1 Intermediate Microeconomics

Learning Outcome:

1. To provide students an introduction to market structures in microeconomic theory (Module I)
2. To familiarize students with the microeconomic aspects of land and labor markets (Module II)
3. To give students an introduction to general equilibrium (Module III)
4. To introduce to students the microeconomic theories of risk and uncertainty (Module IV)

Module I: Market Structures in Microeconomic Theory

- Perfect Competition
- Imperfect Competition
- Monopoly and Barriers to Entry- Output Determination and Price Rule
- Measure and Sources of Monopoly Power
- Social Costs of Monopoly Power-Deadweight Loss
- Pricing with Market Power- First-, Second- and Third-Degree Price Discrimination
- Monopolistic Competition- Short Run and Long Run Equilibrium
- Excess Capacity
- Oligopoly Equilibrium as Nash Equilibrium
- Cournot, Bertrand and Stackelberg Model - Competition versus Collusion- the Prisoners' Dilemma
- Collusive Oligopoly - Cartels and Price Leadership

Module II: The Microeconomics of Factor Markets

- Labour and Land Markets - Basic Concepts (Derived Demand, Productivity of an Input, Marginal Productivity of Labour, Marginal Revenue Product)
- Demand for Input
- Input Demand Curves
- Shifts in Input Demand Curves
- Competitive Input Markets
- Non-Competitive Input Market
- Bilateral Monopoly
- Monopsony

Module III: General Equilibrium, an Introduction

- General Equilibrium and Economic Efficiency- Exchange, Production and Welfare
- Pareto Optimality
- Edgeworth box and Contract Curve
- Pareto Efficiency and Perfect Competition
- Reasons for Market Failure
- Pareto Efficiency and Market Failure (Externalities and Public Goods)
- Property Right
- Coase Theorem

Module IV: Risk and Uncertainty in Microeconomics

- Concepts of Expected Value and Uncertainty
- Markets with Asymmetric Information-Adverse Selection, Moral Hazards, Agency Problems

Suggested Readings:
Books:

1. Ferguson, C. E., & Gould, J. P., 1989, Microeconomic Theory, *Aitbs Publishers and Distributors*
2. Lipsey, R. & Chrystal, A., 2007, Economics, *OUP*
3. Maddala, G.S., & Miller, E., 1989, Microeconomics, *Prentice Hall, McGraw Hill.*
4. Pindyck, R. S., Rubinfeld, D. L., & Mehta, P. L., 2017, Microeconomics (8^{th} Edition), *Pearson*.
5. Varian, H. R., 2010, Intermediate Microeconomics (8th Ed.), *WW Norton and Company*.

3.2 Introduction to Theory of Econometrics

Learning Outcomes:

1. To acquaint students with the building blocks of regression analysis
2. To have students work with simple regression models
3. To introduce to students the problems one encounters in regression analysis in practice
4. To introduce to students intermediate problems in regression analysis, and potential treatments of said problems

Module I: The Building Blocks of Regression Analysis

- Review of Probability and Statistics
- Univariate Case & Bivariate Case
- Random Variables and Probability Distributions
- Expectation and Moments
- Review of Statistical Inference
- Sampling Distributions and Inference
- The Central Limit Theorem (Asymptotic Distribution of The Sample Mean)
- Confidence Intervals
- Testing of Hypotheses

Module II: Running a Regression, and Understanding the Diagnostics

- Conditional Expectation Functions
- Bivariate Regression
- Sampling Distribution of Regression Estimates
- Gauss-Markov Theorem
- Asymptotic Distribution of The Sample Slope
- Residuals
- Fitted Values
- Goodness of Fit

Module III: Potential Issues with Regression Analysis

- Multivariate Regression: Anatomy of Multivariate Regression Coefficients
- Specification Analysis Omission of a Relevant Variable
- Inclusion Of Irrelevant Variable
- Tests Of Specification Errors
- Dummy Variables and Interactions
- Testing Linear Restrictions Using F-Tests

Module IV: Intermediate Problems in Regression Analysis

- Inference Problems - Heteroscedasticity and Autocorrelation
- Consequences of - Heteroscedasticity, Weighted Least Squares, The Linear Probability Model
- Serial Correlation in Time Series
- Consequences of - Quasi-Differencing, Common-Factor Restriction
- Durbin-Watson Test for Serial Correlation

Suggested Readings:
Books:

1. C Dougherty, 2011, Introduction to Econometrics, (4th edition), *Oxford University Press.*
2. Gujarati, D. N., & Porter, D. C., 2010, Essentials of econometrics, *McGraw-Hill/Irwin.*
3. Stock, J. H., & Watson, M. W., 2018, Introduction to econometrics, *Pearson.*

3.3 Operations Research

Learning Outcomes:

1. An introduction to the framing of an OR problem, and its solution by the graphical method, and by the simplex method (Module I)
2. To introduce the concept of duality, and its applications (Module II)
3. To introduce to students the idea behind nonlinear programming (Module III)
4. To familiarize students with the concepts behind Markov Chain Analysis (Module IV)

Module I: The Framing of, and Solutions for, an OR Problem

- Operations Research Models
- Solving the OR Model, Queuing and Simulation Models
- Art of Modeling
- More than Just Mathematics
- Phases of an OR Study
- Modeling with Linear Programming- Introduction
- Two-Variable LP Model, Graphical LP Solution
- Computer Solution with Solver and AMPL
- Linear Programming Applications
- The Simplex Method and Sensitivity Analysis - LP model in Equation Form
- Transition from Graphical to Algebraic Solution
- The Simplex Method, Artificial Starting Solution
- Special Cases in the Simplex Method
- Sensitivity Analysis

Module II: Duality and Related Concepts in Operations Research

- Duality and Post-Optimal Analysis - Definition of the Dual Problem
- Primal–Dual Relationships
- Economic Interpretation of Duality
- Additional Simplex Algorithms
- Dual Simplex Algorithm
- Post-Optimal Analysis
- Bounded-Variables Algorithm
- Duality
- Unboundedness and Infeasibility
- Parametric Linear Programming Transportation Model and Its Variants
- Definition of the Transportation Model
- Non-traditional Transportation Models
- The Transportation Algorithm - Determination of the Starting Solution
- Northwest-corner method
- Least-Cost Method
- Vogel Approximation Method (VAM)
- Iterative Computations of the Transportation Algorithm
- Transhipments model- Simplex Method Explanation of the Method of Multipliers
- The Assignment Model
- The Hungarian Method
- Simplex Explanation of the Hungarian Method

Module III: Nonlinear Programming in Operations Research

- Classical Optimization Theory Unconstrained Problems

- Constrained Problems - Constrained derivatives (Jacobian) Method
- Sensitivity Analysis in the Jacobian Method
- Lagrangean method - Inequality Constraints—Karush–Kuhn–Tucker (KKT) Conditions
- Sufficiency of the KKT Conditions
- Nonlinear Programming Algorithms Unconstrained Algorithms
- Constrained Algorithms- Separable Programming and Separable Convex Programming
- Quadratic Programming
- Chance-Constrained Programming
- Linear Combinations Method and SUMT Algorithm

Module IV: Markov Chains and Related Concepts

- Markov Chains: Definition of a Markov Chain
- Absolute and n-Step Transition Probabilities
- Classification of the States in a Markov Chain
- Steady-State Probabilities and Mean Return Times of Ergodic Chains
- First Passage Time
- Analysis of Absorbing States
- Simulation Modeling Monte Carlo Simulation
- Types of Simulation - Elements of Discrete Event Simulation
- Generic Definition of Events
- Sampling from Probability Distributions -Inverse method
- Convolution method
- Box-Muller Normal Sampling Formula
- Generation of Random Numbers
- Mechanics of Discrete Simulation - Manual Simulation of a Single-Server Model and Spreadsheet-Based Simulation of the Single-Server Model
- Methods for Gathering Statistical Observations - Subinterval Method and Replication Method
- Simulation Languages

Suggested Readings:
Books:

1. Taha, H., 2011, Operations Research: An Introduction (9th Ed.), *Pearson*.

3.4 Intermediate Macroeconomics

Learning Outcome:

1. To introduce the students to the basics of aggregate demand theory (Module I)
2. To introduce the interactions between aggregate demand and supply (Module II)
3. To acquaint the students with open economy models (Module III)
4. To introduce to the students the applications of intermediate macroeconomics (Module IV)

Module I: Aggregate Demand

- Aggregate Demand: Components of Aggregate Demand.
- Aggregate Demand Curve and Its Determinants.
- The Policy of Aggregate Demand Management.
- Consumption Function Investment Function, The Government and External Sector Role in Determination of Aggregate Demand.
- Aggregate Supply Meaning and Derivation of Aggregate Supply Curve. Its Determinants and Policy Implications

Module II: Interaction between Aggregate demand and Aggregate Supply

- Macroeconomic Issues and Interaction of Aggregate Demand and Supply, Including The Is-lm Approach The Macroeconomic Equilibrium - Inflation, Unemployment and Expectations Phillips Curve; Adaptive and Rational Expectations; Policy Ineffectiveness Debate.

Module III: Open Economy Models

- Open Economy Models: Mundell-Fleming Model; Exchange Rate Determination; Purchasing Power Parity; Asset Market Approach; Dornbusch's Overshooting Model; Monetary Approach to Balance of Payments; International Financial Markets.

Module IV: Application of Intermediate Macroeconomics

- Micro Foundations of Macroeconomics
- Micro Foundations Of Consumption: Fisher‘s Theory Of Optimal Intertemporal Choice; Life-cycle and Permanent Income Hypothesis; Rational Expectations and Random-walk Of Consumption Expenditure.
- Post Keynesianism Micro Foundations of Investment: Determinants of Business Fixed Investment; Residential Investment and Inventory Investment.

Suggested Readings:

Books:

1. Dornbusch, Fischer and Startz, 2010, Macroeconomics (11th Edition), Mcgraw Hill.
2. N. Gregory Mankiw., 2010, Macroeconomics (7th Edition), Worth Publishers.
3. Errol D‘souza, 2009, Macroeconomics, Pearson Education.
4. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, 2012, International Economics (9th Edition), Pearson Education Asia.

3.5 Communication Skills and Public Speaking

Learning Outcomes:

1. To introduce to students the importance of clear communication (Module I)
2. To familiarize students with the barriers to effective communication (Module II)
3. To help students learn how to design and deliver presentations (Module III)
4. To have students deliver effective presentations through practice (Module IV)

Module I: Communicating Clearly

- The Building Blocks of Communication
- The Process of communication
- The Functions, Characteristics and Types of Communication
- The Responsibilities of Sender and Receiver for effective communication
- Modes for different types of Communication agenda Listening Skills

Module II: The Barriers to Effective Communication

- Barriers to Effective Communication
- Individual Barriers to Communication
- Process Barriers to Communication
- How to Overcome Barriers?
- Concept of Grapevine and How to Avoid It: Strategic Communication
- Communicating with Different Demographics
- Communicating in Cross-Cultural Setting
- Communicating in Difficult Situations and Conflicts Polishing the Communication Skills in Knowledge Economy
- Technology in Communication
- Symbolisms in Communication - Pitch, Tone and Modulation

Module III: Designing an Effective Presentation

- Anatomy of a Successful Presentation
- Fundamental Principles of Presentation
- Expressions, Self-Awareness and Structure of the Presentation
- Understanding Your Speech Strength as a Presenter
- Psychologically Preparing Your Presentation
- Confidence Building and Positive Self Talk
- Toning the Central Message
- Introduction and Conclusion Effectively for Strong Start and End
- Effective Stage Presence and Pretext Setting
- Understanding Your Audience, Their Needs and Characteristics

Module IV: Delivering an Effective Presentation

- Presenting: Effective Visual Aids- ppts, Videos and Other Tools
- Avoiding Too Much, Too Less, Too Soon and Too Late Part of Message
- Body Language and Voice Command
- Controlling Buffer Words
- Improving Your Presentation: Strengthening Content Through Emotions, Actions, Analogies Word play and Involvement
- Managing Audience Interactions
- How and When to Use Humour in Presentation

Suggested Readings:
Books:

1. Berkun, S., 2010, Confessions of a Public Speaker, *O'Reilly*.
2. C.B. Mamoria, S. V.Gankar, 2011, Personnel Management, *Himalaya Publishing House.*
3. Robbins, S. P., Judge, T. A., & Campbell, T. T., 2017, Organizational Behaviour, *Pearson Education Ltd*.
4. Tracy, B., 2008, Speak to Win. How To Present with Power in Any Situation, *Amacom*.

Additional References:

1. Case Studies, Articles, Exercises and Live Projects (Activities)
2. Practical Through Newspaper Readings, Articles, Blogs, Books and Other Reading Materials
3. Practical Through Newspaper Readings, Articles, Blogs, Books and Other Reading Materials
4. Videos, Audios, Speeches, Writings and Other Material for Exercises

3.6 Introduction to R Language

Objectives:

1. To develop proficiency in computational thinking and problem-solving strategies using language-agnostic approaches and algorithmic thinking.
2. To gain practical knowledge of R programming, including installation, basic syntax, data structures, and functions.
3. To enhance skills in data manipulation and visualization, including using R packages, handling data frames, and creating basic graphs and charts.

Module 1: Computational Thinking Approach (4 Hours)

- Computational Thinking and Problem solving
- Language agnostics approaches
    - Problem-solving strategies
    - Algorithmic thinking
    - Iterative approaches
    - Visualizing through flow-charts
- Abstracting Commonly used Patterns – Iterators, Conditionals, Functions.

Module 2: Introduction to R (8 Hours)

- Installation of R and RStudio
- Basics of R – Objects, Variables, Datatypes
- Major R data structures: vectors, matrices, arrays, lists, and data frames
- Control structures (loops and conditionals)
- Functions: Understanding and writing Functions, Return Value, Environment & Scope.

Module 3: Effectively Using R Data Structures (8 Hours)

- R Packages and Installation.
- Slicing, Selection and Filtering.
- Vectors, Matrices and Lists.
- Data Frames and Factors.
- Good Programming Practices

Module 4: Data Manipulation and Visualization (10 Hours)

- File Reading and Writing: Text files, CSV files and Excel sheets.
- Data Manipulation : Sorting and Data Type Conversion, Aggregation (GroupBy), Missing and Duplicate Values, Merging and Joining Data Frames
- Plotting Basic Graphs & Charts: Line Plot, Bar Plot, Histogram, Scatterplot

References: Various Online Resources

- https://www.javatpoint.com/r-tutorial
- https://rstudio-education.github.io/hopr/
- https://rbasics.netlify.app/index.html
- http://home.iitk.ac.in/~shalab/sprs.htm
- https://r4ds.hadley.nz/intro
- https://cran.r-project.org/doc/manuals/

4.1 Intermediate Econometrics (with STATA/R/Python)

Objective
To acquaint the students with basic tools and techniques to do econometrics using R and Python - to familiarize students with coding and syntax requirements in R and Python - to equip students with a working knowledge of statistical theory and their application to datasets in R and Python

Learning Outcome:

1. To introduce to the students the basics of data structures and data visualization (Module I)
2. To introduce students to data handling in Python (Module II)
3. To acquaint student with linear and logistic regression in Python and R. (Module III)
4. To expose students to the application of R and Python using appropriate case studies (Module IV)

Module I: Introduction to basic data structures and data visualization

- Basic Data Structures In R: Vectors, Dataframes, Lists, Matrix.
- Importing Data From Flat Files, SQL Servers and Web
- Data Manipulation Using DPLYR: Filtering, Sorting, Selecting, Group By Operations,
- Working With Dates, Joining Dataframes, Handling Missing Values
- Data Visualization: Ggplot2, Grammar of Graphics, Building Custom Plots Using Ggplot 2

Module II: Introduction to data in Python

- Basic Python Data Structures: Numbers, Strings, Lists, Dictionary, Tuples, Files.
- Importing Data From Flat Files, Sql Servers and Web Intro To Pandas
- Data Manipulation: Filtering, Sorting, Selecting, Group by Operations, Working with Dates, Joining Data Frames, Handling Missing Values
- Data Visualization: Using Inbuilt Pandas Plotting Functions.
- Using Seaborn and Plotly.

Module III: Linear and Logistic Regression in Python and R

- Feature Engineering - Doing Sanity Checks, Imputing Missing Values, Dealing with Outliers, Binning Continuous Variables.
- Linear Regression in Python and R.
- Linear Regression: Predicting Continuous Variable Using OLS, WLS, Assumptions of
- Linear Model, constructing a Regression Model in Python, Checking Model Assumptions,
- Doing K-Fold Cross Validation
- Logistic Regression in Python and R.
- Logistic Regression: Predicting a Binary Variable, Interpreting Model Output, Using Python to Create a Logistic Model, Checking Model Diagnostics, Computing Accuracy Metrics, ROC, AUC, Kappa, Doing K-Fold Cross Validation

Module IV: Case Studies

- Case Studies: Predicting Customers Who are Likely to Default on a Loan Payment Based on Historical Data Such as NPA Status, Debt Ratio and More.
- Case Studies: Predicting the Presence of a Heart Disease in an Individual Based on Various Attributes Such as Cholesterol Levels, Heart Rate, Blood Pressure, Chest Pain Type, Blood Sugar and More.

Suggested Readings:
Books:

1. Hatekar, N., 2010, Principles of Econometrics, Sage Publications.

4.2 International Trade: Pure Theory

Learning Outcomes

1. To provide a fundamental understanding about the major principles and theories of international trade (Module I)
2. To introduce to students the basic theories that govern modern international trade theory (Module II)
3. To introduce to students some intermediate problems in international trade theory (Module III)
4. To familiarize students with the barriers to international trade (Module IV)

Module I: The Building Blocks of International Trade Theory

- Mercantilist Doctrine of Balance Trade
- Adam Smith and Absolute Advantage Theory of Trade
- Ricardo and Comparative Advantage, Its Limitations
- Production Possibility Curve
- Community Indifference Curve
- Gain From Trade
- Offer Curve
- Determination of International Equilibrium Price

Module II: The Basic Theorems of International Trade

- Different Concepts of Terms of Trade
- Factors Affecting Terms of Trade.
- Heckscher Ohlin Model
- Stolper-Samuelson Theorem
- Rybczynski Theorem
- Definitions of Factor Abundance
- Relationship Between Factor Prices and Commodity Prices
- Factor Price Equalisation Theorem
- Factor Intensity Reversal
- The Leontief Paradox.

Module III: Nuances in International Trade Theory

- Other Alternative Explanations of The Basis of Trade in Terms of Technological Lead, Domestic Market Size and Product Cycle Approach
- Linder's Hypothesis
- Intra-industry Trade

Module IV: Barriers to International Trade Today

- The Rationale of Tariffs, Quotas and Subsidies
- Infant Industry Argument
- Tariffs and Factor Income Distribution
- Tariffs, Terms of Trade and Domestic Prices
- The Optimum Tariff Rate
- Tariffs, Subsidies and Distortions in Commodity and Factor Markets
- Effective Rate of Protection
- Welfare Implications of Tariffs
- Non-tariff Barriers
- Effects of Quotas and Other Quantitative Restrictions
- Tariffs Versus Quotas

Suggested Readings:
Books:

1. Chacholiades, M., 1973, The Pure Theory of International Trade, *Routledge*
2. Salvatore, D., 1983, International Economics, *John Wiley & Sons Inc.*
3. Södersten, B. and Reed, G., 1994, International Economics, *Palgrave Macmillan*

4.3 Accounting and Financial Statement Analysis

Course Objective-

To provide students with hands-on experience analyzing financial statements. This subject will help students in learning the general concepts of accountancy, and analysis of financial statements in different ways. By the end of the course, students should be comfortable analysing and comparing the financial statements to assess company performance.

Course Outcome-

CO1- Detailed understanding of accounting concepts and principles
CO2- Preparation of Financial Statements according to Companies Act, 2013
CO3- Analysis of Income and Expenditure and Cash Flow Statements in detail.
CO4- Analysis of the balance sheet along with annual reports of various companies.

Module 1- Introduction to Accounting (10 hours)

Definition-Accounting, Business Accounting, Cost Accounting, Need for accounting, Branches of accounting, Basic terms of accounting, Difference between book keeping and accounting, accounting concepts and conventions, Rules of Accounting and its application, Accounting Principles and Accounting Standards, GAAP, Accounting Standards by ICMA, Concept of IFRS, Difference between GAAP and IFRS.

Model 2- Preparation of financial statements (10 Hours)

Journal Transactions, Ledger Transactions, Trail Balance, Income and expenditure statements, Cash Flow Statements.
Balance Sheet, Double entry accounting system, Common form of balance sheet, Presentation of the Balance sheet according to IFRS, Preparation of Balance sheet according to Companies Act 2013, Off balance sheet items.

Module 3- Analysis of Financial Statements- I (10 Hours)

Objective of Financial Statement Analysis, Techniques to analysis- Horizontal analysis and vertical analysis.
Income and Expenditure Statement-Revenue recognition, Income recognition, COGS, Gross Profit, Depreciation, Amortization, Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA), EBIT, Link between income and expenditure statement and Balance sheet.
Cash Flow statements- Cash Flow from Operations, Cash flow from financing and investing activities, Link between Cash Flow statement and Balance sheet.
Funds flow statements
Equity statements

Module 4- Analysis of Financial Statements- II (10 Hours)

Ratio analysis- Liquidity ratios, Working capital efficiency ratios, Profitability ratios, Solvency ratios, Activity Turnover ratios,

Equity Analysis- The dividend discount model, The price to earnings ratio, du point analysis. Trend analysis

Studying the annual reports of companies in different sectors in detail along with notes to consolidated statements.

Analysing and comparing the Financial Statements in detail of various companies.

Reference Material-

1. Introduction to Financial Accounting- David Annand and Henry Dauderis, Publisher- Lyryx, 2021.
2. A Manager's Guide to Finance & Accounting, Harvard Business School, E book. https://info.email.online.hbs.edu/finance-accounting-ebook?_gl=1*kaytrl*_gcl_au*OTMwNTg5OTI0LjE3MDgyNDA2Nzc.&_ga=2.203373847.745245912.1708240677-662343345.1708240677
3. Financial Accounting- Dr. S. N Maheshwari, Sixth revised edition, Vikas Publication House.
4. Introduction to Accounting-An Integrated Approach by Penne Ainsworth and Dan Deines, 2019, Wiley Publications.
5. Financial Reporting &Analysis Using Financial Accounting Information, Charles H. Gibson, 11th Edition, South-Western Cengage Learning.
6. Financial Statement Analysis- A practitioner's guide, Martin S. Fridson and Fernando Alvarez, Fifth Edition, Wiley Finance Series, Wiley Publication.
7. Financial Statement Analysis, Charles J Woelfel, 1988, Probus Publications
8. Financial Statement Analysis- K.R Subramanyam- Mc Graw Hill Publications
9. Financial Accounting- Dr. S. N Maheshwari, Sixth revised edition, Vikas Publication House.

4.4 Money Banking & Financial Markets

Learning Outcomes:

1. To introduce the students to the basic concepts of monetary economics and finance. (Module I)
2. To acquaint students with the structure and functioning of the banking and financial institutions and markets (Module II)
3. To familiarize students with the functions of, and the working of, the central bank (Module III)
4. To familiarize students with the functioning of India's money and financial markets (Module IV)

Module I: The definition, functions and measurement of money

- Money as a concept,
- Functions of Money
- Measurement of Money Supply
- Introduction To Modern Currency Systems

Module II: An Introduction to Banking in India

- Banking System
- Bank Balance Sheets
- Banks As Depository Institutions and Their Role in The Money and Credit Supply
- Indian Banking Sector Composition, Types of Banks and Contemporary Issues of Profitability and Non- Performing Assets

Module III: The role of the Central Bank

- Role of Central Banking and Monetary Policy Functions
- Goals, Targets, Indicators and Instruments of Monetary Control
- Monetary Management in An Open Economy
- Current Monetary Policy of India

Module IV: Money and Financial Markets in India

- Financial Institutions, Markets, Instruments
- Structure and Functioning of Money and Financial Markets
- Role of Financial Markets and Institutions in The Economic Growth
- Money and Capital - Instruments

Suggested Readings:
Books:

1. Bhole, L.M. and Mahukud, J., 2009, Financial Institutions and Markets, 5th Edition, *Tata McGraw Hill*,
2. Fabozzi, F.J, Modigliani, F, Jones, F.J and Ferri, M.G, 2009, Foundations of Financial Markets and Institutions (3rd edition), *Pearson Education*.
3. Mishkin, F.S., 2009, Economics of Money, Banking and Financial Markets (11th Edition), *Pearson Education*
4. Mishkin, F.S and Eakins, S.G., 2009, Financial Markets and Institutions (6th Edition), *Pearson Education*,

Additional References:

1. R.B.I. Bulletins, Annual Reports, Reports on Currency and Finance.

4.5 Demography

Objective
To understand the fundamentals of population studies and how it is related to other sciences and social sciences. To understand the world population scenario and sources of demographic data. To understand the important concepts of size, growth, distribution and characteristics of Indian population. To familiarize the students with the components of population change and its contribution in change over the time. It also includes understanding the thinking and planning about the future population by setting some short term and long term goals.

Module 1 (6 Hours)
Introduction to Demography and Population Studies, Interdisciplinary nature of Population studies, Sources of Data (Census & Sample Registration System)

Module 2 (6 Hours)
World Population Growth, India's Population Size and Growth, Sex-ratio
Age- Sex Structure, Age Pyramids, Literacy, Workforce
Household Amenities, Demographic Dividend

Module 3 (6 Hours)
Dynamics of Population Change, Fertility, Mortality, Migration and Urbanization

Module 4 (2 Hours)
Population Projections, Population Policy and Programmes

Recommended Reading:

- Bende, A.A. and T. Kanitkar (2014), Principles of Population Studies, Mumbai: Himalayan Publishing House.
- F. Ram and K.B. Pathak (1998): Techniques of Demographic Analysis, Himalaya Publishing house, Bombay(Chapters 2 & 3).
- Newell, C. (1988), Methods and Models in Demography, New York: John Wiley and Sons.
- Srinivasan, K. (1999), Basic Demographic Techniques and Applications, New Delhi: Sage Publications
- Spiegelman, N. (1968), Introduction to Demography, Harvard University Press.

4.6 Database Management System

Objective

To equip students with cutting edge knowledge about processes to capture, store, retain and extract data in modern corporations to equip students with the basics of SQL and associated data extraction languages

Module 1 (5 Hours)

RDBMS Concepts-Tables, Rows, Fields, Data Types- Data Normalization-Data base design- Create, Alter and Drop Database - Create, Alter and Drop Table

Module 2 (8 Hours)

Data Loading-Inserting Records Update/ Modify Data-Select queries-Aggregations-Joins- Inner/Outer - Built-In functions - Create and use Views - Temporary Tables - Unions - Subqueries/Nested queries - Performance Tuning

Module 3 (12 Hours)

What is Data Warehousing? Types of Data Warehouse-General Stages in Data Warehouse- Importance of Data Warehouse in Enterprises-Characteristics of Data Warehouse-Components of Data Warehouse - Data Warehouse Terminology and Concepts- Three-tier Architecture- Data Warehouse Best Practices- Process Overview-Steps in ETL-ETL Tools-Overview- ETL vs ELT

Module 4 (15 Hours)

Data Models - Concepts, Overview - Introduction to OLAP - Types of OLAP Systems Basic Analytical Operations in OLAP - OLTP vs OLAP - Differences - Elements of Dimensional Data Model- Steps of Dimensional Modelling - Types of Schema-What is a Data Mart?- Need for a Data Mart-Types of Data Mart- Implementation Steps -Data Mart Vs Data -Warehouse-Differences-What is a Data Lake- Necessity of a Data Lake- Key Concepts of Data Lake- Data Lake vs Data Warehouse-What is BI?-Importance of BI-DW and BI Tools today

5.1 Development Economics

Objective

Learning Outcome:

1. To introduce to the student's basic concepts of growth and development with measures of development (Module I)
2. To introduce to the students models of growth and the basic concepts of inequality (Module II)
3. To familiarize the students with theories of growth and development (Module III)
4. To introduce applications of development models using inter-country comparisons (Module IV)

Module I: Measures of Growth and Development

Development and Underdevelopment: An Overview Background and Beginning of Development Economics' in The Post-world War Era, Its Elements.

Defining Economic Development.

Alternative Measures of Development.

PQLI, HDI and Its Extensions.

Development and Growth - Income as a Measure of Growth.

Human Development- Sen's; s Capability Approach, Development as Freedom.

Structural Features of Underdeveloped Economies.

International Variations – Development Gap

Underdevelopment as a Low-Level Equilibrium in a Multiple Equilibrium Situation – Low Level Equilibrium

Trap

Module II: Growth models and Concept of Inequality

Perceptions About Development and Underdevelopment Vicious Circle of Poverty; Big Push, Balanced and Unbalanced Growth.

Dual Economy Models- Lewis Model and Its Extensions.

Harris- Todaro Migration Model.

Poverty and Inequality: Definitions, Measures and Mechanisms.

Concept Of Poverty and Its Measures.

Inequality Meaning – Axioms - Commonly Used Inequality Measures.

Kuznets Curve.

Impact Of Poverty and Inequality on Process of Development (2).

Module III: Theories of growth and development

Models of Growth and Theories of Development:

Causes of Growth: Harrod - Domar Model, Solow Model and Its Variants.

Contribution and Application of New Growth Theory - O Ring Theory - Endogenized Solow Model

Module IV: Case studies of growth and development

Cross Country Differences In Development Paths and New Development Challenges Asia With Special Reference To China and India, Africa, Latin America Millennium Development Goals

Sustainable Development Goals

Suggested Readings:

Books:

1. Bagchi A. K., 1982 The Political Economy of Underdevelopment, Cambridge University Press.
2. Debraj Ray, 1998, Development Economics, Princeton University Press.
3. Kaushik Basu, 1998, Analytical Development Economics, OUP.
4. Meier and Rauch, 2005, Leading Issues in Economic Development, OUP.
5. Thirlwall A. P., 2005, Growth and Development (6 th and 7 th Edition), Palgrave Macmillan.

Additional References:

1. Human Development Reports, Various Years

5.2 Urban Economics

Course Outcomes:

1. To introduce students to the basic concepts of urban economics
2. To acquaint the students with concepts of land use.
3. To familiarise the students with the problems of resource constraints in urban areas
4. To introduce the functioning of urban local governments

Module 1 Basic Concepts of Urban Economics

● Introduction to Urban Economics - Scope and Dimensions
● The Nature and Function of Cities
● Models of Urban Development and Planning
● The Urban Economy and Development Strategy
● The Economics of Urban Growth
● Models of Urban Growth
● The Frontiers of Urban Growth
● The Economics of Intra-urban Location Decisions
● Residential and industrial locations, Semi urban areas, Special townships.

Module 2 Concepts and Models of Land Use

● Land Use Planning - General Urban Land-Use Models
● The Determinants of Specific Land Uses
● Changes in Land Uses - Land Use Policy - Land Reservation - Public Amenities - Town Planning
● Small Cities Concept - Size of Liveable Areas
● Space Planning - Floor Space Index Concept.

Module 3 Resource Problems

● Resource problems in urbanization - Transportation, Waste management and Water - Traffic Congestion - Traffic management and Policies - Public transport Surveillances - Route Mapping - Signal system
● The Urban Environment - Environmental Pollution - Types of pollution and Management - Types of wastes: Degradable and Non-degradable - Garbage, Plastic, Biomedical Waste Managements
● Sustainable development Policies.

Module 4 Urban Local Governance

● Urban Local Government – Types of local Bodies and Governance

● Cantonment Boards - Special Areas Improvement Trust: Functions, Problems and Limitations

● Slums Areas: Locations and Problems - Slum Development Policy

● Urban Poverty: Problems, Measures, and Policies

● The Nature of Urban Poverty

● The Causes of Poverty - Urban Crime and Management.

Suggested Readings:

Books:

1. Black, Duncan and Henderson, Vernon (1999), A Theory of Urban Growth, Journal of Political Economy, 1999, vol. 107, no. 2, The University of Chicago.

2. Button, K. J. (1976) Urban Economics Theory and Policy, Palgrave Macmillan UK.

3. Duranton, G. (2007). Urban Evolutions: The Fast, the Slow, and the Still. American Economic Review, 97 (1), 197-221. http://dx.doi.org/10.1257/aer.97.1.197.

4. Hartwick, John M. (2015) Urban Economics, Routledge; 1st edition.

5. Henderson, J. V. (1974) The Sizes and Types of Cities, The American Economic Review, Vol. 64, No. 4 (Sep., 1974), pp. 640-656, URL: https://www.jstor.org/stable/1813316 Accessed: 05-10-2018 12:02 UTC.

6. O'Sullivan, Arthur (2012) Urban economics, 8th Ed., McGraw-Hill/Irwin

7. Rakesh A Mohan (1978) Urban Economic and Planning Models Assessing the Potential for Cities in Developing Countries, OCP- 25, World Bank.

5.3 Indian Public Finance

Learning Outcomes:

1. To introduce students to the role of government intervention in economic activities (Module I)
2. To introduce students to Indian and global theories of public expenditure (Module II)
3. To introduce students to theories of taxation (Module III)
4. To familiarize students with the concepts of fiscal federalism (Module IV)

Module 1: Role of government (10 hours)

- Role of government in a market economy, social goods and market failure
- Provisioning of public goods and merit goods
- Free-rider problem
- Publicly provided private goods
- Allocation vs distribution
- Equity in distribution
- Externalities
- Normative social choice theory
- Arrow's theorem
- Majority voting
- The median voter model
- Representative democracy
- Voting paradoxes

Module 2: Expenditure (theories and Indian perspective) (10 Hours)

- The finance bill, how is a budget made?
- How to read/analyse the Indian budget
- Key differences between Union, State and Local body budgets
- The concept of union deficit and its financing
- Case studies: welfare schemes, unemployment benefit programs, education expenditure

Module 3: Taxation (theories & Indian perspective) (10 Hours)

- Categories of revenue
- What is a 'good' tax?
- Smith's Cannons of taxation
- Equity in taxation- Horizontal and vertical
- Incidence and impact of taxation
- Laffer curve
- Introduction to Indian public finance
- India's taxation system
- The evolution of direct taxes in India
- The evolution of indirect taxes in India
- Comparison between direct and indirect taxes
- Excise, customs, state VAT
- The benefits and drawbacks of India's GST.

Module 4: Fiscal Federalism (10 Hours)

- Need for a federal structure
- Centre-state financial relationship in India
- Fiscal decentralisation- with respect to 73rd and 74th Constitutional amendments

- The Gadgil formula
- The need for cesses and their evolution.

Recommended Reading

1. Bagchi, A. (2005). Readings in public finance. *Oxford University Press.*
2. H.L.Bhatia , Public Finance, *S. Chand Publications, 30th edition, 2020.*
3. J. E. Stiglitz. Economics of Public Sector,*W. W Norton and Company, 3rd Edition, 2000.*
4. J. Hindriks and G. D. Myles. Intermediate Public Economics, *The MIT Press; Annotated Edition, 2006*
5. R.A. Musgrave and P.B. Musgrave, Public Finance in Theory & Practice, *McGraw Hill Publications, 5th edition, 1989.*
6. Rao, M. (2005). Changing contours of federal fiscal arrangements in India. In A. Bagchi (ed.): Readings in public finance. *Oxford University Press.*
7. Reddy, Y. (2015). Fourteenth finance commission: Continuity, change and way forward. *Economic and Political Weekly, 50(21), 27-36. 9*
8. Stiglitz, J. (2009). Economics of the public sector, *3rd ed. W. W. Norton.*
9. The Economic Survey, 2020-21
10. Vithal, B. P. R., & Sastry, M. L. (2001). Fiscal federalism in India. *Oxford University Press, USA.*

5.4 Behavioral Economics

Learning Outcome:

1. To introduce to the students the basic concepts of Behavioral Economics (Module I)
2. Xx
3. Xx
4. To familiarise students with the application in behavioral economics**.**

Module I: Basic concepts of Behavioral Economics

- Introduction To Behavioral Economics Origins Of Behavioral Economics
- Decision-making Under Neo-classical Economic Framework- Rationality Optimization
- Role of Intuition
- Emotions, Beliefs In Decision Making Bounded Rationality Judgment Under Risk & Uncertainty Heuristics & Biases Heuristics
- Representativeness
- Substitution
- Availability
- Affect
- Anchoring
- Framing Biases: Cognitive and Emotional Biases

Module II: A Behavioral Approach to Utility Theory

- Choice Under Risk & Uncertainty Expected Utility Prospect Theory
- Reference Points
- Risk Concept and Understanding
- Loss Aversion
- Shape of Utility Function
- Decision Weighting
- Probabilistic Judgment.
- Mental Accounting Framing Mental Accounts Fungibility & Labels
- Hedonic Editing

Module III: Behavioral Choice Theory

- Intertemporal Choice, Temporal Choice, Construal Level Theory, Valuation Of Delayed Consumption Preferences For Sequences Of Outcomes, Hyperbolic Discounting, Preference Reversal

Module IV: Applications of Behavioral Economics

- Behavioral Game Theory Social Preferences: Fairness, Trust, Cooperation, Reciprocity
- Norms Limited Strategic Thinking Choice Architecture: Nudge, Nudge Vs. Boost, Behavioral Public Policy.

Suggested Readings:

Books:

1. D.Kahneman, Thinking Fast and Slow, 2011, Allen Lane, Penguin Books
2. Dhami, S., 2016, The Foundations of Behavioral Economic Analysis. Oxford University Press.
3. E.Cartwright, 2011, Behavioural

Economics, Routledge
4. Erik Angner, “A Course in Behavioral Economics”, Palgrave Macmillan
5. G.Loewenstein, 2007, Exotic Preferences: Behavioural Economics and Human Motivation, Oxford University Press
6. M.Altman, 2007, Handbook of Contemporary Behavioural Economics: Foundation and Developments, Prentice Hall India
7. Mind, Society, and Behavior. (2015). World Development Report.
8. Ogaki, Masao, Tanaka, Saori C., & Integration with Traditional Economics. (n.d.). Behavioral Economics: Toward a New Economics. Springer.
9. Wilkinson, N., & Klaes, M., 2012, An Introduction to Behavioral Economics (2nd ed.). Palgrave Macmillan

5.5 The Interplay of Economic Theory and Data

Learning Outcomes:

1. To introduce to students the role of data in the formulation of economic theory (Module I)
2. To introduce to students the sources of data in Indian economic research (Module II)
3. To introduce to students the sources of data in global economic research (Module III)
4. To work with case studies and applications of data in a selection of economic projects (Module IV)

Module I: Data and Economic Theory, The Linkages

- An Introduction to The Role of Data in Economic History
- The Physiocrats Quesnay - Hume - William Petty – Kuznets
- Modern Data Sources
- The Structure of Data
- An Introduction to Cross-Sectional, Longitudinal and Panel Data
- Data Storage and Retrieval
- Efficient Data Pulls
- Basic Data Cleaning Measures in MS Excel
- Basic Data Sanitation Checks in Excel
- Basic Data-Related Formulas in Excel

Module II: Data and Economic Research in India

- India Specific Data Sources -The Role of The National Sample Survey Organization (NSSO), Central Statistical Organization (CSO), Annual Survey of Industries (ASI), Reserve Bank of India (RBI)
- Datasets - (Employee Provident Fund Organization [EPFO], Ministry of Corporate Affairs [MCA], Database on Indian Economy, [DBIE], Census Datasets)
- Replication of GIPE Data Pulling Exercises
- GIPE Data Cleaning Exercises
- GIPE Data Treatment Exercises
- Case Study

Module III: Data and Economic Research in an International Context

- Global Data Sources - United Nations Conference on Trade and Development (UNCTAD), World Development Indicators (WDI), World Economic Outlook, Federal Reserve Economic Database (FRED) St. Louis, Eurostat.
- Limitations Of Publicly Available Data (China Case Study)
- Replication Of GIPE Data Pulling Exercises
- GIPE Data Cleaning Exercises
- GIPE Data Treatment Exercises
- Case Study

Module IV: Applications and Case Studies

- Case Studies
- The Minimum Wage Controversy
- The Backward Bending Supply Curve for Labour
- GDP Calculations
- Inflation Calculations
- Purchasing Power Parity Calculations
- Reinhart/Rogoff Controversy

Suggested Readings:
Books:

1. GIPE Publications [With the Aid of Relevant Faculty/RA's]
2. Winston, W. L., 2016, Microsoft Excel 2016: Data Analysis and Business Modelling, *Microsoft Press*.

5.6 Socio Economic Supervised Learning

Module 1: Introduction to Research

Data, Knowledge, Information, Wisdom

Scientific Research (aim, Process, Logical reasoning, Principle of inquiry: Empiricism,
Objectively, Control)

Origin of research topic, Unit of analysis, Ecological fallacy, Variable, Relationships

Stating problem and hypotheses.

Research Purpose and Research Design

Stages of scientific Research

Module 2: Data Sources & Pre-processing

Importance of socio-economic analysis

Common socio-economic datasets and their nitty-gritty (e.g., NFHS, NSSO, Census, etc.)

Data transformation and Manipulation

Handling missing data and outliers

Primary data

Module 3: Theory to practice

Choosing/finding real socio-economic problems

Forming hypotheses and research questions

Analysing data and checking the relationships among variables through learned techniques.

6.1 Strategy and Game Theory

Learning Outcomes:

1. To introduce to the students the basics of game theory (Module I)
2. To familiar the students with cooperative and non-cooperative games (Module II)
3. To acquaint the students with the concepts of voting theories and auctions (Module III)
4. To help students apply game theory concepts using case studies. (Module IV)

Module I: Basic concepts of game theory

• An Overview of Microeconomic Models Relevant to Game Theory
• An Introduction to The Motivation for Game Theory
• Revisiting The Prisoner's Dilemma
• The 2x2 Form Standard Model
• Dominance
• Nash Equilibrium
• SPNE

Module II: Cooperative and Non-cooperative games

• Zero Sum Games
• General Sum Games
• The Coordination Problem
• Cooperative Games
• Non-cooperative Games
• Decision Making and Uncertainty
• Reciprocative Decision Making
• Case Studies

Module III: Voting theories and Auctions

• Voting Theory
• Voting Strategies
• Auctions
• Types Of Auctions
• Auction Design
• Elicitation
• Scoring Rules
• Adaptive Decision Making

Module IV: Application

• Case Studies: Pricing, Marketing, Strategy, Hr, Finance, Taxation, Dominant Assurance Contracts, Compliance, Incentive Design.

Suggested Readings:

Books:

1. Dixit, A., 2009, Games of Strategy, W. W. Norton & Company.
2. Dixit, A., & Nalebuff, B. J., 2010, The Art of Strategy, W. W. Norton & Company.
3. Pastine, I., Pastine, T., & Humberstone, T., 2017, Introducing Game Theory: A Graphic Guide, Icon Books Ltd.
4. Spanie, W., 2011, Game Theory 101: The Complete Textbook, CreateSpace Independent Publishing Platform.

6.2 Introduction to Energy and Environment Economics

Course Outcomes:

1. To introduce students to the fundamentals of Environmental Economics (Module I)
2. To analyse the role of public and private sector in environmental protection and regulation (Module II)
3. To introduce the basic concepts of energy economics (Module III)
4. To introduce the various techniques used to analyse the energy markets in India (Module IV)

Module I: Fundamentals of Environmental Economics

- Significance of Environmental Economics, Economy and Environment Interlinkages, Eco-systems, Common Property Resources, Environment and Development Trade-off, Sustainable Development.

Module II: Role of Private and Public Sector

- Role of Public and Private Sector in Environmental Protection – Rain Water Harvesting, Solid Waste Management, Etc
- Environmental Regulation in India: Air and Water Acts, Fiscal Incentives, Enforcement and Implementation Issues, Emerging Options – Eco-taxes And Eco-subsidies
- Case Studies on Pollution Control in India.

Module III: Fundamentals of Energy Economics

- The Fundamentals of Energy Economics - Demand and Price Formation in Energy Markets - Evolution of Energy Markets in India - The Electricity Act (2003) And Its Impact on Energy Markets in India

Module IV: Analysis Techniques

- Techniques Specific to Energy and Electricity Markets in India: Risk Management, Futures Markets and Derivatives.
- Renewable Energy Policies - Comparative Analysis of These Markets from An India Vs Rest of The World Perspective - The Role of Ireda

Suggested Readings:

Books:

1. Muthukrishnan Subhashini (2015), Economics of Environment, Prentice Hall India Pvt Ltd.
2. Peter M. Schwarz, Energy Economics, Latest Edition, Routledge
3. Peter Zweifel, Energy Economics, Latest Edition, Springer
4. R. N. Bhattacharya (2006), Environmental Economics: An Indian Perspective, Oxford University Press, New Delhi.
5. Shogren, J Hanley, N and White, B. (2013) Introduction to Environmental Economics, 2nd edition, Oxford: Oxford University Press.
6. Singh & Shishodia (2010), Environmental Economics: Theory and Applications, Sage Publications, New Delhi.

6.3 Indian Economy

Learning Outcome:

CO1- Examine the scope of agricultural sector in Indian economy

CO2- Explain the role of service and manufacturing sector for the Indian economy

CO3- Discuss major dilemmas faced by Indian economy

Module 1 (6 Hours)

Evolution of Indian Economy, Major issues grappling the agricultural sector, Role of MSP in Indian agriculture and its impact on the Indian economy, Scope for technological intervention in the sector (Case study approach)

Module 2 (8 Hours)

Service Sector as engine of growth, Challenges and opportunities in service sector, New Industrial Policy-2023, Micro, Small and Medium Scale Industries (MSMEs)- Role, problems and remedies, Role of PSUs in Indian Economy, GDP Sectoral contribution and employment contribution by each sector and the way forward

Module 3 (8 Hours)

Debates- Missing middle problem, Jobless growth, Demographic dividend, Is the economy better off by being service driven, Nationalisation VS Privatisation

6.4 Multivariate Analysis

Objectives

1. Able to summarize and interpret multivariate data, will understand the link between multivariate techniques and corresponding univariate techniques. (Module I)
2. Carry out a principal component to summarise high-dimensional data. (Module II)
3. Perform clustering analysis to discover and characterize subgroups in the population (Module III)
4. Conduct inference for multivariate means, construct confidence regions, and understand their potential uses, such as for group comparisons. undertake multivariate hypothesis tests, and draw appropriate conclusions. (Module IV)
5. Use classification and discrimination methods to assign individuals into groups. (Module V)

Module I: Descriptive Multivariate Statistics

- Exploratory multivariate data analysis,
- Sample mean vector and dispersion matrix,
- Correlation matrix,
- Graphical representation,
- Means, variances, covariance, correlations of linear transforms,

Module II: Dimensionality reduction method

- Introduction to principal component analysis and
- Correspondence analysis,
- Factor analysis,
- Canonical correlation coefficients and canonical variables.

Module III: Cluster analysis and multidimensional scaling

- What Is Cluster Analysis? Requirements for Cluster Analysis, Overview of Basic Clustering Methods.
- Partitioning Methods: k-Means: A Centroid-Based Technique
- Hierarchical Methods: Agglomerative versus Divisive Hierarchical Clustering, Distance Measures in Algorithmic Methods, Hierarchical Clustering
- Evaluation of Clustering

Module IV: Multivariate Statistical Inference

- Tests of hypothesis about the mean vector of a multivariate normal distribution,
- Hotelling's T^2-statistic and its distribution, applications of Hotelling's T^2-statistic.
- Goodness-of-fit of multivariate normal distribution.
- Simultaneous confidence interval for the linear functions of the mean,
- Tests of significance for multiple and partial correlation coefficients.

Module V: Classification problem

- Discriminant analysis, Mahalanobis D^2-statistic
- Methods and applications of MANOVA (without derivation of the distribution of Wilks' lambda)

Suggested Readings:
Books:

1. Härdle, W. K. & Simar, L. (2012). Applied Multivariate Statistical Analysis, Springer, New York
2. Johnson R.A. & Wichern, D.W. (2007). Applied Multivariate Statistical Analysis, 6th Ed., Pearson Education
3. Manly, B. F. J., (2004), Multivariate Statistical Methods - A primer, Chapman and Hall / CRC Florida

References:

1. Avril Coghlan, A Little Book of R For Multivariate Analysis, Release 0.1, https://buildmedia.readthedocs.org/media/pdf/little-book-of-r-for-multivariate-analysis/latest/little-book-of-r-for-multivariate-analysis.pdf

Multivariate Statistical Inference, https://uc-r.github.io/multivariate_inference

6.5 Introduction to Sociology

Objective:
The course covers the fundamentals of sociological thinking, basic sociological concepts, Classical sociological theory, and key concerns in Indian sociology. This course is designed to help students comprehend the significance of studying society from a sociological perspective.

Module I (3 Hrs): Why Sociology?
- Sociological Imagination – Wright Mills
- Coming Crisis of Western Sociology – A. W. Gouldner

Module II (6Hrs): Basic Concepts in Sociology
- Society
- Social Stratification (Caste/Class/Gender/Race)
- Groups
- Socialization
- Culture

Module III (5Hrs): Classical Sociological Thought
- Origin of Sociology: Enlightenment, Industrial Revolution, French Revolution
- August Comte - Positivism
- Classical Thinkers – Karl Marx, Emile Durkheim, Max Weber

Module IV (6Hrs): Sociology of India
- Casteism
- Secularism
- Globalization
- Agrarian Crisis
- Social Movements

Recommended Readings:

1. Mills, C.W. 1959. The Sociological Imagination. Oxford University Press, New York.
2. Gouldner, A. W.1971. The Coming Crises of Western Sociology. London: Heine Mann.
3. Haralambos and Holborn. 2007. Sociology: Themes and Perspectives. Collins, London.
4. Abraham, M. F. and Morgan, J. H. 1996. Sociological Thought. Madras. MacMillan, India.
5. Aron, Raymond. 1982. Main Currents in Sociological Thought. Vol. I & II. Penguin, Books. New York.
6. Lewis, Coser. 1979. Masters of Sociological Thought. Harcourt, Harcourt Brace, Jovanovich. New York.
7. Ken, Morrison. 1995. Marx, Durkheim, Weber: Formation of Modern Social Thought. Sage. London.
8. Ritzer, George. 6th (ed.) 1996. Sociological Theory. Tata McGraw Hill. New Delhi.
9. Ray, Larry J. 2010. Theorizing Classical Sociology. Tata McGraw Hill. New Delhi.
10. Deshpande, S. 2003. Contemporary India: A Sociological View. Viking, University of Michigan.
11. Dipankar Gupta (ed.). 1992. Social stratification. Second enlarged edition. (Oxford in India Readings in Sociology and Social Anthropology.) xvii, 518 pp. Delhi, etc.: Oxford University Press.

6.6 Academic Writing / Decision Making

Objectives

1. To understand the importance of academic writing
2. To familiarize students with the ethics of academic writing and the concept of plagiarism
3. To understand the basic skills of writing a literature review
4. To understand the basic skills of research paper writing, review paper writing, and thesis writing.
5. To familiarize students with the process of research proposal writing and conference abstract formation.

Module I

1. Academic & research writing: Introduction; Importance of academic writing; Basic rules of academic writing
2. English in academic writing I & II; Styles of research writing

Module II

3. Plagiarism: Introduction; Tools for the detection of plagiarism; Avoiding plagiarism, Writing with AI - Prompt Engineering for academic writing.

Module III

4. Literature review: Introduction, Source of literature; Process of literature review
5. Online literature databases; Literature management tools.
6. Citation formats, bibliography analysis
7. Tools and techniques: Note taking tools- Zotero and its uses
8. AI and LLM's for research and citation; consensus.ai, Elicit- thor advantages and disadvantages.
9.

Module III

1. Thesis statement, Context and hook, reading and summary writing.
2. How does research question, objective and hypothesis fit together? Why is this important?
3. Appendix - composition, how to make the decision.

Semester VII : To be uploaded
Semester VIII : To be uploaded