

**BODOLAND UNIVERSITY**  
**DEPARTMENT OF ECONOMICS**  
**PG SYLLABUS**  
Year :2019-21



Bodoland University  
Debargaon, Kokrajhar (B.T.C.)

**Choice Based Credit System (CBCS) Syllabus for M.A/M.Sc. in Economics Department of  
Economics, Bodoland University-2019  
Total Credit=84, Total Marks=2100**

***DETAILED STRUCTURE***

<b>Ist Semester</b>				<b>Remarks</b>
<b>Paper code</b>	<b>Semester</b>	<b>Paper</b>	<b>Credits</b>	
Eco-1.1	Microeconomics-1	Core	4	
Eco-1.2	Macroeconomics-1	Core	4	
Eco-1.3	Mathematical Economics-1	Core	4	
Eco-1.4	Statistical Economics	Core	4	
Eco-1.5	Development Economics-I	Core	4	
Eco-1.6	Contemporary Economic Issues	OE	2	<i>Any One</i>
Eco-1.7	History of Economic Thought I	OE	2	
Eco-1.8	Gender Economics	OE	2	
<b>Total credits</b>			<b>22</b>	
<b>IInd Semester</b>				
Eco-2.1	Advanced Microeconomics	Core	4	
Eco-2.2	Advanced Macroeconomics	Core	4	
Eco-2.3	Mathematical Economics-II	Core	4	
Eco-2.4	Elements of Econometrics	Core	4	
Eco-2.5	Development Economics-II	Core	4	
Eco-2.6	Research Methodology	OE	2	<i>Any One</i>
Eco-2.7	History of Economic Thought II	OE	2	
Eco-2.8	Health Economics	OE	2	
<b>Total credits</b>			<b>22</b>	
<b>IIIrd Semester</b>				
Eco-3.1	International Economics	Core	4	
Eco-3.2	Population and Human Resources	Core	4	
Eco-3.3	Monetary Economics	Core	4	
Eco-3.4	Public Finance	Core	4	
Eco-3.5	Labour Economics	Elective	4	<i>Any One</i>
Eco-3.6	Resource Economics	Elective	4	
<b>Total credits</b>			<b>20</b>	
<b>IVth Semester</b>				
Eco-4.1	Economics of Environment	Core	4	
Eco-4.2	Economy of the North Eastern Region	Core	4	
Eco-4.3	Dissertation	Core	4	

Eco-4.4	Demography	Elective	4	<i>Any One</i>
Eco-4.5	Industrial Economics	Elective	4	
Eco-4.6	Econometrics	Elective	4	<i>Any One</i>
Eco-4.7	Agricultural Economics	Elective	4	
<b>Total credits</b>		<b>20</b>		
<b>Grand Total credits</b>		<b>22+22+20+20</b>	<b>84</b>	

<b>Scheme of Examination</b>				
<b>I Semester</b>				
<b>Paper code</b>	<b>Paper Name</b>	<b>Internal</b>	<b>Theory</b>	<b>Max. Marks</b>
Eco 1.1	Microeconomics-1	20	80	100
Eco 1.2	Macroeconomics-1	20	80	100
Eco 1.3	Mathematical Economics-I	20	80	100
Eco1.4	Statistical Economics	20	80	100
Eco 1.5	Development Economics-1	20	80	100
Eco 1.6	Indian Economy I	10	40	50
Eco 1.7	History of Economic Thought I	10	40	50
Eco 1.8	Gender Economics	10	40	50
<b>Total Marks</b>				<b>550</b>
<b>IInd Semester</b>				
<b>Paper code</b>	<b>Nomenclature of the Paper</b>	<b>Internal</b>	<b>Theory</b>	<b>Max. Marks</b>
Eco 2.1	Microeconomics-II	20	80	100
Eco 2.2	Macroeconomics-II	20	80	100
Eco 2.3	Mathematical Economics-II	20	80	100
Eco 2.4	Elements of Econometrics	20	80	100
Eco 2.5	Development Economics-1I	20	80	100
Eco 2.6	Indian Economy II	10	40	50
Eco 2.7	History of Economic Thought II	10	40	50
Eco 2.8	Health Economics	10	40	50
<b>Total Marks</b>				<b>550</b>
<b>IIIrd Semester</b>				
<b>Paper code</b>	<b>Nomenclature of the Paper</b>	<b>Internal</b>	<b>Theory</b>	<b>Max. Marks</b>
Eco 3.1	International Economics	20	80	100
Eco 3.2	Population and Human Resource	20	80	100
Eco 3.3	Monetary Economics	20	80	100
Eco 3.4	Public Finance	20	80	100
Eco 3.5	Labour Economics	20	80	100
Eco 3.6	Resource Economics	20	80	100
<b>Total Marks</b>				<b>500</b>

IVth Semester				
Paper code	Nomenclature of the Paper	Internal	Theory	Max. Marks
Eco 4.1	Economics of Environment	20	80	100
Eco 4.2	Economy of the North Eastern Region	20	80	100
Eco 4.3	Dissertation	20	80	100
Eco 4.4	Demography	20	80	100
Eco 4.5	Industrial Economics	20	80	100
Eco 4.6	Econometrics	20	80	100
Eco 4.7	Agricultural Economics	20	80	100
<b>Total Marks</b>				<b>500</b>
<b>Grand total (550+550+500+500)</b>				<b>2100</b>

**(Dr Manjit Das)**  
**HOD, Economics**

## MICROECONOMICS-I

### (Eco-1.1)

#### **Unit-1: Theory of consumer Behavior**

Review of Indifference curve analysis and Revealed Preference Theorem. Recent Development in Theory of Demand: Indirect Utility function-Roy's Identity; Dual properties of Utility and Expenditure functions.

Linear Expenditure system; Distributed lag models of demand

#### **Unit-2: Theory of Production and Cost**

Production concepts: Isoquant and substitution of factors, Elasticity of substitution, function of a single product firm: Cobb Douglas production function, CES production function: Derivation of cost function from production function.

Production function of a multi-product firm; Iso-quant-types and properties

producer's Equilibrium-Expansion Path and Factor Substitution; Production Possibility Curve.

Basic Concept of costs.

#### **Unit-3: Market**

Oligopoly Market; Non collusive oligopoly- Cournot Duopoly Model, Bertrand Duopoly model, Chamberlin's Oligopoly Model, Kinked Demand Model, Stackelberg's Duopoly Model.

Collusive Oligopoly-Cartels, Price leadership and Basing point price system.

#### **Unit-4: Uncertainty and Imperfect Competition**

Uncertainty, Probabilities and Expected values, Attitude towards risk, Insurance and Gambling, Asymmetric information: Market for Lemons. The Insurance markets and Adverse selection, the problem of moral Hazard, Signaling. Principal-Agent Problem, Uncertainty in Public and Private Enterprise.

#### **Recommended Readings:**

1. Hal A. Varian (1992), Microeconomic Analysis, W. W. Norton and Co.
2. Walter Nicholson (1992), Microeconomics, Salvatore
3. Pindyck and Rubinfeld (1992) Microeconomics, PHI.
4. D. M. Kreps, A Course on Microeconomics, EHI
5. Koutsoyianis , A., " Modern Microeconomics" , Macmillan
6. Anindya Sen , "Microeconomics Theory". Oxford University Press.
7. Madalla Miller. "Microeconomics", McGraw Hill.
8. Mukherjee, S., "Business and Managerial Economics", New Central Book Agency.
9. Juneja and Chawla, "Book Keeping and Accountancy.

## **MACROECONOMICS-I (ECO I. 2)**

### **Unit- 1: National Income, employment and income determination (Short run)**

National income concepts and accounting methods; Circular Flow of income in two, three and four sector economy; Determination of the equilibrium level of income – Classical Keynesianism. the fiscal models and level of income and employment; Demand and supply of labour – classical view

### **Unit- 2: Consumption Function**

The Consumption Function Puzzle – Relative Income Hypothesis – Permanent Income Hypothesis – Life Cycle Hypothesis; FRB-MIT (Federal Reserve Bank and Massachusetts Institute of Technology) model; Modern approaches - consumption and uncertainty.

### **Unit – 3: Investment Function**

Marginal efficiency of capital and investment-long run and short run MEI and level of investment; The profits and accelerator theories and investment behaviour – Influence of policy measures on Investment; The User Cost and Liquidity Effects – lags in the Investment Function.

### **Unit- 4: Monetary Theory**

Classical Theory of Money; Say's Law and Walras' Law; Classical dichotomy and the neutrality of money; Friedman's Modern Quantity Theory of Money; Pigou Effect and Real Balance Effect.

### **Recommended Readings:**

1. Jha, Raghubendra,(1991) ,Contemporary Macroeconomics Theory and Policy, Wiley Eastern Ltd, New Delhi
2. Branson W.H.(1989), Macroeconomics: Theory and Policy, Harper and Row,New York
3. Brooman, F.S.” Macroeconomics” George Allen & Unwin, London
4. Michl, “Macro Economics Theory- A Short Course”, Prentice Hall of India
5. Shapiro, Edward (1996). “Macroeconomic Analysis” Galgotiapublications,New Delhi
6. Dornbusch, R , Stanley F and Fischer, S(2000), Macro Economics”Tata McGraw- Hill, New Delhi
7. Mankiw, N.G, “Macroeconomics” McMillan International, New york
9. Gupta, R.D & Rana, A.S, “Keynes Post Keynesian Economics”, Kalyani Publisher, New Delhi
- 10.Gupta, S.B. (1997). Monetary Economics, S. Chand and Company, New Delhi
- 11.Patinkin, D. (1965). Money, Interest and Prices, Harper and Row, New York.
12. Survey of Economic Theory, (1972), Vol.I: Money, Interest & Prices, Macmillan, New York.
13. Sikdar, S. (2011). Principles of Macroeconomics: Second Edition Paperback, OUP.

14. Hejdra, B.J. and F.V. Ploeg (2001), Foundations of Modern Macroeconomics, Oxford University Press, Oxford.

## **MATHEMATICAL ECONOMICS- I (ECO1.3)**

### **Unit- 1: Matrix Algebra**

Concepts, Types, Its solutions; It's application to input-output table-Static Leontief system –Closed and Open, Domestic and external sectors.

### **Unit- 2: Integration**

Concept, Basic Rules and Properties: Applications; derivation of total functions from marginal functions, estimation of consumer's surplus, Producer's surplus, problems relating to investment, capital formation and derivation of simple growth process(Domar)

### **Unit- 3: Unconstrained Optimization**

Maxima and Minima of functions of single variable- application to cost minimization, revenue maximization, tax revenue maximization, profit maximization and equilibrium of firm. Unconstrained maxima and minima with more than one variable-application to discriminating monopoly, multi-product equilibrium, Multiplan equilibrium of firm with advertisement cost and subsidy

### **Unit- 4: Optimization with inequality constraint**

Linear programming, General formulation- optimum; Application to Transportation problem, Diet problem and production problem – Simplex method of solution, Concept of duality and Solutions.

### **Recommended Readings:**

1. A.C. Chiang, "Fundamental Methods of Mathematical Economics," McGraw Hill.
2. S. Baruah, "Basic Mathematics and its Economic Applications, Macmillan
3. R.G.D Allen, "Mathematical Analysis for Economists."
5. Taro Yamane, "Mathematics for Economists."
6. E.T Dowling. "Theory and Problems of Mathematical Methods for Business and Economics," McGraw Hill
7. Mouhammed, "Introduction into Mathematical Economics," Prentice Hall of India.
8. M. Metwally, "Mathematical Treatment of Micro-Economics."

## STATISTICAL ECONOMICS

(ECO1.4)

### **Unit-1: Probability theory and expected value**

The Concept of Probability, distribution and a density function. Axiomatic Definition and derivation of Basic probability Rules-Conditional Probability, Baye's theorem (Concept Only) Random variable-mathematical expectation and moments relating to both Discrete and Continuous random Variables. Binomial distribution, Poisson distribution and normal distributions with properties-Moment Generating function-The Central Limit Theory.

### **Unit-II: Sampling and Estimation**

Sampling and sample designs: simple random sampling, stratified random sampling, systematic sampling and cluster sampling. Concept of Sampling Distribution and Standard Error of Statistic- Methods of Estimation principles of Moments, Least Square and Maximum Likelihood (Concept Only)-Characteristics of a Good estimator.

### **Unit -III: Analysis of Time Series and Index number**

Components of time series-fitting of trend, moving average method, fitting of linear and exponential trend curves. Classification of index numbers, unweighted price index numbers, relative of aggregate method and average of price relatives, weighted price index numbers: Laspeyre's, Paasche's and Fisher's ideal index numbers. Time reversal test and factor reversal test and chain based index numbers.

### **Unit IV: Statistical inferences**

One-tailed and two-tailed tests, testing of Hypothesis: Type I and Type II Errors, Tests- based on standard normal, t , F and chi-square distribution and its applications.

### **Recommended Readings:**

1. Yamana, Taro, "Statistics-an Introductory Analysis"
2. Gupta, S.C, and Kapoor, U.K. fundamentals of mathematical statistics"
3. Nagar, A.L. and Das, R.K. "Basic statistics", oxford
4. Salvatore, Dominick and Darrick, "Statistics and Econometrics".
5. Goon, Gupta, Das Gupta," Fundamental of Statistics, Vol. II



## **DEVELOPMENT ECONOMICS 1**

### **(ECO1.5)**

#### **Unit 1: Development, Inequality, Measurement**

Development: Concept, Alternative measure of Development: PQLI, HDI, GDI, Poverty Gap, capability Approach of Sen, Inequality and Growth.

#### **Unit 2: Theories of Growth**

Harrod-Domar Model, Solo's Model: steady state growth, Alternative Theories: Kaldor's theory of distribution and growth, Joan Robinson's Model, Endogenous growth

#### **Unit 3: Theories of Underdevelopment**

The International Dependence Revolution: Neo-colonial Dependence model, False Paradigm, The Dualistic Development Thesis, The Process of Cumulative Causation: Myrdal, The Vicious Circle Theory.

#### **Unit 4: Theories of Development and Strategies**

The Stages of Growth: Rostow, The Big push: Rosenstein-Rodan, Balanced Growth: Nurkse, Unbalanced Growth: Hirschman, Horris-Todaro Model of Migration.

#### **Recommended Readings:**

1. Higgins, Benjamin, Economic Development, Universal Book Stall.
2. Todaro, MP, Development Economics, Pearson.
3. Meir, GM, Leading Issues in Economics development, OUP.
4. Basu, Kausik, Analytical Development Economics, OUP.
5. Barro & Salai-Martin, Economic Growth, Prentice Hall of India.
6. Thirlwal, AP, Growth & Development, Palgrave.
7. Sen, Amartya, On Economic Inequality, OUP
8. World Bank, World Development Reports, OUP.
9. UNDP, Human Development Reports. OUP

## CONTEMPORARY ECONOMIC ISSUES

(OE-1.6)

(CREDIT-2)

The paper seeks to familiarize the other than economics students with basic concepts related to some contemporary Indian economic issues. Its aim is to equip the students with sufficient knowledge and skills so as to understand media discussions, and to critically analyze contemporary issues. Such capability is necessary to understand government policies and also to increase people's participation in economic decision-making. The emphasis in this paper will be on conceptual understanding only.

- I. Concepts
  - a. Growth and Development: GDP, GNP, HDI.
  - b. Fiscal policy, need for government spending, areas of government spending in India
  - c. Capital expenditure, revenue expenditure, plan expenditure, non-plan expenditure.
  - d. Deficits (budget, fiscal, revenue), impact of fiscal deficit on economy, need to control fiscal deficits,
  - e. Capital receipts, revenue receipts, tax and non-tax revenue, direct and indirect taxes, need to rationalize tax structure. Goods and Services Tax (GST).
  - f. Actuals, Revised Estimates, Budget Estimates
  - g. Zero-base budgeting
  - h. Gender budgeting
  - i. Centre-state financial relations in India
  - j. Demonetisation
- II. The Union Budget  
Need for the Budget, Understanding the process of budget making in India, Analysis of budget in terms of various parameters such as:
  - a) Deficits — trends in fiscal deficit and revenue deficit
  - b) Receipts- proposed sources of revenue and expected growth in revenue;

stepstakentoincreaserevenuesuchastaxsimplification,improvementintax administration, expansion of taxnet;

- c) Expenditure - expenditure pattern and expected growth in expenditure; Thethrustareasofthebudget;areas/sectorswhichhavereceived higherorlower share of expenditure, reasons and consequences thereof; steps proposed to ensure effectivespending.

### Recommended readings:

1. 'Understanding the Budget Concepts and Terminologies', Centre for Budget and Governance  
Accountability<http://www.cbeaindia.org/files/documents/Understanding%20the%20Budget%20Concepts%20and%20Terminologies.pdf>
2. *The Key to Budget Documents, Budget At A Glance, Macroeconomic Framework Statement, Medium Term Fiscal Policy Statement and Fiscal Policy Strategy Statement*, all available at [indiabudget.nic.in](http://indiabudget.nic.in).
3. *Economic and Social Classification of the Budget*, available at <http://finmin.nic.in/reports/FunClass201415.pdf>.
4. <http://www.unionbudget.nic.in/ub2016-17/bh/bh1.pdf> (For Budget 2016-17 highlights)
5. PranabMukherjee(2012),“BudgetMaking”,inK.BasuandA.Maertens(eds), *The New Oxford Companion to Economics in India*, OUP.
6. DipakDasguptaandSupriyoDe(2012),“FiscalDeficit”,inBasuandMaertens.
7. UmaKapila(2016),“FiscalandBudgetaryDevelopments”,in*IndianEconomy Since Independence*, Academic Foundation, latestedition.
8. YVReddy(2015),“Continuity,ChangeandTheWayForward:FourteenthFinance Commission”, EPW Vol. 50, Issue No. 21, 23 May,2015
9. 14th Finance Commission Report.  
<http://finmin.nic.in/14fincomm/14thFinanceCommission.htm>
10. Chakraborty,Pinaki(2015)“IntergovernmentalFiscalTransfersinIndia:Emerging Trends and Realities” in P. Patnaik (ed), *Economics Volume 3. Macroeconomics*, Oxford University PressIndia.
11. Mukherjee,Sacchidananda(2015).“PresentStateofGoodsandServicesTax(GST) ReforminIndia,”WorkingPaperNo.2015-154(September2015),NationalInstitute of Public Finance and Policy, NewDelhi.
12. M.R.Spiegel(2003),*TheoryandProblemsofProbabilityandStatistics*,ch.19.

## **MICROECONOMIC ANALYSIS – II**

### **(ECO2.1)**

#### **Unit 1: Alternative Theories of the Firm**

Baumol's theory of sales revenue maximization, Marris' model of managerial enterprise; Williamson's model of managerial discretion; Behavioral theory of the Firm (Model of Cyert and March); Full cost pricing principle; Limit pricing principle (Bains, Sylos-Labini, Modigliani ); Issues regarding existence, purpose and objectives of a firm.

#### **Unit-II: Welfare Economics**

Pareto Optimality: The Fundamental Theorems of Welfare Economics. Market Failure: Causes and instances, externality and public good, Welfare Effects of Nonprice Allocations and Price Control. Problem of Welfare Maximization: Compensation Principle, Social Welfare Function and Social Choice, Arrow's contribution, Trade protection and Economic Welfare.

#### **Unit 3: General Equilibrium**

Meaning of General Equilibrium, Partial vs General Equilibrium, Walrasian General Equilibrium System: Tatonnement, Existence, Stability and Uniqueness of the Equilibrium.

Critique of General Equilibrium Theory – Non-tatonnement Process. Contributions of Arrow and Debreu

Dynamic Stability of General Equilibrium.

#### **Unit-4 Input Markets**

Demand and supply of inputs: Firm's and Industry's input demand curves; Monopsony and Monopoly in Input markets; Unions as monopolists; Bilateral monopoly; Choice of optimal combination of inputs; Adding-Up Problem; Product Exhaustion theorems – Euler's and Clark-Wicksteed-Walras theorems.

#### **Recommended readings:**

1. Koutsoyiannis, A.: Modern Microeconomics.
2. Varian, H.: Microeconomic Analysis.
3. Gravelle and Rees: Microeconomics.
4. Quirk and Saposnik: General Equilibrium and Welfare Economics.
5. Domonick Salvatore: Microeconomics-Theory and Application.
6. G.S. Maddala and Ellen Miller: Microeconomic Theory and Applications.

#### **Additional Readings**

1. Anjan Mukherjee: General Equilibrium.
2. Kreps, David M.: A Course in Microeconomic Theory

## MACROECONOMICS –II

(ECO: 2.2)

### Unit -1 Theory of Inflation

Theories of Inflation- Structural and Monetarist Approaches to Inflation; Philips curve analysis – Short run and long run Philips's curve; the natural rate of unemployment hypothesis; Tobin's modified Philips's curve and policies to control inflation.

### Unit- 2: Macroeconomics in the open economy

The IS-LM model; Extension of IS-LM model with government sector; Relative effectiveness of monetary and fiscal policies; IS-LM Analysis of an open economy; Foreign Trade Multiplier; Mundell-Fleming model – Asset market, expectations and the exchange rate.

### Unit- 3: Business Cycles

Characteristics of change and movements; Accelerator and Multiplier Principles and their Interactions; Theories of Business cycle- Kaldor, Samuelson and Hicks - Control of Business cycle; Relative efficacy of Monetary and Fiscal policies.

### Unit- 4: The Demand and Supply of Money

Supply of money Measures of money supply; Money Multiplier theory, determinants of money supply; Demand for money - approach of Baumol and Tobin.

1. Jha, Raghubendra,(1991) ,Contemporary Macroeconomics Theory and Policy, Wiley Eastern Ltd, New Delhi
2. Frisch, H: Theories of Inflation, Cambridge University Press
3. Branson W.H.(1989), Macroeconomics: Theory and Policy, Harper and Row,New York
4. Brooman, F.S.” Macroeconomics” George Allen & Unwin, London
5. Shapiro, Edward (1996). “Macroeconomic Analysis” Galgotiapublications,New Delhi
6. Dornbusch, R , Stanley F and Fischer, S(2000), Macro Economics”Tata McGraw- Hill, New Delhi
7. Mankiw, N.G, “Macroeconomics” McMillan International, New york
8. Gupta, R.D & Rana, A.S, “Keynes Post Keynesian Economics”, Kalyani Publisher, New Delhi

9. Gupta, S.B. (1997). Monetary Economics, S. Chand and Company, New Delhi
10. Patinkin, D. (1965). Money, Interest and Prices, Harper and Row, New York.
11. Levacic, R. and A. Rebman: Macroeconomics: An Introduction to Keynesian and Neo-Classical Controversies
12. Sikdar, S. (2011). Principles of Macroeconomics: Second Edition Paperback, OUP.
14. Keynes, J.M. (1936), The General Theory of Employment, Interest and Money, Macmillan, London

## **Mathematical Economics –II** **(ECO2.3)**

### **Unit- I: Optimization with Equality Constraint**

Optimization with equality constraints, Lagrange's multiplier method- application to consumer's equilibrium and producer's equilibrium in factor market. Homogenous, homothetic equations and solution. Solution to system of simultaneous equations

### **Unit- II: Difference and Differential Equation and their Applications**

First order difference equation, Properties and solution. Stability of equilibrium. The Cobweb model. First order differential equation with constant coefficient and constant term, properties and solution. Dynamics of market price. Application in growth models.

### **Unit- III Game Theory**

Two- person zero sum game- pure strategies with saddle point, game without saddle point, rule of dominance, mixed strategy. Nash equilibrium, Prisoner's dilemma, Repeated Games and its application to simple market models.

### **Unit- IV Optimal control theory**

Concept, Basic Procedures and Illustrative examples.

#### **Recommended Readings:**

1. A.C. Chiang, 'Fundamental methods of Mathematical Economics', McGraw Hill.
2. S.Barua, 'Basic Mathematical and its Applications', MacMillan.
3. Taro Yamane, 'Mathematics for Economists'.
4. Jaydeb Sarkhel "An Introduction to Mathematical Techniques for Economic Analysis", Book Syndicate, Kolkata
5. C P Simon, "Mathematics for Economists"
6. Mathematical Economics by Akira Takamaya
7. Statistics for business and economics by McClave Benson Sincich
8. For Optimal Control Theory <https://www.pdfdrive.com/schaums-outline-theory-and-problems-of-introduction-to-mathematical-economics-e54318490.html>

## **Elements Econometrics-I (ECO2.4)**

### **Unit 1: Introductory Econometrics**

Econometrics: Meaning, Uses and Scopes. Classical Linear Regression Model: Two Variable linear Regression, properties of least square estimates(Gauss-Markov), test of hypothesis, confidence interval, standard errors.

### **Unit 2: Multiple Linear Regression Model and its estimation**

The general linear Regression model- Standard Assumption- OLS estimation and their properties-  $R^2$  and Adjusted  $R^2$ .

### **Unit 3: Further Topics in Linear Regression Model**

Multicollinearity, Effects, detection and remedies- Specification Errors and their consequences, Dummy Variables, functional forms of regression models (Use of Cob-Douglas and CES Production function).

### **Unit 4: Introduction to simultaneous Equation models**

Structural and reduced forms- Simultaneity bias- informal introduction to identification problem Formalization of identification problem- order and rank condition of identification.

### **Recommended Readings:**

1. Johnston and Dinardo, *Econometric Methods*, McGraw Hill
2. Gujarathi, *Basic Econometrics*, McGraw Hill.
3. Daugherty, *Basic Econometrics*, McGraw Hill
4. GMK Madnani, "Introduction to Econometrics: Principles and Applications", Oxford and IBH Publishing.
5. Jeffrey M. Wooldridge, "Introductory Econometrics: A Modern Approach", South-Western Cengage Learning

## **Development Economics-II (ECO2.5)**

### **Unit- : Development Planning:**

Introduction to planning: types of planning, rationale for planning in a developing economy, planning process. Project evaluation and social cost-benefit analysis

### **Unit-2: Development Financing:**

Internal sources: private savings & taxation. Public and private borrowing: advantages & disadvantages, foreign borrowing: importance, disadvantages. Foreign investment: portfolio and direct foreign investment-importance/ advantages & disadvantages,

### **Unit-3: Development and Environment:**

Trade as an Engine of growth- trade and aid-gain from trade; Terms of trade and underdeveloped countries, singer & Myrdal's views; Environment & Environmental degradation, Forestation & deforestation- consequences, concept of sustainable development and role of state in environmental preservation

### **Unit-4: Sectoral aspects of Development:**

Role of agriculture in economic development, commercialisation in agriculture, problems & causes of low agricultural development, rationality and pattern of industrialization in developing countries, relation between agriculture-industry.

### **Recommended readings:**

1. Todaro, M.P, : Development Economics, McGraw Hill



2. Thirlwal, A.P. : Development Economics, Pearson
3. Misra&Puri, : Economics of Development & Planning, HPH
4. Lekhi, R, K. : The Economics of Development & Planning

## **RESEARCH METHODOLOGY**

**(OE- 2.6)**

This course is designed to make students enable to understand the basic knowledge of research which will help them in writing papers, doing project and future research work.

1. Nature of research
2. Formulating the research topic
3. Review of literature
4. Approaches to research and research strategy
5. Research ethics
6. Data collection, sample selection model
7. Analysing the data
8. Project report writing
9. Reference/ bibliography

### **Recommended readings:**

1. Ranjit Kumar (2014) *Research Methodology: A Step by Step Guide for the Beginners*, 4<sup>th</sup> edition, Sage Publication

2. C R Kothari & Gaurav Garg (2019) *Research Methodology: Methods and Techniques*, 4<sup>th</sup> edition, New Age International Publishers.

## **INTERNATIONAL ECONOMICS (ECO3.1)**

### **Unit - 1: International Trade Theories**

Theories of Trade: Foundational propositions in positive theories of trade- the Ricardian and Heckscher- Ohlin- Vanek theory of trade in a 2x2x2 competitive framework- the basic assumptions- factor price equalization theorem-Rybczynski and Stolper-Samuelson theorems.

Alternatives to the standard trade theories – the Product Cycle and technology gap models, availability hypothesis. The rise of new theories of trade under Monopolistic Competition and analysis of gains from trade

### **Unit-2: Economic Growth and International Trade**

Effects of Growth on Trade – Growth, Trade and National Income – Trade and Technical Progress – Neutral Technical Progress, Labour - Saving Technical Progress, Capital – saving Technical Progress

### **Unit- 3: International Trade Policy**

Types of Tariff – Partial Equilibrium Analysis of Tariff – General Equilibrium Analysis (Small Country Case) – Tariff and World Welfare – Tariff and Income Distribution – Effective Protection – Economic and Non-economic Arguments for Protection.

Instruments of Commercial Policy: Export Tax and Subsidy – Quantitative Restrictions – International Cartels – Dumping – Other Non Tariff Barriers.

### **Unit - 4: Regional Economic Integration**

Preferential Trading Club - Free Trade Area– Customs Union –Common Market – Economic Union – Trade Creation and Trade Diversion - Dynamic Effects of Customs Union –Preferential Treatment to Developing Countries in WTO.

### **Unit- 5: The International Monetary System**

Characteristics of a Good IMS – the Gold Standard –The Britton Woods System – Present System of Managed Flexibility – Optimum Currency Area – European Monetary System

### **Recommended Readings:**

1. R.N.Batra: Pure Theory of International Trade. Chapter 4, 10
2. Wilfred Ethier: Modern International economic s
3. Chacholiades, M., “International Trade: Theory and Policy”, McGraw Hill.
4. Kindleberger, C.P., “International Economics”, Irwin.
5. Soderston, B., “International Economics”, Tat McGraw Hill
6. Lipsey, R.G., “The Theory of Custom Union”, Windfield.
7. Roy, P.N., “International Trade: Theory and Policy”
8. M.M. Conden, “Economics of Protection.”

## **Population and Human Resource (ECO3.2)**

### **Unit 1: Concepts and Basic Theories**

The Malthusian Theory of Population—Theory of Optimum Population—Theory of Demographic Transition—Sources of Population Data—Population Pyramids.

### **Unit 2: Elements of Vital Statistics**

Measure of Fertility—Crude Birth Rate, Fertility Rate, Age Specific Fertility Rate, Measures of Reproductivity—Total Fertility Rate, Gross Reproduction Rate, Net Reproduction Rate—Measure of Mortality—Crude Death Rates, Age Specific Death Rates, Concept of Infant Mortality Rate, Life Table.

### **Unit 3: Economics of Education**

Education and Economic Development—Cost Benefit Analysis of Education—public and private financing of education—Criteria for adequacy of education finance—Financing of education and Equity, Education and Economic Efficiency—Financing for higher education in India and its problems.

### **Unit 4: Health Economics**

Primary Health and its services, Health and Economic Development, Cost and Benefit Analysis of Health Care Services and Facilities

### **Recommended Readings:**

1. Bhende, A and T. Kanitkar: Principles of Population Studies
2. Gupta and Kapoor: Fundamental of Applied Statistics
3. Ramkumarr, R : Technical Demography
4. G. Psacharopolous (ed): Economics of Education
5. Gupta, S.K and R. Joshi: Human Resource Management

## **MONETARY ECONOMICS**

### **(ECO3.3)**

#### **Unit-1: Supply of Money**

Money- concept, functions, characteristics, Supply of money and its components-- Inside and outside money--determinants of money supply---high powered money---money multiplier

#### **Unit-2: Demand for Money**

Demand of money--The classical approach--The Keynesian approach, Friedman's contribution--The approaches of Baumal and Tobin-- The portfolio balance approach

#### **Unit-3 Inflation and Economic stabilization**

Classical, Keynesian and monetarist approaches to inflation. Philips curve analysis-short run and long run Philips curve-rational expectation

#### **Unit-4: Financial System**

Components of financial system—financial institutions, financial markets--function of the financial system--nature and role of banking and NBFIs and monetary policy. Details of Money market and capital market

#### **Recommended readings:**

1. S.B. Gupta: Monetary Economics
2. R. R Paul: Monetary Economics
3. L.M. Bhole: Impacts of Monetary Policy.
4. Harendra Badhav (ed.) Challenges to Indian Banking Competition, Globalization and Financial Markets McMillan
5. N.S. Yher: Non-Perfuming Advances in Banks, Skylark, New Delhi.

6. Report of the Committee (Narsimham) on the Financial System Nov., 1991.
7. Raghuram Rajan Committee Report on Financial Sector Reforms, Planning Commission
8. Hanson and Kathuria (ed.) A Financial Sector for the 21<sup>st</sup> Century, Oxford. University Press
9. Y.V. Reddy: Monetary and Financial Sector Reforms in India, New Delhi

## **PUBLIC FINANCE (ECO3.4)**

### **Unit-I: State Role in the Economy & Provision of Public Goods**

Role of the government in the economy- allocation, distribution and stabilization functions. The nature of Public Goods. Public Goods and market failure. The efficient provision for public goods, Basic concepts-The Theory of Clubs, Tie-bout Hypothesis, Voluntary Bargaining in Small Groups (Coase's analysis), Public goods- externalities, corrective policies and viability of government intervention

### **Unit-2: Public Expenditure**

Theories of Public Expenditure- Lindhal's Model of Voluntary Exchange, Samuelson's Benefit Theory of Public Expenditure, Musgrave's Optimum Budget Theory

Public Expenditure on non-marketed goods, fixed quantity subsidy for marketed goods and excise subsidy –their impact on allocation and distribution. Evaluation of public expenditure-cost benefit analysis

### **Unit-3 :Public Revenue & Public Debt**

Tax Ratio, Buoyancy and elasticity of taxation, Rate schedules of taxation, tax credit, Exemption and Deduction, Excess burden of tax and taxable capacity. Value Added Tax.

Principle of taxation – The Benefit Principle, The Ability to pay principle, the Maximum Welfare Principle of Budget Determination.

The Neo-classical Theory of Incidence and Shifting, Musgrave's Budget Incidence Theory

Public Debt- sources, burden and effects, Optimality in Public Debt Management Pay- As- You- Use and Pay- As- You-go Finance, Musgrave's Intergeneration Equity Theory.

#### **Unit-4 : Public Budget & Fiscal Policy**

The Modern Theory of public Budgeting, Structure of a Public Budget, Incremental and Zero-base Budget Concepts: Budget Deficit, Revenue Deficit and fiscal deficit. The current Union and State Budget. Fiscal Policy and its role in the economy

Fiscal Policy-Functional Finance and Pump Priming-Fiscal Policy under condition of inflation, Fiscal Policy under condition of unemployment, The Balanced Budget Multiplier, Built in the compensatory mechanism. Incidence of deficit financing-The Ricardian Equivalence Theorem- Impact of deficit finance on the capital market. The Crowding out effect. The welfare cost of deficit finance. Rational and methods of reducing deficits

#### **Recommended Readings:**

1. Cullis, John & Jones, Philip: Public Finance and Public Choice.
2. Browning, E.K & Browning, J.M : Public Finance and the price system.
3. Musgrave & Musgrave: Public Finance in Theory and Practice.
4. Buchanan, J.M: The Public Finance

## **ISSUES IN INDIAN ECONOMY (ECO3.5)**

#### **Unit-I: National Income, Poverty & Unemployment**

National Income-growth trends and sectoral composition, poverty in India, concept and magnitude, inequality, unemployment-their trends and estimates, employment policy under different plans period

#### **Unit 2: Industrial Policy and controls**

Industrial environment since independence, industrial policy of 1948 and 1956, performance of industrial licensing system-Indian industry-growth trends and role small scale industries and their problems, role of public sector enterprises

#### **Unit 3: Indian Agriculture**

Nature and importance-agriculture performance-growth and productivity-Agriculture policy-institutional reforms, land reforms and economic reforms and their impact on agriculture

#### **Unit 4: India's Economic Reforms**

Rationale for economic reforms-history of economic reforms-current phases of reforms, disinvestment-privatization-financial reforms-impact of WTO on Indian economy-foreign investment and multinational corporations

**Recommended readings:**

1. Bardhan, P : The political Economy of Development of India
2. Brahmananda, P.R &Panchamukhi, V.R: The Development Process of Indian Economy
3. Dutta &Sundharam: Indian Economy
4. Dhar, P.K: Indian Economy

**ECONOMICS OF ENVIRONMENT  
(ECO4.1)****Unit-I Economy and the Environment**

Poverty and the environment-poverty and environment-concept and indicators of sustainable development-environment accounting policy for sustainable development. Environmental degradation and market failure-externalities, pigouvian tax, property rights and transaction costs-environment public goods.

**Unit-2 natural resources and environment: Economic issues**

Economic issues of renewable and non renewable resources. Optimal depletion-sustainable exploitation-common property resources-open access-the tragedy of commons

**Unit-3 valuation of environment: damages and benefits**

Use and non use values-valuation methods-direct and indirect methods-stated preferences methods: contingent valuation method, revealed preference methods-hedonic pricing and travel cost method-environment impact assessment.

#### **Unit-4 Current issues in global environment**

Climate change, loss of biodiversity, ozone depletion, international conventions and protocols-trade and environment-pollution havens.-Pollution prevention-command and control, market based instruments-taxes vs tradable permits.

#### **Recommended readings:**

1. Nick Hanley, Janson F. Shogren and Ben White: environmental Economics, Macmillan Publications
2. Bhattachariya, R.: environmental Economics, Oxford University Press
3. Shankar, U. : Environmental Economics, Oxford University Press
4. Kolstad, Charles D: Environmental Economics, Oxford University Press

## **ECONOMY OF THE NORTH EASTERN REGION (ECO4.2)**

#### **Unit-1 Resource base of the North Eastern Region:**

Natural resource- Mineral, Forest, water and their uses, Human resource and population- population trend in post independence period- growth rate and density of population- urban-rural composition, sex ratio, literacy, life expectancy and infant mortality, occupational distribution of population , concept of regional Economics.

#### **Unit-2 Infrastructure in the North eastern region:**

State of infrastructure in the region vis a vis of India, power, transport and communication-road, railway and banking, trend of state income-sectoral composition-nature and extend of poverty-inequalities and unemployment-types and magnitude



**Unit-3 Development of agriculture in Assam:**

Role and importance of agriculture in economic development-trends of production-area and productivity-cropping pattern-reasons for slow progress in agriculture-progress in modernization in agriculture. Land reforms-technology in agriculture-traditional techniques and practices

**Unit-4 Development of industry in north eastern states:**

Industrial development of Assam-state of industrialization-growth and problems of public enterprise and small scale industries -factors responsible for slow rate of industrialization-study of specific industries in Assam- tea and petroleum. Planning efforts since the emergence of north eastern council-role and function of NEC-impact of special measures in post 1991 period-emerging areas for future growth of the region-handicraft and handloom sector, tourism

**Recommended readings:**

1. Uma Kapila: Indian Economy
2. Misra, S K & V K Puri, : Indian economy
3. Chand, M &Puri, V K : Regional Planning in India
4. High level commission report to the Prime Minister: Govt. of India, planning commission, 1997, transforming the northeast.
5. Nath, B K, : Assam Economy-analytical profile development perspective of a laggard economy

**DISSERTATION  
(ECO 4.3)****AGRICULTURAL ECONOMICS  
(ECO4.4)****Unit-1 Introduction to agricultural Economics**

Nature and scope of agricultural economics-role of agriculture in economic Development-special Characteristics of the primary sector-interdependence between agriculture and rest of the Economy-farming system-the Chayanovian farm Household model-farm size and productivity

### **Unit-2 The Economics of Agricultural production**

Agricultural Production functions –input-output relationship-farm Budgeting –rotation of crops-location of crops, cropping pattern determinants of cropping pattern

### **Unit-3 Agricultural markets**

Land market: Land use and land prices, lease market-land tenure system-mobility of labour-marginal product of labour-credit market-role of capital in agricultural development-the rural credit market in India-micro finance. Demand for farm product-factors affecting demand for food, Engels law and Engels elasticity-supply of agricultural products-supply of individual crops and aggregate supply – supply response to perennial crops-marketed supply and marketable supply-cowweb market model, Nerlover's PAAE model.

### **Unit-4 Behaviour of agricultural prices, models of agricultural development**

Features of agricultural prices-agricultural price policy-role and functions-sectoral terms of trade and economic growth. Lewis, Fei-Ranis, Jogenson, Mellor, Schultz and Boserup models

### **Recommended readings:**

1. Heady, E.O: Economics of Agricultural Production and Resource Use, prentice Hall
2. Heady, E.O: The Economic Organisation of Agriculture, Mc Graw Hill
3. Fei, Ranis: Economic Growth-An Evolutionary Perspective.
4. Ray, Debraj: Development Economics-Oxford University Press

## **DEMOGRAPHY (ECO 4.5)**

### **Unit-I: Population and Economic development**

Population and Development-Meaning and scope of demography; population growth and their interdependence; Measures of population change and sources of population data, International aspects of population growth and distribution; Pattern of age and sex structure in developing and less developed countries.

### **Unit-II Fertility, vital rates and the life table**

Determinants of fertility-sociological and economic theories, factors of declining fertility in developed and developing countries. Concept of stable population and stationary population. The stable population model, its vital rates and other characteristics. Nuptiality – Concept and analysis of marital status; Trends in age at marriage in India

The rate and trends of mortality in developed and developing countries including factors affecting mortality decline, standardized death rates, various approaches to estimating infant mortality rate, Life table- relationships among various life table functions, curate expectation of life, central mortality rate: construction of abridged life tables from death registration and census data, reed-Merrell method

### **Unit-III Urbanization and migration of population**

Urbanization –Growth and distribution of rural–urban population in India, forces of urbanization in developed and developing countries, trends in urbanization in India, importance of migration in the study of population, internal migration-concept, determinant and consequences. International migration-types, determinants and consequences, migration modal-push-pull hypothesis- todaro’s model of rural-urban migration

### **Unit-IV Population policy and projection**

Population policies affecting fertility in developed and developing countries, population policies and programme in India, national projection of total population and age-sex composition, mathematical method and components of national projection of population, composition and size of labour force- female participation in the workforce

### **Recommended Readings:**

1. Bose, A. (1996), India’s Basic Demographic Statistics, B.R. Publishing Corporation, New Delhi.
2. Choubey, P.K. (2000), Population Policy in India, Kanishka Publications, New Delhi.
3. Coale, A.J. and E.M. Hoover (1958), Population Growth and Economic Development in Low Income Countries: A Case Study of India’s Prospectus, Princeton University Press, Princeton
4. Bhende, A and T. Kantikar, principles of Population Studies’
5. Thomson and Lewis: population problems
6. Gupta, SP and VK Kapoor: Fundamentals of applied statistics’
7. Ramkumar, R: Technical Demography

## **ECONOMETRICS** **(ECO 4.6)**

### **Unit-1 Multiple Regression Analysis: Issues**

Heteroscedasticity, Autocorrelation – Tests, Detection and Remedies.

### **Unit-2 Non linear Estimation and distributed Lagged models**

Non Linear least squares and its iteration process-models with binary dependent variable-Logit and Pobit models, Tobit Model, Koyck model-partial adjustment and adaptive expectation model, estimation of model with lagged dependent variable(ARDL).

### **Unit-3 Simultaneous Equation Models**

Identification through restrictions on the covariance matrix of structural disturbances, recursive model-methods of estimation ILS, 2SLS, IV, 3SLS and FIML methods with properties, forecasting and simulation in SEM.

### **Unit-4 Time series modeling**

Stationery and Non stationery series, random walk model, unit root time series modeling, casualty test-granger and sim's test, co-integration/integrated series, error correction mechanism. Introduction to Panel Data- Fixed and Random Effect models.

### **Recommended readings:**

1. Johnston and Dinardo: econometrics Methods, McGraw Hill
2. Gujarati, D: Basic Econometrics, McGraw Hill
3. Pindyck and Rubinfeld: econometrics Models and econometrics Forecast, McGraw Hill
4. Greene William: Econometrics Analysis, McGraw Hill
5. G.S Madalla: Introduction to Econometrics, Macmillan, New York
6. Jeffrey M. Wooldridge, "Introductory Econometrics: A Modern Approach", South-Western Cengage Learning

## **INDUSTRIAL ECONOMICS**

(4.7)

### **Unit 1 Introduction to industrial Economics**

Meaning-Scope-Need & Significance of the Study of Industrial Economics

Industrial Profile -Private Sector, Large, Medium & Small Scale Industries

Village Industries-Public Sector-Role and Problems of Public Sector-Industries-Disinvestment-Policy.

Integration, Industrial Combinations - Causes, Mergers & Amalgamations, Effects of Industrial Monopoly

### **Unit 2 Theories of Industrial Location**

Factors Influencing Location of Industries-Theories of Industrial Location, Weber, and Sargent Florence-Industrial Imbalance, Causes and Measures-Need for Balanced Regional Development of Industries.

### **Unit 3 Industrial Productivity & Efficiency**

Productivity - Norms and Measurement, Factors affecting Productivity and Capacity Utilization

Importance of Productivity in the Competitive Environment, Measures required for Improving Productivity and Efficiency.

### **Unit 4 Industrial Finance**

Meaning, Scope, Importance of Industrial Finance, Sources of Industrial Finance: Private, Public and Co-operative Sector -Shares, Debentures, Bonds, Deposits, Loan etc

Foreign capital: Need for Foreign Capital, Governments Policy towards, Foreign Capital. Direct Investment, Foreign Institutional Investment, Euro Issues, GDR, ADR, External Commercial Borrowings

### **Unit 5 Indian Industrial Growth**

Brief Outline of Industrial Policies of 1948, 1956, 1977, Industrial Policy – 1991; Trends in Industrial Growth after 1991

Make in India, Look East Policy, North East Industrial and Investment Policy, Performance & Problems of Small Scale & Cottage Industries in India, Role of MNC's in India.

### **Recommended readings:**

1. Alhuwalia I.J. (1985), Industrial Growth in India, Oxford University Press, New Delhi.
2. Barthwal R.R. (1985), Industrial Economics, Wiley Eastern Ltd., New Delhi.
3. Cherunilam, F. (1994), Industrial Economics: Indian Perspective (3rd Edition), Himalaya Publishing House, Mumbai
4. Desai, B. (1999), Industrial Economics in India (3rd Edition), Himalaya Publishing, House, Mumbai
5. Divine, P.J. and R.M. Jones et.al (1976), An Introduction to Industrial Economics, George, Allen and Unwin Ltd., London. Government of India, Economic Survey (Annual)
6. Hay D. and D.J. Morris (1979), Industrial Economics Theory and Evidence, Oxford University Press, New Delhi
7. Kuchhal S.C. (1980), Industrial Economy of India (5th Edition), Chaitanya, Publishing Houses, Allahabad.

8. Singh, A and A.N. Sandhu (1988), Industrial Economics, A Himalaya Publishing, House, Bombay