



Syllabus of MA in Economics under Choice Based Credit System (CBCS)
(Approved by the BOS meeting held on 27/06/2022)

Department of Economics
Rabindra Bharati University

Session: 2022-23 & onwards

RABINDRA BHARATI UNIVERSITY

DEPARTMENT OF ECONOMICS

SYLLABUS FOR MA IN ECONOMICS UNDER CBCS (2017-18 & onwards)

The Syllabus for MA Economics under Choice Based Credits System (CBCS) follows the UGC curriculum with minor changes to suit the present circumstances. The syllabus for MA Economics is divided into four Semesters with 14 **Core Courses** (RAB/PG/ECOS/CC), 4 Compulsory Elective Courses (RAB/PG/ECOS/CEC) and 2 Open Elective Courses (RAB/PG/ECOS/OEC). In the first and second semesters there are five core courses (papers) in each of the semesters, the third semester comprises 3 core courses and 2 compulsory elective courses while the fourth semester contains 1 core course, 2 compulsory elective courses and 2 open elective courses. The courses are spitted into halves, units and sub-units as per requirement. With Choice-Based-Credit System, credit-hour for each course is allocated. Structure of the M.A. Economics syllabus and the broad time-frame of examinations in accordance with the Academic Calendar of the University are given below.

First Semester : 5 Core courses of 50 marks each.

Second Semester : 5 Core courses of 50 marks each.

Third Semester : 3 Core courses and 2 Compulsory Elective Courses of 50 marks each

Fourth Semester : 1 Core course, 2 Compulsory Elective Courses and 2 open elective courses of 50 marks each

The semester schedule is as follows:

Semester	Broad Duration	Effective No of weeks
I	July-December	18 weeks
II	January-June	18 weeks
III	July-December	18 weeks
IV	January-June	18 weeks

Distribution of MA Courses in Economics per semester:

	CORE		CREDITS CLASS
SEMESTER	COURSE(CC)	COURSES	
I Effective No. of Weeks=18	RAB/PG/ECOS/CC1.1/ECOH	Microeconomics-I	5
	RAB/PG/ECOS/CC1.2/ECOH	Macroeconomics-I	5
	RAB/PG/ECOS/CC1.3/ECOH	Mathematical Economics	5
	RAB/PG/ECOS/CC1.4/ECOH	Statistics	5
	RAB/PG/ECOS/CC1.5/ECOH	Development Economics	5
Total Credit of Semester I			25
II Effective No. of Weeks=18	RAB/PG/ECOS/CC2.1/ECOH	Microeconomics-II	5
	RAB/PG/ECOS/CC2.2/ECOH	Macroeconomics-II	5
	RAB/PG/ECOS/CC2.3/ECOH	Growth Economics	5
	RAB/PG/ECOS/CC2.4/ECOH	Pure Theory of International Trade	5
	RAB/PG/ECOS/CC2.5/ECOH	Econometrics -I	5
Total Credit of Semester II			25
III Effective No. of Weeks=18	RAB/PG/ECOS/CC 3.1/ECOH	Environmental Economics	5
	RAB/PG/ECOS/CC 3.2/ECOH	Operations Research	5
	RAB/PG/ECOS/CC 3.3/ECOH	Econometrics -II	5
		Compulsory Elective Course (CEC): (Any one of ECTE, RECE, EMFE, ITRE)	
	RAB/PG/ECOS/CEC 3.1/ECTE	Econometric Theory and Application-I	5
	RAB/PG/ECOS/CEC 3.2/ECTE	Econometric Theory and Application-II	5
	RAB/PG/ECOS/CEC 3.1/RECE	Rural Economics-I	5
	RAB/PG/ECOS/CEC 3.2/RECE	Rural Economics-II	5
	RAB/PG/ECOS/CEC 3.2/EMFE	Economics of Money and Finance-I	5
	RAB/PG/ECOS/CEC 3.1/EMFE	Economics of Money and Finance-II	5
	RAB/PG/ECOS/CEC 3.1/ITRE	International Trade -I	5
	RAB/PG/ECOS/CEC 3.2/ITRE	International Trade -II	5
Total Credit of Semester III			25
IV Effective No. of Weeks=18	RAB/PG/ECOS/CC 4.1/ECOH	Contemporary Development Issues	5
	RAB/PG/ECOS/CEC 4.1/ECTE	Econometric Theory and Application-III	5
	RAB/PG/ECOS/CEC 4.2/ECTE	Econometric Theory and Application-IV (Project)	5
	RAB/PG/ECOS/CEC 4.1/RECE	Rural Economics-III	5
	RAB/PG/ECOS/CEC 4.2/RECE	Rural Economics-IV (Project)	5
	RAB/PG/ECOS/CEC 4.1/EMFE	Economics of Money and Finance-III	5
	RAB/PG/ECOS/CEC 4.2/EMFE	Economics of Money and Finance-IV	5
	RAB/PG/ECOS/CEC 4.1/ITRE	International Trade -III	5
	RAB/PG/ECOS/CEC 4.2/ITRE	International Trade –IV (Project)	5
		Open Elective Course (OEC)	
	RAB/PG/ECOS/OEC 4.1/INEO	Indian Economics	5
	RAB/PG/ECOS/OEC 4.2/ESSO	Economics of Social Sector	5
Total Credit of Semester IV			25
Total Credit of the MA Academic Programme			100

Examination:

The assessment of student performance is carried out through a combination of continuous internal evaluation and end-of-semester evaluation. At present the internal evaluation is of 10 marks in each course per semester and end-of-semester evaluation of 40 marks in each course per semester. Together, it is 50 marks for each course (40+10= 50). The RAB/PG/ECOS/CEC 4.2 (ECTE, RECE, EMFE, ITRE), in semester IV is a project paper, and is of 50 marks. It is evaluated by internal and external experts.

Attendance of the students in class and other academic programme organized by the department is vital. Attendance of 75 percent is essential at every semester for appearing at the written examinations.

SYLLABUS (COURSE OUTLINE)

MA SEMESTER I
CORE COURSE: RAB/PG/ECOS/CC1.1/ECOH
MICROECONOMICS -I

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of fundamental topics of Microeconomics.

Outcome: This course enables the students to develop an analytical understanding of behaviours of consumers and producers, markets, and the issues of General Equilibrium and Welfare.

Module -1: Preference Relations and Consumer Behavior (Credits: 1)

- . Utility maximization
- . Ordinary and compensated demand function
- . Indirect Utility function
- . Expenditure function-properties

Module -2: Producer Behavior (Credits: 1)

- . CD, CES ,VES, Homogenous & Homothetic production functions
- . Cost minimization
- . Derived demand for inputs
- . Profit Maximization
- . Duality in production

Module -3: Markets (Credits: 1.5)

- . Perfect Competition
- . Monopoly and Monopsony
- . Monopolistic Competition
- . Bilateral Monopoly
- . Oligopoly

Module – 4: General Equilibrium Analysis and Welfare Economics (Credits: 1.5)

- . The concept of General Equilibrium.
- . Uniqueness and stability of General equilibrium.
- . Brower's fixed-point theorem.
- . Pareto Efficient Allocations
- . First and Second Fundamental Theorems of Welfare Economics
- . Theory of the second Best-Arrow's Social Welfare function
- . General Possibility theorem Compensation Principle-Kaldor-Hicks-Scitovsky

References

Gravell, H. and Reese, R. (1992): *Microeconomics*, 2nd edition, Longman, London.
Varian, H (2000): *Microeconomic Analysis*, W.W. Norton & Company, New York
Layard and Walters (1987): *Microeconomic Theory*, McGraw-Hill. New York
Charavarty S.R. (2010): *Microeconomics* Allied Publishers Pvt Ltd.

CORE COURSE: RAB/PG/ECOS/CC1.2/ECOH
MACROECONOMICS -I

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of fundamental topics of Macroeconomics.

Outcome: This course enables the students to develop an analytical understanding of the Complete Keynesian Model, Open Economy Macroeconomics, Monetarism and Development Macroeconomics.

Module-I: Complete Keynesian Model (Credits: 1)

Aggregate demand (CM)–Aggregate supply (NN) version of the Keynesian model, definition of involuntary unemployment, unemployment equilibrium, differences of Keynes with the classical ideas.

Module-II: Elements of Open Economy Macroeconomics (Credits: 1)

Accounting Framework; Simple Keynesian model (open economy version-with and without repercussion effects); Macroeconomic equilibrium using open economy IS-LM versions under fixed and flexible exchange rates.

Module-III: Monetarism (Credits: 1)

Alternative explanations of aggregate supply curve, Phillips curve analysis: short run and long run, Natural rate hypothesis, rational expectation.

Module-IV: Development Macroeconomics (Credits: 1)

Effective demand incorporating structural feature of a capitalistic industrial economy; Three Sector Model: Extension of Kaleckian capitalistic industrial economy to agriculture; A model of effective demand with supply constraint.

Module-V: Effects of Fiscal and Monetary Policies (Credits: 1)

Public Debt, Budget Deficit, Money multiplier theory, Deficit financing and money supply,

References

- Ghosh, C. and Ghosh A. (2011): Macroeconomics, PHI, Chapters 4, 7, 8 and 12.
Dornbusch, R(1980) : Open Economy Macroeconomics, Cambridge University Press, Chapters 1 and 2.
Kalecki, M. Selected Essays in the Dynamics of Capitalist Economy, Selected Chapters.
Dornbusch, R., Fischer S. and Startz, R. (2000): Macroeconomics, Selected Chapters.
Blanchard, O.J. and Fischer, S.(1989): Credits on macroeconomics , Chapter -11.
Ghosh, C. and Ghosh A. (2008) : Economics of the Public Sector, PHI, Chapter – 9.

CORE COURSE: RAB/PG/ECOS/CC1.3/ECOH
MATHEMATICAL ECONOMICS

Full Marks: 50[=40(exam)+10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of application of mathematical tools in economics.

Outcome: This course enables the students to develop expertise in the theories of static and dynamic optimisation and input-output analysis.

Module-I: Theory of Static Optimization (Credits: 1.5)

- . Unconstrained optimization
- . Constrained multivariate optimization with inequality constraint.

Module –II: Theory of Dynamic Optimization with Phase Diagram Analysis (Credits: 2.5)

- . Discrete and Continuous frameworks for analysis under finite time horizon
- . Discrete and Continuous frameworks for analysis under infinite time horizon

Module –III: Input-Output Analysis (Credits: 1)

- . Leontief Static Open Model
- . Leontief Static Closed Model
- . Basic ideas of Leontief Dynamic Model

References

1. Chiang, A. C. (1986): *Fundamental Methods of Mathematical Economics*, McGraw Hill, New York.
2. Dixit, A.K(1989).: *Optimization in Economic Theory*, Oxford University Press.
3. Dorfman, R., Samuelson, P.A. and Solow, R.M. (1958) : *Linear Programming and Economic Analysis*, McGraw-Hill Book Company.
4. Silberberg E and Suen, W.: *The Structure of Economics-a Mathematical Analysis*, 3rd edition, McGraw Hill Publishing Company, International Edition.
5. Sydsacter, K. and Hammond, P.J. : *Mathematics for Economic Analysis*, Pearson Education.
6. Chiang, A. C. (1992): *Elements of Dynamic Optimization*, McGraw-Hill, Inc.

CORE COURSE:RAB/PG/ECOS/CC1.4/ECOH
STATISTICS
Full Marks: 50[=40(exam) +10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of application of statistical tools in economics.

Outcome: This course enables the students to develop expertise in the theories of sampling, normal and derived distributions, statistical inference and ANOVA.

Module- 1: Sampling Theory (Credits: 1.5)

Types of Population and Types of Sampling.
Parameter, Statistic and Its Sampling Distribution.
Results Concerning Simple Random Sampling.
Basic Concepts of Stratified Random Sampling, Multistage Sampling,
Systematic Sampling, Purposive Sampling, Quota Sampling, VP Sampling

Module – 2: Normal and Derived Distribution (Credit: 1)

Normal Distribution and Its Properties
Four Fundamental Distributions Derived from Normal: Standard Normal, Chi-Square, t and F Distributions.

Module – 3: Theory of Statistical Inference (Credits: 1.5)

Idea of Statistical Inference.
Point Estimation: Methods of Point Estimation (Method of Moments, Maximum-Likelihood Method), Desirable Properties of Estimators- Small Sample Properties and Large Sample Properties.
Concepts of Interval Estimation: Confidence Interval, Confidence Limits, Confidence Coefficient, Central and Non-Central Interval.
Elements of Testing of Hypotheses: Null and Alternative Hypothesis, Simple and Composite Hypothesis, Critical Region, Type of Errors, Test, Level of Significance, power.
Exact Tests and Confidence Intervals: Problems Regarding a Univariate Normal Distribution, Comparisons of two Univariate normal distributions.
Approximate Tests and Confidence Intervals: Tests and confidence intervals for single mean, single proportion, difference of two means, and difference of two proportions.

Module – 4: ANOVA (Credits: 1)

Analysis of one-way classified data.

References:

1. Goon, A. M., Gupta, M. K. and. Dasgupta, B. (2008): *Fundamentals of Statistics*, Vols I & 2, The World Press Pvt. Ltd., Kolkata.
2. Gupta, S.C. and Kapoor, V.K.(2002) : *Fundamentals of Mathematical Statistics*, Sultan Chand and Sons, New Delhi, 11th edition.

CORE COURSE: RAB/PG/ECOS/CC1.5/ECOH
DEVELOPMENT ECONOMICS
Full Marks: 50[=40(exam) +10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of fundamental topics of Development Economics.

Outcome: This course enables the students to develop analytical and rigorous understanding of the theories fundamental topics of Development Economics.

Module-I: Approaches to Development

(Credit: 1)

Development as growth, development as capability enhancement, and development as environmental sustainability

Module-II: Developing Countries and Underdevelopment

(Credit: 1)

Unit 1. Economic structure of developing countries: production structure, labour market and financial sector

Unit 2: Underdevelopment and its alternative explanations: Low level equilibrium trap, Co-ordination failure, O-Ring Theory of low productivity

Unit 3: Policy issues: Linkages, Big push, Balance-unbalanced growth; Murphy Shleifer Vishny model

Module-III: Dualism and Sectoral Inter-linkage

(Credit: 1)

Lewis, Fei-Ranis Model, Model of Migration (Harris-Todaro Model), Labour Turnover Model, Sectoral inter-linkage and problem of effective demand, Structural disequilibrium and inflation

Module-IV: Interlocking of Rural Markets:

(Credit: 1)

Concept and emergence of Interlocking; Triadic interactions in rural markets; Equilibrium and comparative statics in interlinked market

Module-V: Globalisation and Development

(Credit: 1)

Unit 1: Drivers of globalization; Trade and growth, Capital flow and Immiserization, Trade and Wage inequality

Unit 2: The Multilateral Organization: IMF and World Bank, WTO

Reference:

1. Agenor, P.R. and Peter.J., Montiel: ‘ *Development Macroeconomics* ’, Princeton University Press, Chapter 1, 2
2. Amartya Sen: Development as freedom. Chapter 2, Oxford University Press
3. Basu, K.: ‘ *Agrarian Questions* ’, Introduction, Oxford University Press
4. Basu, K.: ‘ *Analytical Development Economics: The Less Developed Economy Revisited* ’, Oxford University Press, Chapter 2, 7, 8, 9 and 14
5. Christopher Bliss (1989): ‘ *Trade and Development* ’, Handbook of Development Economics, Volume 2, Chapter 23, Pages 1187–1240.
6. Marjit, S. and R. Acharyya,: ‘ *International trade, wage inequality and the developing economy* ’, Physica- Verlag.
7. Rakshit, M. (ed.): ‘ *Studies in the Macroeconomics of Developing Countries* ’, Introduction, Oxford University Press
8. Ray, D.: ‘ *Development Economics* ’, Oxford University Press, Chapter 5
9. Sakiko Fukuda-Parr, Kumar A. K. Shiva, A.K. Shiva Kumar (ed.): ‘ *Readings in Human Development* ’, Oxford University Press.
10. Sikdar, S.: ‘ *Contemporary issues in Globalization* ’, Oxford University Press. (Chapters 3, 4 & 7).

Semester – II

CORE COURSE: RAB/PG/ECOS/CC2.1/ECOH MICROECONOMICS - II

Full Marks: 50[=40(exam) +10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of more advanced topics of Microeconomics.

Outcome: This course enables the students to develop analytical and rigorous understanding of the theory of choice under uncertainty, Game theory and Information Economics.

Module-I: Theories of Uncertainty (Credits: 1.5)

- . Expected utility function- Properties- Consumer's equilibrium under uncertainty
- . Measures of risk aversion- Absolute and Relative
- . Portfolio choice under uncertainty
- . Theory of Insurance
- . Theory of firm under uncertainty

Module-II: Game Theory (Credits: 1.5)

- . Static Games of Complete Information
- . Dynamic Game with Complete Information
- . Introduction to Games with Incomplete Information

Module-III: Economics of Information (Credits: 2)

- . Limited Information about Quality. Adverse Selection and Moral Hazard
- . Solving the Problem: Cases of Equal Information- Signalling
- . The Principal-Agent Problem

References:

1. Varian, H. R(1978).: *Microeconomic Analysis*, W.W. Norton, New York.
2. Mass-Colell, A., Whinston,M. and Green,J. (1995); *Microeconomic Theory*, Oxford University Press, New Delhi, Chapter – 14.
3. Gibbons, R. (1992): *Game Theory for Applied Economists*, Princeton University Press, Princeton, New Jersey, Chapter – 4.

CORE COURSE: RAB/PG/ECOS/CC2.2/ECOH
MACROECONOMICS - II

Full Marks: 50[=40(exam) +10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of more advanced topics of Macroeconomics.

Outcome: This course enables the students to develop analytical and rigorous understanding of the theory of equilibrium and disequilibrium macroeconomic analysis and microfoundations of macroeconomics.

Module-I: Equilibrium Macro Analysis

Equilibrium models of Patinkin and Barro.

(Credit: 1)

Module-II: Disequilibrium Analysis of Keynesian Unemployment (Credit: 1)

Disequilibrium Models of Patinkin, Clower and Barro-Grossman.

Module-III: Micro based Macroeconomic Models (Credits: 3)

a) New Keynesian Macroeconomics

- Menu costs and the need for real rigidity
- Efficiency wage model and the theories of unemployment, Shapiro-Stiglitz Model
- Interest rate rigidity, credit rationing, Stiglitz-Weiss Model

b) New Classical Macroeconomics and Rational Expectations Theory

- Basic ideas of New Classical Macroeconomics. The Rational Expectations Theory meaning-Differences with Adaptive Expectations.
- The Lucas Imperfect Information Model and Rational Expectations. Implications and Limitations- The Phillips Curve and Lucas critique.
- Neo-Keynesian Approach to Rational Expectation

c) Real Business Cycle

- A Baseline Real Business Cycle Model.
- Household Behaviour.
- A Special Case of the Model and its Solution.
- Productivity Shocks, Consumption and Capital Accumulation.

References

1. Patinkin, D. (1956): Money, Interest and prices, Row, Peterson and Compagny.
2. Barro, R.J. (1997): Macroeconomics, 5th Edition, Selected Chapters.
3. Barro, R.I. and Grossman, H.I (1971): "A General Disequilibrium Model of Income and Employment", American Economic Review, March 1971, Vol. 61(1):82-93.
4. Blanchard, O.J. and Fischer, S.(1989): Credits on macroeconomics, Chapter 2, 3 and 7.
5. Romer, D (2001): Advanced Macroeconomics, McGraw-Hill International Edition, chapter 4.
6. Ghosh, C. and Ghosh A. (2011): Macroeconomics, PHI, Chapters 12 and 13.

CORE COURSE:RAB/PG/ECOS/CC2.3/ECOH
GROWTH ECONOMICS
Full Marks: 50[=40(exam) +10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of fundamental topics of Growth Economics.

Outcome: This course enables the students to analytically and rigorously understand the traditional and new theories of growth, optimum growth models and theories of endogenous growth.

Module-I: Traditional Growth Theories and Emergence of New Growth Theories

(Credits: 2.5)

- Growth Models under Exchange-based Approach
Harrod's Model of Growth: Equilibrium and stability analyses with economic and social consequences.
Domar's Model of Growth: Equilibrium and stability analyses with economic and social consequences
Solow's Model of Growth: Assumptions – Evolution of the inputs into production – Dynamics of the model – Impact of a change in the saving rate – Quantitative implications, Empirical applications and convergence theories – Extension of the model incorporating demographic transition theory.
- Cambridge Models of Growth: Kaldor Model with equilibrium and stability analyses
- Technical Progress and Growth

Module-II: Optimum Growth Models

(Credit: 1)

- A Simplified Version of the Ramsey Model

Module-III: Theories of Endogenous Growth

(Credits: 1.5)

- Introduction to the Endogenous Growth Theory
- Endogenous Growth Models - Endogenous technology: The Romer Model
- Human Capital: The Lucas Model

References:

1. Barro, R.J. and Sala – i- Martin, X. (2004) : *Economic Growth*, 2nd Edition, Prentice Hall of India Pvt. Ltd, Chapters 1-4, 6.
2. Domar, E. (1957) : *Essays in the Theory of Growth*, Oxford University Press, London.
3. Harrod, R.F. (1948) : *Towards a Dynamic Economics*, Macmillan, London.
4. Romer, D. (2001) : *Advanced Macroeconomics*, McGraw-Hill International Edition, Chapters 1 and 2.
5. Solow, R.M. (2000) : *Growth Theory :An Exposition*, 2nd Edition, Oxford University Press, USA, Chapters 7- 9.
6. Domar, E.D. (1946) : “ Capital Expansion, Rate of Growth and Employment”, *Econometrica*, April.
7. Kaldor, N. (1956) : “Alternative Theories of Distribution”, *Review of Economic Studies*, Vol. XXIII.
8. Kaldor, N. (1957) : “ A Model of Economic Growth”, *Economic Journal*.

9. Lucas, R.E Jr. (1988) : “On the Mechanics of Economic Development”, *Journal of Monetary Economics*, 22(July), 3-42.
10. Romer, P.M. (1990): “Endogenous Technological Change”, *The Journal of Political Economy*, Vol. 98, No. 5, Part 2: The Problem of Development: A conference of the Institute for the study of Free Enterprise Systems (Oct.), S71-S102, Chicago Journal

CORE COURSE: RAB/PG/ECOS/CC2.4/ECOH
PURE THEORY OF INTERNATIONAL TRADE
Full Marks: 50[=40(exam) +10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of fundamental topics of International Trade theories and applications.

Outcome: This course enables the students to analytically and rigorously understand the various models of international trade theory, tariff and non-tariff barriers to trade and imperfect competition and international trade.

Module-I: Comparative and Absolute Advantage (Credit: 1)

- Adam Smith’s theory of absolute advantage.
- Ricardian theory of comparative advantage, 2X2 models and extensions
- Price definition and physical definitions, relationships between commodity price ratio and factor price ratio.
- The meaning of factor-intensity reversal. Factor-intensity reversal and validity of Heckscher-Ohlin Theorem under price and physical definitions.
- The concept of cone of diversification. Incomplete specialization, factor price equalization, factor-intensity reversal and the cone of diversification.

Module-II: Jones (1965) Heckscher-Ohlin-Samuelson type model (Credit: 1)

- Jones (1965) general equilibrium trade model for a small open economy. The role of the decomposability property.
- Equivalence of Factor-intensity conditions in physical and value terms. The Rybczynski Theorem. The Stolper-Samuelson Theorem-the price magnification effects.
- Effects on welfare. Policy implications of Jones (1965) model.

Module-III: Jones (1971) Specific-factor model (Credit: 1)

- The basic structure-indecomposable nature of the model-implications of the indecomposable structure. Invalidity of Jones (1971) model in the presence of fixed coefficient technology. Impact of terms of trade on income earnings (factor earnings)-idea about inequality in earnings-modifications of the price magnification effects-role of elasticity of marginal productivity of labour elasticity of substitution-Policy implications of the model.

Module-IV: Theory of Tariffs, Quotas and Non-Tariff Barriers (Credit: 1)

- Tariff and quota-partial equilibrium effects, general equilibrium effects, optimum tariff, Metzler’s paradox. Monopoly effects of tariffs and quotas. Tariff vs quota. Tariff and welfare.
- Different Non-Tariff Barriers

Module-V: Imperfect Competition and International Trade (Credit: 1)

- Trade based on product differentiation
- Model of intra-industry trade

References

1. Caves R, Frankel J.A. and Jones R.W(1990): *World Trade and Payments*, Boston, Little, Brown and Co.
2. Sodersten, B. and Reed G.(1994) : *International Economics* , Macmillan, London, 3rd edition
3. Jones R.W(1979): *International Trade: Essays in Theory*, Amsterdam, North Holland
4. Gandolfo, G. (2006): *International Trade Theory and Policy*, Springer International Edition.
5. Marjit, S. (2008): *International Trade and Economic Development: Essays in Theory and Policy*, Oxford University Press, New Delhi.
6. Jones, R.W. (1965): "The Structure of Simple General Equilibrium Models", *Journal of Political Economy*, 73: 551-572.

CORE COURSE : RAB/PG/ECOS/CC2.5/ECOH
ECONOMETRICS -I

Full Marks: 50[=40(exam)+10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of Econometric concepts, principles, tools and applications.

Outcome: This course enables the students to analytically and rigorously understand the various Econometric concepts, principles, tools and applications.

Module-I: Classical Linear Regression Model

(Credits: 2)

Two-variable CLRM

Model specification, Estimation (Using OLS & ML Method), Properties of the estimators; Gauss-Markov Theorem, Analysis of variance, Hypothesis testing, Prediction with regression model.

K-variable CLRM

Model specification, OLS Estimation, Properties of the estimators; Gauss-Markov Theorem, Discussion of simple, partial, and multiple correlation coefficient, Degrees of freedom and R^2 , Analysis of variance and hypothesis testing, Concept of Multicollinearity- consequences, detection and ways out, Tests for Stability- Chow test, Source of instability- LSDV regression.

Module-II: Violation of the Assumptions of CLRM

Heteroskedasticity

(Credits: 3)

Concept, Consequences, Detection- Likelihood ratio test- Goldfeld-Quandt test-White's test, Ways out.

Autocorrelation

Concept, Consequences- effect of AR (1) errors on OLS estimates, Detection-Durbin-Watson test, Durbin's h -test, Remedial Measures, Estimation in levels versus first differences

Simultaneous Equations System

Identification problem, Structural and reduced form equations, Rank and order conditions for identification, Methods of estimation- indirect least Squares, instrumental variable and two- stage least squares methods.

References:

1. Johnston, J. and Dinardo, J. (1997): *Econometric Methods*, 4th Edition, McGraw Hill International Edition.
2. Maddala, G.S. (2005): *Introduction to Econometrics*, 3rd Edition, John Wiley & Sons (ASIA) Pvt. Ltd.
3. Wooldrige, J.M. (2009): *Introductory Econometrics: A Modern Approach*, 4th Edition, Cengage Learning India Pvt. Ltd.

SEMESTER - III
CORE COURSE:RAB/PG/ECOS/CC 3.1/ECOH
ENVIRONMENTAL ECONOMICS

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to explore and analyse the relationship between environment and economics and various approaches in addressing environmental issues from economic perspectives.

Outcome: This course enables the students to analytically understand the relationship between environment and economics and various approaches in addressing environmental issues from economic perspectives.

Module-I: Environment and Economy

(Credit: 1)

- Environment-Economy relationship
- Growth and Environment: Environmental Kuznets Curve – Empirical evidence for the EKC hypothesis – The economics of sustainable development

Module-II: Environmental Pollution and Control Measures (Credits: 1.5)

- Environmental pollution as a negative externality: Optimal level of pollution – Market achievement of optimal pollution – Environmental standards, taxes and subsidies - Pollution charges and property rights – Pollution charges and abatement costs – Marketable pollution permits
- Different types of pollution with control measures

Module-III: Economic Valuation of Environmental Benefits and Costs (Credits: 1.5)

- Revealed preference approach and valuation techniques (Travel Cost Method; Hedonic Price Theory; Household production and defensive expenditure)
- Stated preference approach and valuation techniques (Constructed markets: hypothetical – Contingent Valuation Method, Choice Modeling; and Experimental)

Module-IV: Environment and Sustainable Development

(Credit: 1)

- Concepts and indicators of sustainable development – Sustainable accounting
- Global environmental issues and initiatives

References:

1. Bhattacharyya, R. N. (2001): *Environmental Economics: An Indian Perspective*, Oxford University Press.
2. Conrad, J.M. (1999): *Resource Economics*, Cambridge University Press.
3. Conrad, J.M. and Clark, C. (1987): *Natural resource Economics: Notes and Problems*, Cambridge University Press.
4. Fisher, A. (1981): *Resource and Environmental Economics*, Cambridge University Press.
5. Hanley, N., Shrogen, J. F. and White, B. (2001) : *Introduction to Environmental Economics*, Oxford University Press.
6. Kolstad, C.D. (2003) : *Environmental Economics*, Oxford University Press.
7. Pearce, D.W. and Turner, R.K. (1990): *Economics of Natural Resources and the Environment*, Harvester Wheatsheaf.
8. Perman, R.; Ma, Y; McGilvary, J and Common, M (1999) : *Natural Resources and Environmental Economics*, 2nd Edition, Prentice Hall.

CORE COURSE: RAB/PG/ECOS/CC 3.2/ECOH
OPERATIONS RESEARCH

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of concepts, principles, tools and applications of Operations Research.

Outcome: This course enables the students to analytically and rigorously understand the theories of Non-linear Programming, Integer Programming, Networking, Queuing Theory and Statistical Quality Control.

Module-1: Non-linear Programming (Credit: 1)

. Unconstrained Optimization

. Constrained Optimization

Module-11: Integer Programming (Credit: 1)

. Branch & Bound Method

. Cutting Plane Algorithm

Module-111: Networking (Credit: 1)

. Network Representation

. Critical Path Computation

. PERT Calculations

Module-1V: Queuing Theory (Credit: 1)

. Queuing Systems

. Queuing Process

Module-V: Statistical Quality Control (Credit: 1)

References:

1. R. Rardin: Optimisation in Operations Research (1998), Pearson Education India
2. Taha (1995): Operations Research (5/e), Prentice Hall

3. Swarup, K., Gupta P.K. and Manmohan (2005), Operations Research, 12th Edition, Sultan Chand and Sons.

CORE COURSE:RAB/PG/ECOS/CC 3.3/ECOH
ECONOMETRICS - II

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of Econometric concepts, principles, tools and applications along with learning of econometric softwares.

Outcome: This course enables the students to analytically and rigorously understand the Econometric concepts, principles, tools and applications along with using econometric softwares.

- **Data Exploration:** Checking for outliers, assessing normality, Transforming variables.
- **Multiple Linear Regression Model and Diagnostics**
- **Dummy Variable:** Dummy Independent Variables, Dummy Dependent Variables - The Logit and Probit Models, Concept of Truncated Variables.
- **Introduction to Time Series Econometrics:** Stationary and Non-stationary Stochastic Process, Stationarity Tests, Cointegration.
- **Introduction to Panel Data:** Definition and Usefulness, Fixed Effects and Random Effects Model, Hausman Test.
- **Introduction to Principal Component Analysis**
- **Indian Official Statistics**

References:

1. Maddala, G.S (2003), Introduction to Econometrics, Macmillan, 3rd Edition.
2. D Gujarati (2003), Basic Econometrics, McGraw Hill, 4th Edition
3. Mukherjee, C, H. White & M. Wuyts: Econometrics and Data Analysis for Developing Countries, Routledge, 1998.
4. Tacq, J: Multivariate Analysis Techniques in Social Science Research, Sage International, 1997.
5. Wooldridge, J: Introductory Econometrics- Modern Approach, SouthWestern College Publishing, 1999.
6. Goon, A.M., Gupta, M. and Dasgupta, B. (2005): *Fundamentals of Statistics Vol. I & II*, World Press, Kolkata.
7. Feller, W. (1968): *An Introduction to Probability Theory and Its Applications*, Vol. I (3e), Wiley
8. Hoel, P.G. (1954): *Introduction to Mathematical Statistics* (5e), Wiley and Sons.
9. Rao, C.R. (2001): *Linear Statistical Inference and Applications*, Wiley and Sons.
10. Mood, A.M., Graybill, F.A. and Boes (1974): *Introduction to the Theory of Statistics*, McGraw Hill, Tokyo.

11. Hoel, Port and Stone (1993): *Introduction to Probability Theory*, Universal Book Stall, New Delhi.
12. K. L. Krishnan Edited (1997): *Econometric Applications in India*, Oxford University Press

COMPULSORY ELECTIVE COURSE:CEC: 3.1
RAB/PG/ECOS/CEC 3.1/ECTE
ECONOMETRIC THEORY AND APPLICATION- I

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of various Econometric models along with using econometric softwares.

Outcome: This course enables the students to analytically and rigorously understand various Econometric models along with using econometric softwares.

Module-I: Dummy Dependent Variables **Credit : 1**

- . Linear Probability Model
- . Problem of Truncation
- . Latent Variable Modeling: Logit, Probit, Tobit

Module-II: Distributed Lag Models **Credit : 1**

- . Geometric Lag Approach- Koyck Transformation
- . Polynomial Lag
- . Adaptive Expectation Model
- . Partial Adjustment Model

Module-III: Time Series Econometrics: Concepts **Credits: 2**

- . Stochastic Process- Stationary and Non-Stationary Stochastic Process,
- . Random Walk Model
- . Test for Stationarity- Unit Root Test, Different Statistics for Unit Root Test
- . Cointegration and Error Correction Mechanism

Time Series Econometrics: Forecasting

- . Time Series Modelling: AR, MA, ARMA, ARIMA
- . Box-Jenkins Methodology
- . Vector Autoregression

Module-IV: Analysis of Panel Data **Credit : 1**

- . Meaning and Advantages
- . The Constant Coefficients Model
- . Hausman Specification Test
- . The Fixed Effects Model
- . The Random Effects Model

References:

1. Johnston, J. (1977 and 1984): *Econometric Methods*, 2nd and 3rd Editions, McGraw Hill.
2. Johnston, J. and Dinardo, J. (1997) : *Econometric Methods*, 4th Edition, McGraw Hill International Edition
3. Gujarati, D.N. (2003): *Basic Econometrics* 4th Edition, McGraw Hill, New Delhi
4. Maddala, G.S. (1997): *Introduction to Econometrics*, McGraw Hill, New York.
5. Hamilton, J. D. (1994): *Time Series Analysis*, Princeton University Press.
6. Granger, C.W.J. and Newbold, P. (1977) : *Forecasting Economic Time Series*, 2nd Edition, Academic Press.
7. Greene. W.H. (1997): *Econometric Analysis*. 3rd Edition, Prentice Hall.
8. Enders, W. (2004): *Applied Econometric Time Series*, Wiley.

RAB/PG/ECOS/CEC 3.1/RECE
RURAL ECONOMICS-I
Full Marks: 50
Full Marks: 50[=40(exam)+10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical understanding of concepts, principles, and issues related to rural resource management.

Outcome: This course enables the students to analytically understand the concepts, principles, and issues related to rural resource management.

Module-I: Backwardness and Interlocking in Rural Market Credit: 1

. Theory of stagnation and backwardness in rural economy, Inter-locking of Factor markets

. Institutional and Non-institutional Credit, Features of Rural Credit market
Microfinance, SHGs -- Bangladesh and India.

Module-II: Migration and Rural Economy Credit: 1

. Migration models, extensions in a labour surplus economy, reasons and impact of migration; forced and seasonal migration; remittance and return.

. Empirical Evidence on rural migration: Case studies of Rural-rural and rural-urban migration in India and West Bengal

Module-III: Food Production, Starvation and Famine Debate Credit: 1

. Food production: Constraints, Supply and Demand, Role of Technology, Exchange Entitlement, Theories on Starvation and Famine.

. Sen's Reading of The Bengal Famine 1942-43, the cases of Bangladesh, Ethiopia, China; Slump and Boom Famines

Module-IV: Reforms in Agricultural Sector Credit: 1

Subsidy in Agriculture: measurement and definition; Domestic support and Cross-country perspective

Role of MNCs in Indian agriculture, Debt-trap and suicide of farmers – the case of Maharashtra, Karnataka, Andhra Pradesh, Punjab, West Bengal.

Module-V: Contemporary Issues on Land Credit: 1

Post-independent and Post Reform issues
Displacement and Compensation package

References:

- Sen A., (1983) *Poverty and Famines: An Essay on Entitlement and Deprivation*, OUP Oxford.
- Osmani S. (1995) "The Entitlement Approach to Famine" in Basu K, Pattanaik P. and Suzumura K. (ed) *Choice Welfare and Development: A Festschrift in Honour of A.K.Sen*, OUP Oxford.
- Gulati A. and Narayanan S., (2003) *The Subsidy Syndrome in Indian Agriculture*, OUP.
- Balakrishnan P., (2000) "Agriculture and Economic Reforms: Growth and Welfare," *Economic and Political Weekly*, Vol. 35, No. 12.
- Kaur R., (2016) *Analysis of Agricultural Subsidies in India*, Scholars World, New Delhi.
- Haan de A. and McDowell C., (1997) "Migration and Sustainable Livelihoods: A Critical Review of the Literature" IDS, Working Paper, No. 65.
- Breman J., (1996), *Footloose Labour. Working in India's Informal Economy*, Cambridge: Cambridge University Press.
- Banerjee A. K., (2013) "Sustainable Poverty Reduction: Credit for the Poor," in *Development and Sustainability: India in a Global Perspective*, Banerjee S., and Chakrabarti A. (ed.), Springer.
- OECD/ICRIER (2018), *Agricultural Policies in India*, Food and Agricultural Reviews, OECD Publishing, Paris. Chapter 1.
- Despande, R. S, (2009), "Agrarian Transitions and Farmers' Distress in Karnataka," in *Agrarian Crisis in India*, Reddy D.N and Mishra S. (ed.) OUP.
- Vaidyanathan A. (2006), "Farmers' Suicides and the Agrarian Crisis," *Economic And Political Weekly*, Vol. No. 41.
- Bhadury A. (1973), "Agricultural Backwardness Under Semifeudalism" *Economic Journal*, March No 329, Vol. 83.
- Bhadury A. (1983b), *The Economic Structure of Backward Agriculture*, Academic Press, London.
- Bardhan P. (1980), "Interlocking Factor Markets and Agrarian Development: A Review of the Essays" *Oxford Economic Papers*, March Vol. 32 No. 1.

RAB/PG/ECOS/CEC 3.1/EMFE
ECONOMICS OF MONEY AND FINANCE - I
Full Marks: 50[=40(exam)+10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical understanding of advanced concepts in the economics of money and finance along with relevant models.

Outcome: This course enables the students to analytically understand the advanced concepts in the economics of money and finance along with relevant models.

Module-I:	Credit: 1
Money in a Walrasian General Equilibrium Model/ Money in Classical theory: Patinkin's Model; Rational Expectation, Flexible Price and monetary shocks.	
Module-II:	Credit: 1
Money in over-lapping generation model: Inter temporal Allocation.	
Module-III:	Credit: 1
Money in Keynesian Economics, Money and Effective Demand: Alternative Approaches: Blinder and Bernanke (1989), Blanchard (1981).	
Module-IV:	Credit: 1
Interaction between real and financial sector Asymmetric information, credit rationing and monetary policy; credit rationing and effective supply failure.	
Module-V:	Credit: 1
Financial bubbles, Banking Crises and financial crises.	

References:

1. Barro (1976): Rational Expectations and the role of monetary policy, Journal of monetary Economics, 2: 1-32.
2. Minford: Rational Expectations models
3. Lewis and Mizen: Monetary Economics
4. Knoop, Arestis and Swayer ed: A Handbook of alternative monetary economics,
5. Blinder: Macroeconomics under debate
6. Monetary Economics ed by Clower, Penguin Readings

RAB/PG/ECOS/CEC 3.1/ITRE
INTERNATIONAL TRADE - I
Full Marks: 50
Full Marks: 50[=40(exam)+10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical understanding of advanced concepts in international trade along with various economic paradigms.

Outcome: This course enables the students to analytically understand the advanced concepts in international trade along with various economic paradigms.

Module-I: Neo-Classical Orthodox Trade Theory

Credit: 1

Revision of general equilibrium trade models: Jones (1965) model along with its implications, Specific factor model of Jones (1971), Hybrid models of Jones (1965) and Jones (1971) along with its applications for developing countries, trade models with labour market distortions

Some Refinements of the Orthodox Theory: Natural Resources, “Dutch Disease” and Deindustrialization, International Factor Mobility and Trade in Factors, Directly Unproductive (DUP) Activities and International Trade

Module-II: Strategic Trade Policy

Credit: 1

Nonequivalence of tariff and quota
Intermediate goods and effective rate of protection: Distortions in domestic goods markets, Distortions in domestic factor markets

Theory of Integration: Preferential Trading Cooperation: the various degrees of cooperation, the effects of a Customs Union.

The “New” Protectionism: Voluntary export restraints and import expansion, Subsidies, Administered and Contingent Protection and Fair Trade: dumping and antidumping, Countervailing duty, Safeguard actions

Module-III: The Precursors to New Trade Theories

Credit: 1

Technology Gaps
The Product Cycle
Income Effects: Linder’s Theory, Baker’s Variety Hypothesis
Intra-Industry Trade: Perfectly Homogeneous Goods and Differentiated Products

Module-IV: The New Trade Theories

Credits: 2

The Neo-Heckscher-Ohlin Trade Theories and Trade Policy
 Monopolistic Competition and International Trade: Introduction, A Model of Monopolistic Competition: Love for variety and demand, the production side, international trade, tariffs.

Oligopoly and International Trade

- (a) Homogeneous Goods, Oligopoly and Trade: A Cournot-type model, the equilibrium solution, stability, strategic trade policy-tariffs and subsidies, Vertically Differentiated
- (b) Goods, Oligopoly and International Trade: Consumers, firms and market equilibrium, international trade, Horizontal Differentiation.
- Models of Antras (2003) and Melitz(2003).

References:

Books

1. Batra R.N.(1972): *Studies in the Pure Theory of International Trade*, MacmillannCaves R, Frankel J.A. and Jones R.W.(1990): *World Trade and Payments*, Boston, Little, Brown and Co.
2. Chaudhuri, S. and Mukhopadhyay, U (2009): *Revisiting the Informal Sector: A General Equilibrium Approach*, New York, Springer.
3. Gandolfo, G. (2006) : *International Trade Theory and Policy*, Springer International Edition.
4. Helpman, P. and Krugman, P.(1985) : *Market Structure and Foreign Trade*, Cambridge, Massachusetts, MIT Press.
5. Helpman, P. and Krugman, P.(1989) : *Trade Policy and Market Structure*, Cambridge, Massachusetts, MIT Press
6. Jones R.W. (1979): *International Trade: Essays in Theory*, Amsterdam, North Holland
7. Jones, R.W. (2000): *Globalization and the Theory of Input Trade*, The MIT Press.
8. Krugman, P.R. (1990): *Rethinking International Trade*, Cambridge, Massachusetts, MIT Press.
9. Krugman, P.R. (1991): *Geography and Trade*, Cambridge, Massachusetts, MIT Press.
10. Krugman, P. R. and Obstfeld, M. (1991): *International Economics : Theory and Policy*, 2nd Edn, New York, Harper-Collins.
11. Marjit, S. (2008): *International Trade and Economic Development: Essays in Theory and Policy*, Oxford University Press, New Delhi.

Articles

1. Antras, P. (2003): "Firm Contracts and Trade Struct ure", *Quarterly Journal of Economics*: 1375-1418.
2. Brander, J.A.(1981) : "Intra-industry Trade in Ide ntical Commodities", *Journal of International Economics*,11:1-14.
3. Bhagwati, J.N. (1982) : "Directly Unproductive, Pro fit Seeking (DUP) Activities", *Journal of Political Economy*,90 :998-1002. Reprinted in Balsubramanayam (ed), *Essays in Honour of J.N. Bhagwati: Writings on International Economics*, Oxford University.
4. Brander, J. and Krugman, ,P. 1983) : "A Reciprocal Dumping Model of International Trade", *Journal of International Economics*,15:313-321.
5. Brander, J. and Spencer, B.J.(1985):"Export Subsidi es and International Market Share Rivalry", *Journal of International Economics*, 18: 83-100.
6. Corden, W.M. and Findlay, R(1975) : "Urban Unemploy ment, Intersectoral Capital Mobility and Development Policy", *Economica*, 29: 59- 78.
7. Dixit, A.K. and Stiglitz, J. (1977): "Monopolistic Competition and Optimum Product Diversity", *American Economic Review*, 67: 297-308.
8. Dornbusch, R., Fischer, S. and Samuelson, P.A. (1977): "Comparative Advantage , Trade and Payments in a Ricardian Model with Continuum of Goods", *American Economic Review*,67(5) : 823-839.
9. Gabszewicz, J.J., Shaked, A., Sutton, J. and Thisse, J.F. (1981): "International Trade in Differentiated Products", *International Economic Review*, 22: 527-534.
10. Harris J.R. and Todaro, M.P. (1970) : " Migration, Unemployment and Development : A Two-Sector Analysis", *American Economic Review*, 60: 126-142.
11. Helpman, E.(1990) : "Monopolistic Competition in Tr ade Theory", *Special Paper in International Economics*, Princeton University, International Finance Section.

12. Jones, R.W. (1965): "The Structure of Simple General Equilibrium Models", *Journal of Political Economy*, 73: 551-572.
13. Jones, R.W. (1971): "A Three Factor Model in Theory, Trade and History" in Bhagwati, Jones, Mundell and Vanek (eds) *Trade, Balance of Payments and Growth*, North Holland, Chap1 : 3-21.
14. Krugman, P.R. (1979): "Increasing Returns, Monopolistic Competition and International Trade", *Journal of International Economics*, 9: 469-479.
15. Krugman, P.R. (1980): "Scale Economies, Product Differentiation and Pattern of Trade", *American Economic Review*, 70:950-959.
16. Melitz, M. (2003): "The Impact of Trade on Intra-Industry Reallocations and Aggregate Industry Productivity", *Econometrica*, 71(6):1695-1725.
17. Spence, A.M. (1976) : "Product Selection, Fixed Costs and Monopolistic Competition", *Review of Economic Studies*, 43:215-235.

RAB/PG/ECOS/CEC 3.2/ECTE
Econometric Theory and Application - II

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of advanced concepts and applications of econometrics in economics.

Outcome: This course enables the students to analytically and rigorously understand the advanced concepts and applications of econometrics in economics.

Module-I: Generalized Method of Moments

Credit 1

Module-II: Simultaneous Equations Model

Credits: 2

General Specification

Identification- Structural and Reduced form Approach

Estimation Methods-Single Equation Estimation and System Estimation

Module-III: Introduction to Multivariate Analysis

Credits: 2

Factor Analysis

Principal Component Analysis

Cluster Analysis

References:

Maddala, G.S (2003), Introduction to Econometrics, Macmillan, 3rd Edition.

D Gujarati (2003), Basic Econometrics, McGraw Hill, 4th Edition

Mukherjee, C, H. White & M. Wuyts: Econometrics and Data Analysis for Developing Countries, Routledge, 1998.

Tacq, J: Multivariate Analysis Techniques in Social Science Research, Sage International, 1997.

Wooldridge, J: Introductory Econometrics- Modern Approach, SouthWestern College Publishing, 1999.

Goon, A.M., Gupta, M. and Dasgupta, B. (2005): *Fundamentals of Statistics Vol. I & II*, World Press, Kolkata.

Feller, W. (1968): *An Introduction to Probability Theory and Its Applications*, Vol. I (3e), Wiley

Hoel, P.G. (1954): *Introduction to Mathematical Statistics* (5e), Wiley and Sons.

Rao, C.R. (2001): *Linear Statistical Inference and Applications*, Wiley and Sons.

Mood, A.M., Graybill, F.A. and Boes (1974): *Introduction to the Theory of Statistics*, McGraw Hill, Tokyo.

Hoel, Port and Stone (1993): *Introduction to Probability Theory*, Universal Book Stall, New Delhi.

RAB/PG/ECOS/CEC 3.2/RECE
RURAL ECONOMICS - II
Full Marks: 50[=40(exam)+10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of advanced concepts and applications in rural resource management.

Outcome: This course enables the students to analytically and rigorously understand the advanced concepts and applications in rural resource management.

Module-I: Ownership Cultivation and different tenurial contracts **Credit: 1**

- . Efficiency of different tenurial contracts vis-à-vis ownership cultivation.
- . Uncertainty and share tenancy.
- . Coexistence of Share Tenancy, Fixed Rent Tenancy and Wage Contract in Indian Agriculture
- . Factors determining the leasing decision – factor market imperfections.

Module-II: Rural Credit Market and different types of Inter linkage **Credit: 1**

- . Characteristics of rural credit market.
- . Credit Rationing
- . Credit-Product Interlinkage – ICPC vs. NICPC – Price uncertainty; Potential Risk, interlinkage in risk less world

Module-III: Rural Insurance and Innovation **Credit: 1**

- . Risk and Problems of Innovation in Agriculture; Efficient Risk Sharing
- . Price Uncertainty, Crop failure and crop insurance Scheme.

Module-IV: Sectoral Growth Linkage between Agriculture and the Rural Non-farm Economy **Credit: 1**

- . Trends and Pattern of rural non-farm employment in India
- . Factor market Linkages and Reverse Linkage - Debates
- . Cross- section and Time-series Evidence of Linkage..

Module-V: Food Industry Consolidation and Agro-industrialization **Credit: 1**

References:

1. Basu, K.: 'Agrarian Questions', Oxford University Press.
2. Basu, K.: 'Analytical Development Economics: The Less Developed Economy Revisited', Oxford University Press.
3. Ray, D.: 'Development Economics', Oxford University Press.
4. Chaudhuri, S (1996) : "Price Uncertainty and Credit-Product Interlinkage: A Note", Keio Economic Studies, Vol.33 No. 2 , p. 103-115
5. Chaudhuri, S (1999): "A Theory of Two-Tier Interlinkage in the Agricultural Credit Market: Comments", Keio Economic Studies, Vol.36 No. 1, p. 99-109.
6. Misra, S.B. (2013) : "Growth of Rural Non-Farm Employment in India: Pre and Post Reform Trends and Patterns", Journal of Land and Rural Studies, Vol. 1 No. 2, p. 99 – 112.
7. Chattopadhyay, M and Sengupta, A. (2001): "Tenancy Inefficiency: A Study Based on West Bengal Agriculture", Economic and Political Weekly, Vol. 36 No. 5/6, pp. 497- 502.
8. Ellis, F.: "Peasant Economics: Farm Households and Agrarian Development", Cambridge University Press.
9. Dwivedi, H. and Rudra, A. (1973): "Economic Effects of Tenancy: Some Further Negative Results", Economic and Political Weekly, Vol. 8 No. 29, pp. 1291- 1294.
10. Bardhan, P. and Rudra, A.,(1978): "Interlinkage of Land, Labour and Credit Relations: An Analysis of Village Survey Data in East India", Vol. 13 No. 6/7, pp. 367-38.

RAB/PG/ECOS/CEC 3.2/EMFE
ECONOMICS OF MONEY AND FINANCE - II
Full Marks: 50[=40(exam)+10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical understanding of advanced concepts in the economics of money and finance along with various applications.

Outcome: This course enables the students to analytically understand the advanced concepts in the economics of money and finance along with various applications.

Module-I: Corporate Finance

Credits: 2

Introduction to corporate finance: Financial instruments and financial structure; Financial statement and ratio analysis.

Value and capital Budgeting: Time value of money; investment decisions and net present value; capital budgeting-weighted average cost of capital and different methods, Valuation of bonds using Present Value, NPV versus some alternative investment rules.

Risk and Capital Budgeting: Concept of risk and return; portfolio theory, capital asset pricing model, arbitrage pricing theory; Risk, return and capital budgeting: Cost of equity capital, estimation of beta, determinants of beta, cost of capital with debt.

Capital Structure and Pay-out policy: Efficient Market Hypothesis, Financial Leverage and Firm Value –Modigliani and Miller Propositions, Implications of Corporate Taxes, Personal taxes and costs of financial distress; Financial leverage and growth, Dividend pay-out policy.

Module-II: Derivatives and Markets

Credits: 1.5

Options: Call Option, Put Option, Payoff Curves, Option Pricing, Strategies using options.

Forward: Long, Short, Payoff Curves

Futures: Mode of Trade, Role of the Exchange, Mark-to-Market, Speculation with Futures, Hedging with Futures.

Module-III:

Credits: 1.5

Economics of Banking Role of Financial Intermediaries: Banks as deposit taking institutions, credit managers and the role of banks in resource allocating.

Simple microeconomic models of banking: perfect competition, monopoly and oligopoly.

Banking under imperfect information: Banking under adverse selection and moral hazard; credit rationing and banking crisis.

References:

1. Ross, S.A., Westerfield, R.W. and J. Jaffe (1999), Corporate Finance, McGraw Hill International Edition, Finance Series, 5th Edition
2. Brealey, R.A., Myers, S.C., Allen, F. and P. Mohanty. (2007), Principles of Corporate Finance, Tata McGraw-Hill Publishing Company Limited, New Delhi, 8th Edition
3. Sharpe, W.F., Alexander, G.J., and J.V. Bailey (2000), Investments, Prentice Hall of India, 5th Edition
4. Arnold and Kumar: Corporate Financial Management, 3rd Edition, (Pearson Education).
5. Eiteman, Stonehill, Moffett and Pandey: Multinational Business Finance, 10th Edition (Pearson Education).
6. Copeland, T. E., Weston, J.F., and Shastri, K. (2005), Financial Theory and Corporate Policy, Pearson Higher Education, International Edition, 4th edition
7. Hull, John. C, Options, Futures and Other Derivatives, 8th Edition, Pearson Education.
8. Eiteman, Stonehill, Moffett and Pandey: Multinational Business Finance, 10th Edition (Pearson Education).
9. Xavier, Freixas and Jean-Charles Rochet, Microeconomics of Banking, 2nd edition, MIT Press.
10. Eichberger, J and Ian R. Harper, Financial Economics, Oxford University .

RAB/PG/ECOS/CEC 3.2/ITRE

INTERNATIONAL TRADE - II

Full Marks: 50

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical understanding of advanced concepts and issues in international trade.

Outcome: This course enables the students to analytically understand the advanced concepts and issues in international trade.

Module-I: The International Financial System

Credit : 1

- The Foreign Exchange Market
- International Money Markets : The International Monetary System ; History and Controversies,
- International Organisations : The IMF, The World Bank,
- International Monetary Integration : Optimum Currency Areas and Monetary Unions
- Eurocurrencies and Euromarkets : External Financial Markets

Module-II: The Monetary Approach to the Balance of Payments **Credit: 1**

Money, Interest Rates, Price Level and Exchange Rates

Inflation and Exchange Rate Dynamics

Module-III: Portfolio and Macroeconomic Equilibrium in an Open Economy **Credit: 1**

Asset Stock Adjustment in a Partial Equilibrium Framework

Portfolio and Macroeconomic Equilibrium under Fixed Exchange Rates

Portfolio and Macroeconomic Equilibrium under Flexible Exchange Rates

Rational Expectation and Overshooting

Module-IV: The Intertemporal Approach **Credit : 1**

The Intertemporal Approach to the Balance of Payments

The Intertemporal Approach to the Real Exchange Rate

An Intertemporal Model with Endogenous Growth in an Open Economy

Module-V: Problems of the International Monetary System **Credit: 1**

Policy Optimisation, Game Theory and International Coordination

The Problem of the Reference Model and the Obstacles to Coordination

The Debt Problem

Capital Movements, Speculation and Currency Crisis

Proposals for the International Management of Exchange rates.

References:

1. Rivera – Batiz (1989): *International Finance and Open Economy Macroeconomics*, Macmillan Publishing Company, New York
2. Giancarlo G. (2000) :*International Finance and Open Economy Macroeconomics*, Springer.
3. Krugman, P. R. and Obstfeld, M. (1991): *International Economics: Theory and Policy*, 2nd Edn, New York, Harper-Collins.
4. Levi,M., *International Finance and Open Economy Macroeconomics*,
5. Caves R, Frankel J.A. and Jones R.W.(1990):. *World Trade and Payments*, Boston, Little, Brown and Co.
6. Dornbusch, R. (1980): *Open Economy Macroeconomics*, Basic Books, Inc Publishers, New York.

SEMESTER IV

CORE COURSE: RAB/PG/ECOS/CC 4.1/ECOH

Contemporary Development Issues

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical understanding of advanced concepts in contemporary development issues.

Outcome: This course enables the students to analytically understand the advanced concepts in contemporary development issues.

Module-1: Multinational Corporations and Foreign Direct Investment

Credit: 1

Definition and Importance

Foreign Direct Investment (FDI)-FDI and multinationals-The debate over multinationals-multinationals and competition effects-impact of capital inflow-FDI in India.

Portfolio Foreign Investment

India, the East Asian Crisis and Capital Account Convertibility

Module-II: Free Trade, Protectionism and Regional Trading Blocks Credit: 1

Benefit of Free Trade

Protectionism and its Tools- Tariff and Non-tariff barriers- Role of GATT

Regional Trading Blocks (RTBs)-the concept-Free Trade Areas, Customs Union, Common Market and Economic Union-members of RTBs-welfare effects of RTBs.

Performance of ASEAN and European Union as RTBs.

RTBs and India.

Module-III: Developing Countries in the New International Economic Order

Credits: 1.5

The World Trade Organization (WTO)-Formation of WTO-objectives and functioning.

Trade and labour Rights-globalization and low skilled labour

Patents, and TRIPS

TRIMS

Doha, Cancun and after

India and WTO

India and patents

Module-IV: Selected Current issues on Globalization Credits: 1.5

Globalization and climate change-carbon emissions-deforestation-carbon credits-global carbon credit market-India and the issues related to climate change.

Recent economic recession and its impact on worldwide employment. Impact of economic recession in India.

Recent oil price hike and inflationary pressures in the Indian economy.

References:

1. Ahluwalia, I.J and Little I.M.D. (eds.) (1998): *India's Economic Reforms and Development*, Oxford University Press, New Delhi.
2. Basu, K.(ed) (2006) : *India's Emerging Economy : Performance and Prospects in the 1990s and Beyond*, 3rd Edition, Oxford University Press, New Delhi
3. IGES White paper (2009): *Climate Change Policies in the Asia-Pacific: Reuniting Climate Change and Sustainable Development*, IGES Publication, Japan.
4. Jalan, B. (1996): *Indian Economic Policy; Preparing for Twenty First Century*, Viking, New Delhi.

RAB/PG/ECOS/CEC 4.1/ECTE

Econometric Theory and Application - III

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of advanced concepts and applications of econometrics in economics, testing various economic theories along with using softwares.

Outcome: This course enables the students to analytically and rigorously understand the advanced concepts and applications of econometrics in economics, testing various economic theories along with using softwares.

Module-I: Application of Exploratory Statistics Credit : 1

Module-II: Application of Regression Analysis Credits: 2

. Cross-section, Time series, Panel Data Analysis

Module-III: Application of Multivariate Analysis Credits: 2

References:

- Maddala, G.S (2003), Introduction to Econometrics, Macmillan, 3rd Edition.
D Gujarati (2003), Basic Econometrics, McGraw Hill, 4th Edition
Mukherjee, C, H. White & M. Wuyts: Econometrics and Data Analysis for Developing Countries, Routledge, 1998.
Taq, J: Multivariate Analysis Techniques in Social Science Research, Sage International, 1997.
Wooldridge, J: Introductory Econometrics- Modern Approach, SouthWestern College Publishing, 1999.
Goon, A.M., Gupta, M. and Dasgupta, B. (2005): *Fundamentals of Statistics Vol. I & II*, World Press, Kolkata.
Feller, W. (1968): *An Introduction to Probability Theory and Its Applications*, Vol. I (3e), Wiley
Hoel, P.G. (1954): *Introduction to Mathematical Statistics* (5e), Wiley and Sons.
Rao, C.R. (2001): *Linear Statistical Inference and Applications*, Wiley and Sons.
Mood, A.M., Graybill, F.A. and Boes (1974): *Introduction to the Theory of Statistics*, McGraw Hill, Tokyo.
Hoel, Port and Stone (1993): *Introduction to Probability Theory*, Universal Book Stall, New Delhi.
K. L. Krishnan Edited (1997): *Econometric Applications in India*, Oxford University Press

RAB/PG/ECOS/CEC 4.1/RECE
RURAL ECONOMICS - III

Full Marks: 50[=40(exam)+10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of advanced concepts and applications in rural resource management.

Outcome: This course enables the students to analytically and rigorously understand the advanced concepts and applications in rural resource management.

Module-I: Economics of Natural Resources

Credit: 0.5

- Resource Taxonomy
- Managing Exhaustible Resources – Towards a Substitute (Backstop)
- Resource Scarcity – Managing Renewable Resources

Module-II: Natural Resource Base, Economic Development and Environmental Degradation in Indian Context

Credit: 1

– Natural Resources in the Process of Economic Development: Land resources, Forest resources, Water resources, Fisheries, Mineral resources, Economic development and environmental degradation, Global climate change and India

Module-III: Theories of Management of Natural Resources

Credit: 1

- Models from forestry and/or fishery

Module-IV: Dependence on Natural Resources and Rural Poverty

Credit: 1

- Common Property Resources, LDCs and Sustainable Development
- Concept of sustainable livelihood
- Rural poverty and approaches of livelihood diversification

Module-V: Institutions, Functional Mechanisms, Government Plans and Programmes for Rural Development in India

Credit: 1

- Institutions and Agencies – Public Sector Banks, Regional Rural Banks, Cooperatives for rural development
- Non-bank financial intermediaries and NGOs for rural development
- Government policies, programmes and schemes for rural livelihood promotions
- Microcredit and SHGs in rural India
- Decentralisation and Panchayati Raj System in rural India

Module-VI: Discussion of Case Studies on Rural Resource Management

Credit: 0.5

References:

1. Bhattacharyya, R.N. (Ed.) (2001): Environmental Economics: An Indian Perspective, Oxford University Press.
2. Vaidyanathan, A. (2006): India's Water Resources: Contemporary Issues on Irrigation, Oxford University Press.
3. Conrad, J.M. (1999): Resource Economics, Cambridge University Press.
4. Conrad, J.M. and Clark, C. (1987): Natural resource Economics: Notes and Problems, Cambridge University Press.
5. Fisher, A.C. (1981): Resource and Environmental Economics, Cambridge University Press.
6. Chiang, A.C. (1992): Elements of Dynamic Optimization, McGraw-Hill.
7. Hanley, N., Shogren, J.F. and White, B. (2001): Introduction to Environmental Economics, Oxford University Press.
8. Hanley, N., Shogren, J.F. and White, B. (2007): Environmental Economics: In Theory and Practice, Palgrave Macmillan.
9. Dasgupta, P. (1996): The economics of the environment. *Environment and Development Economics*, 1(4), pp. 387-428.
10. Chopra, K. and Dasgupta, P. (2008): Nature of household dependence on common pool resources: An empirical study. *Economic and Political Weekly*, 43(8), pp. 58-66.
11. Jodha, N.S. (1986): Common property resources and rural poor in dry regions of India. *Economic and Political Weekly*, 21(27), July, pp. 1169-1181.
12. Adhikari, B. (2005): Poverty, property rights and collective action: understanding the distributive aspects of common property resource management. *Environment and Development Economics*, 10(1), pp. 7-31.
13. Ashley, C. and Carney, D. (1999): Sustainable Livelihoods: Lessons from Early Experience. London: Department for International Development (DFID).
14. Agarwal, B. (1990): Social security and the family: Coping with seasonality and calamity in rural India. *Journal of Peasant Studies*, 17(3), pp. 341-412.
15. Ellis, F. (2000): The Determinants of Rural Livelihood Diversification in Developing Countries. *Journal of Agricultural Economics*, 51(2), pp. 289-302.
16. Ellis, F. (1998): Household strategies and rural livelihood diversification. *The Journal of Development Studies*. 35(1): 1-38.
17. Adhikari, B., Salvatore, D.F. and Lovett, J.C. (2004): Household characteristics and forest dependency: evidence from common property forest management in Nepal. *Ecological Economics*, 48(2), pp. 245-257.
18. India State of Forest Reports. Forest Survey of India, Ministry of Environment, Forest and Climate Change, GoI.
19. National Fisheries Policy, 2020. Department of Fisheries, Ministry of Fisheries, Animal Husbandry and Dairying, GoI (Draft).
20. National Mineral Policies. Ministry of Mines, GoI.
21. National Forest Policies. Ministry of Environment, Forest and Climate Change, GoI.
22. Policies and Acts of Ministry of Rural Development, GoI.
23. Road Map of the Panchayati Raj (2011-2017): An All India Perspective. Ministry of Panchayati Raj, GoI (2011).

RAB/PG/ECOS/CEC 4.1/EMFE
ECONOMICS OF MONEY AND FINANCE - III
Full Marks: 50[=40(exam)+10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to develop analytical and rigorous understanding of advanced concepts and applications in economics of money and finance.

Outcome: This course enables the students to analytically and rigorously understand the advanced concepts and applications in economics of money and finance.

Module-I: The structure of Indian Financial System

Credit: 1

The Structure of Indian Financial System
Role Of Financial Institutions, Markets And Intermediaries

Module-II: Indian Banking System

Credit: 1

Reserve Bank of India
Commercial Bank
Co-Operative Bank

Module-III: Indian Financial Markets

Credit: 1

Money Market
Government Securities Market
Debt Securities Market
Equity Market
Derivatives Market

Module-IV: Non-Bank Financial Intermediaries

Credit: 1

Mutual Funds
Insurance Companies

Module-V: Term Structure of Interest Rates

Credit: 1

Theories of term structure of interest rates
Fitting Yield Curves

References:

1. Madura J. (2001): *Financial Markets and Institutions*, 5th Edition, South-Western College
2. Mier K.: *Financial Markets and Institutions*, Tata McGraw- Hill Publishing Company Ltd.
3. Mukherjee, Ghose, Roy (2005): *Indian Financial System and Financial Operations*, 2nd Edition, Dey Book Concern.

4. Khan, M.Y. (2005): *Indian Financial System*, Tata McGraw- Hill Publishing Company Ltd.
5. Bhole, L.M.(2005): *Financial Institutions and Markets*, 4th Edition, Tata McGraw- Hill Publishing Company Ltd.
6. NCFM (2010) :*FIMMDA- NSE Debt Market (Basic) Module Work Book*

RAB/PG/ECOS/CEC 4.1/ITRE
INTERNATIONAL TRADE - III

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to develop analytical understanding of advanced concepts and policy issues in the context of international trade.

Outcome: This course enables the students to analytically understand the advanced concepts and policy issues in the context of international trade.

Module-I: Trade Policies and Development

Credit: 1

. Foreign Capital and Development Issues

. Outsourcing

Issues of North-South Terms of Trade

Module-II: Trade and inequality

Credit: 1

. Issues in Regional Inequality

Trade and Wage Inequality in Developing Countries

Module-III: Trade and Labour

Credit: 1

. Trade, Wages and Labour Mobility

Trade Policy Reforms and Informal Sector

Module-IV: Trade, Growth and Welfare

Credit: 1

. Theory of Immiserizing Growth and its applications

. Welfare Implications of Directly Unproductive Profit-Seeking Activities

Theories of Customs Unions and Free Trade Areas

Recent Developments of the Institutional Frameworks of the RTBs

Welfare implications

References:

Trade Policies and Development

1. Marjit, S. and Beladi H. (1996), 'Protection and the Gainful Effects of Foreign Capital', *Economics Letters*, 53, 3, 311–16.
2. Chao, C. and. Yu, E. (1994), 'Foreign Capital Inflows and Welfare in an Economy with Imperfect Competition', *Journal of Development Economics*, 45, 1, 141–54
3. Bhagwati, J., Panagariya, A. and Srinivasan, T. N. (2004), 'The Muddles over Outsourcing', *The Journal of Economic Perspectives*, Vol. 18, No. 4, pp. 93-114.
4. Sarkar, P (2004), 'Export Diversification, Market Shares and Issues of North-South Terms of Trade' in Bhattacharya, A. and Marjit, S. (Eds.), *Globalization and the Developing Economies: Theory and Evidence*. Manohar Publishers and Distributors, New Delhi, 157-176.
5. Sikdar, S. (2002), 'Multinational Corporations and Direct Foreign Investment' in *Contemporary Issues in Globalization*. OUP, New Delhi, 79-101.
6. Feenstra, R. and Hanson, G. (1998), 'Foreign Direct Investment and Relative Wages: Evidence from Mexico's Maquiladoras', *Journal of International Economics*, 42, 3/4, 371– 93.

Trade and inequality

1. Krugman, P and Liras Elizondo R. (1996), 'Trade Policy and the Third World Metropolis', *Journal of Development Economics*, 49, 137-150.
2. Marjit, S; Kar, S. and Maiti, D. (2007), 'Regional Trade Openness Index and Income Disparity – A New Methodology and the Indian Experiment', *Economic and Political Weekly*, March 4, 2007.
3. Susan C..Z., and Trefler, D. (2005), 'Trade and Inequality in Developing Countries: A General Equilibrium Analysis', *Journal of International Economics*, 65, 21–4.
4. Feenstra, R.C. and Hanson, G.H. (1996), 'Foreign Investment, Outsourcing, and Relative Wages' in Feenstra, R.C., Grossman, G.M. (Eds.), *The Political Economy of Trade Policy: Papers in Honor of Jagdish Bhagwati*. MIT Press, Cambridge, MA, 89– 127.

Trade and Labour

1. Deardorff, A.V. (2000), 'Policy Implications of the Trade and Wage Debate', *Review of International Economics*, 8(3), 478–496.
2. Marjit, S. and Kar, S. (2004), 'Wages, Labour Mobility, and International Trade' in Bhattacharya, A. and Marjit, S. (Eds.), *Globalization and the Developing Economies: Theory and Evidence*. Manohar Publishers and Distributors, New Delhi, 135-156.
3. Kar, S. and. Marjit, S. (2001), 'Informal Sector in General Equilibrium: Welfare Effects of Trade Policy Reforms', *International Review of Economics and Finance*, 10(3), 289–300.

Trade, Growth and Welfare

1. Bhagwati, J.N. (1973), 'The Theory of Immiserizing Growth: Further Applications', in Feenstra, R.C. (Ed.), *Essays in International Economic Theory*, Vol.1 (1983), MIT Press, Cambridge, 121- 129.
2. Bhagwati, J.N. (1969), 'Optimal Policies and Immiserizing Growth', in Feenstra, R.C. (Ed.), *Essays in International Economic Theory*, Vol.1 (1983), MIT Press, Cambridge, 130-133.
3. Bhagwati, J.N. (1982), 'Directly Unproductive Profit-Seeking (DUP) Activities' in Feenstra, R.C. (Ed.), *Essays in International Economic Theory*, Vol.1 (1983), MIT Press, Cambridge, 259-273.

4. Bhagawati, J.N. and Bent Hansen (1973), 'A Theoretical Analysis of Smuggling' in Feenstra. R.C. (Ed.), *Essays in International Economic Theory*, Vol.1 (1983), MIT Press, Cambridge, 286-301.

Regional Trade Blocs

1. Lipsey, R.G. (1960), 'The Theory of Customs Unions: A General Survey', *The Economic Journal*, Vol.70, No. 279, pp. 496-513.

2. Krauss, M.B. (1972), 'Recent Developments in Customs Union Theory: An Interpretive Survey', *Journal of Economic Literature*, Vol.10, No. 2, pp.413-436.

3. Panagariya, A. and. Krishna, P. (2002), 'On Necessarily Welfare-Enhancing Free Trade Areas', *Journal of International Economics*, 57, 353-367.

RAB/PG/ECOS/CEC 4.2/ECTE

Econometric Theory and Application - IV

Full Marks: 50(= Project Report(20) + viva(20) & internal assessment(10))

(Credits : 5)

Objective: The objective of this course is to help students gain hands-on experience in economic research using econometric tools and softwares, applying various econometric theories and testing them using real life data.

Outcome: This course enables the students to develop expertise in hands-on experience in economic research using econometric tools and softwares, applying various econometric theories and testing them using real life data.

1. Common Course on Software Applications (Excel/E-views / SPSS)

Data Presentation- Numerical and Graphical Techniques

Data Analysis-Simple Statistical and Econometric Analyses

2. Project Work: Computer application and use of softwares will be taught through few compulsory classes. A project report (of 50 marks) will be submitted by the students at the end of the semester. It may be based on theoretical models or empirical work with secondary or primary data. The project report may be a group work or allotted individually, depending upon the decision of the department. It may also be a report based on internship at some other organisation for a short

while. The topic for the project will be decided in consultation with the teacher concerned. The project report will be evaluated by departmental teachers (20 marks) with internal assessment (10 Marks) followed by a viva-voce (20 marks) examination at the presentation of the project, where external examiners will also be present.

RAB/PG/ECOS/CEC 4.2/RECE

RURAL ECONOMICS - IV

Full Marks: 50(= Project Report(20) + viva(20) & internal assessment(10))

(Credits : 5)

Objective: The objective of this course is to help students gain hands-on experience in research on rural resource management using real life data.

Outcome: This course enables the students to develop expertise in hands-on experience in research on rural resource management using real life data.

1. Common Course on Software Applications (Excel/E-views / SPSS)

Data Presentation- Numerical and Graphical Techniques

Data Analysis-Simple Statistical and Econometric Analyses

2. Project Work: Computer application and use of softwares will be taught through few compulsory classes. A project report (of 50 marks) will be submitted by the students at the end of the semester. It may be based on theoretical models or empirical work with secondary or primary data. The project report may be a group work or allotted individually, depending upon the decision of the department. It may also be a report based on internship at some other organisation for a short while. The topic for the project will be decided in consultation with the teacher concerned. The project report will be evaluated by departmental teachers (20 marks) with internal assessment (10 marks) followed by a viva-voce (20 marks) examination at the presentation of the project, where external examiners will also be present.

RAB/PG/ECOS/CEC 4.2/EMFE

ECONOMICS OF MONEY AND FINANCE - IV

Full Marks: 50(= Project Report(20) + viva(20) & internal assessment(10))

.(Credits : 5)

Objective: The objective of this course is to help students gain hands-on experience in research on economics of money and finance using real life data.

Outcome: This course enables the students to develop expertise in hands-on experience in research on economics of money and finance using real life data.

1. Common Course on Software Applications (Excel/E-views / SPSS)

Data Presentation- Numerical and Graphical Techniques

Data Analysis-Simple Statistical and Econometric Analyses

2. Project Work: Computer application and use of softwares will be taught through few compulsory classes. A project report (of 50 marks) will be submitted by the students at the end of the semester. It may be based on theoretical models or empirical work with secondary or primary data. The project report may be a group work or allotted individually, depending upon the decision of the department. It may also be a report based on internship at some other organisation for a short while. The topic for the project will be decided in consultation with the teacher concerned. The project report will be evaluated by departmental teachers (20 marks) with internal assessment (10 marks) followed by a viva-voce (20 marks) examination at the presentation of the project, where external examiners will also be present.

RAB/PG/ECOS/CEC 4.2/ITRE

INTERNATIONAL TRADE - IV

Full Marks: 50(= Project Report(20) + viva(20) & internal assessment(10))

(Credits : 5)

Objective: The objective of this course is to help students gain hands-on experience in research on international trade using real life data.

Outcome: This course enables the students to develop expertise in hands-on experience in research on international trade using real life data.

1. Common Course on Software Applications (Excel/E-views / SPSS):

Data Presentation- Numerical and Graphical Techniques

Data Analysis-Simple Statistical and Econometric Analyses

2. Project Work: Computer application and use of softwares will be taught through few compulsory classes. A project report (of 50 marks) will be submitted by the students at the end of the semester. It may be based on theoretical models or empirical work with secondary or primary data. The project report may be a group work or allotted individually, depending upon the decision of the department. It may also be a report based on internship at some other organisation for a short while. The topic for the project will be decided in consultation with the teacher concerned. The project report will be evaluated by departmental teachers (20 marks) with internal assessment (10 marks) followed by a viva-voce (20 marks) examination at the presentation of the project, where external examiners will also be present.

OPEN ELECTIVE COURSE: RAB/PG/ECOS/OEC 4.1/INEO
INDIAN ECONOMICS

Full Marks: 50[=40(exam)+10(internal assessment)]

(5 Credits)

Objective: The objective of this course is to explore and analyse the issues related to the Indian Economy.

Outcome: This course enables the students to develop analytical understanding of issues related to the Indian Economy.

Module-I: Economic reforms & Performance of Indian Economy-Global economic crisis and Indian economy **Credit: 0.5**

Module-II: Trends and Patterns of Employment in India, Trends and Patterns of poverty in India **Credit: 0.5**

Module-III: Economic Planning in India **Credit: 0.5**

Module-IV: Agricultural Growth and Performance **Credit: 1**

Changes in land use, cropping pattern and role of MNCs

Agriculture trade in post-reform period

Technology, infrastructure, role of the state

Module-V: Industrial Sector in India and Economic Liberalization **Credit: 0.5**

Growth and small scale industries with reference to post-reform period: Trends, issues and concerns

Infrastructure Development in India

Module-VI: External Sector Reforms **Credit: 0.5**

Trends and patterns of merchandise exports and imports of India in the post liberalization era

FDI in the post-1991 period

Capital account convertibility

WTO and Indian economy

Module-VII: Financial and Fiscal Sector Reforms **Credit : 1**

Financial liberalization and corporate financing in India

Monetary and credit policy reforms in India

Capital market in the post liberalization period

Inflation in India

Module-VIII: Centre-State Financial Relations in the post-liberalization period-Decentralized planning and local governance in India **Credit: 0.5**

Reference:

1. Ahluwalia, I.J and Little I.M.D. (eds.) (1998): *India's Economic Reforms and Development*, Oxford University Press, New Delhi.
2. Basu, K.(ed) (2006) : *India's Emerging Economy : Performance and Prospects in the 1990s and Beyond*, 3rd Edition, Oxford University Press, New Delhi.
3. Joshi, V. and Little, I.M.D. (1999): *India: Macro Economics and Political Economy, 1964-1991*, Oxford University Press, New Delhi.
4. Kapila, U. (2007b): *The Indian Economy since Independence*, 16th Edition,, Academic Foundation.
5. Sikdar, S.(2006) : *Contemporary Issues in Globalization : An Introduction to Theory and Policy in India*, 2nd Edition, Oxford University Press, New Delhi.

OPEN ELECTIVE COURSE: RAB/PG/ECOS/OEC 4.2/ESSO
ECONOMICS OF SOCIAL SECTOR
Full Marks: 50[=40(exam)+10(internal assessment)]
(5 Credits)

Objective: The objective of this course is to explore and analyse the issues related to the economics of the social sector.

Outcome: This course enables the students to develop analytical understanding of issues related to the economics of the social sector.

Module-I: Development and Social Sector

Credit: 0.5

Concepts of social security: Promotive and Protective approaches; concept of Decent Labour (ILO)

Different Approaches to Development: Human Resource Development (HRDA), PQLI, Basic Needs, Human development (HDA), Entitlement and Capability.

Module-II: Vulnerability and Safety Nets

Credit: 0.5

Economic and Human Poverty, Unemployment and Deprivation: Measures and Indices; Informal labour, migrant workforce, marginalisation with respect to gender, caste, tribe, region

Economic Reforms, effects of flexibility and Globalisation.

Module-III: Food Security

Credit: 0.5

Food production, availability and access; Nutritional status of rural and urban households

Public distribution system, W T O and food security.

Module-IV: Poverty, Population Growth and Development

Credit : 1

Population growth rate and sex ratio, life expectancy, age structure, infant and child mortality; Fertility and Mortality rates;

Population policy: from control to welfare. Demographic data base in India, national family health survey, household survey.

Reproductive health, social impact and regulations.

Module-V: Education and Development

Credit: 0.5

Education as human capital; Inclusion and Exclusion from education.

Demands and supply constraints: private and social; expenditure on education, private cost, social cost;

Educational Policies, resource mobilization, constraints and reforms.

Module-VI: Health Sector

Credit : 1

Health sector: performance and possibilities — interconnection of poverty, malnutrition, disease burden; Health Finance; Role of Institutions: public and private health sectors, PPP model; Evaluation of health policy and reforms;

Health Insurance and Market Imperfections: Managed care System, Third Party Administrator, Community Based Health Insurance.

Module-VII: Gender and Development

Credit: 1

Women as a constituency in development, GDI and GEM ; Work-force participation, visibility of work, paid and unpaid labour, skill and technology;

Access to resources, land rights, credit, micro-finance and self-help groups.

Women in agriculture, industry and informal sector.

References:

1. Parikh, K.S. and Radhakrishna, R.(2002): India Development Report, Oxford Univ. Press.
2. Prabhu, K.S. (2001): A Study of Two Indian States, Economic Reforms and Social Sector Development, Sage Publication.

3. Prabhu, K.S. and Chatterjee, S (1993): Social Sector Expenditures and Human Development: A Study of Indian States, Department of Economic Analysis and Policy, RBI.
4. I. L. O.: Introduction to Social Security (1984), Decent Labour, (2003) Geneva.
5. Jhabvala, R (ed.) (2001): The Unorganised Sector, Sage.
6. Dreze, J. and A.K. Sen (1989): Hunger and Public Action, Oxford Clarendon Press.
7. Visaria, L: Mortality Trends and Health Transition,.
8. Krishnaraj, M (ed.): Gender Population and Development, Oxford University Press,.
9. Kabeer, N.(1994): Reversed Realities: Gender Hierarchies in Development Thought, Verso.
10. The Pratichi Education Report, the Probe Report on Education in India
11. India Health Report, Oxford.
12. World Bank Country Study (1991): Gender and Poverty in India.