Vidyasagar University

Curriculum for B.Sc. Honours in Economics [Choice Based Credit System]

Semester-I

Sl.No.	Name of the Subject	Nature	Code	Teaching Scheme in hour per week			Credit	Marks
				L	T	P		
C1	**C1T:** Introductory Microeconomics	Core Course-1		5	1	0	6	75
C2	**C2T:** Mathematical Methods in Economics-1	Core Course-2		5	1	0	6	75
GE-1	GE-1	GE					4/5	75
	GE-1	GE					2/1	
AECC	English	AECC					2	50
						Total Credits = 20		

L=Lecture, T=Tutorial, P=Practical

AECC- Ability Enhancement Compulsory Course: English /Modern Indian Language

Interdisciplinary/Generic Elective (GE) from other Department

[**Four papers are to be taken and each paper will be of 6 credits**]:

[Papers are to be taken from any of the following discipline: **Mathematics/Statistics/Computer Sc/Geology/Geography/Bio-Technology/Zoology/Botany/Anthropology/Nutrition/Aquaculture**

Semester-1

Core Course

Core-1

CC-1:Introductory Microeconomics   **Credits 06**

C1 T1 –Introductory Microeconomics

Introductory Microeconomics	
	6 Credits
Exploring the subject matter of Economics	
Why study economics? Nature, scope and method of economics; the economic themes: scarcity and efficiency; thinking like an economist: the question of what to produce, how to produce and how to distribute output; **production possibility curve, positive and normative economics,** marginal benefits and marginal costs; opportunity cost (private and social); the basic competitive model; prices, property rights, the role of property rights in markets and profits; incentives and information; rationing; opportunity sets; economic systems; reading and working with graphs.	
Supply and Demand: How Markets Work, Markets and Welfare	
Elementary theory of demand: determinants of household demand, market demand, and shifts in the market demand curve **Elementary theory of supply:** factors influencing supply, derivation of the supply curve, and shifts in the supply curve **The elementary theory of market price:** determination of equilibrium price in a competitive market; the effect of shifts in demand and supply; the excess demand function: Existence, uniqueness, and stability of equilibrium; consumer surplus, producer surplus and efficiency of competitive markets (graphical approach); the idea of market failure; E**lasticities and** their **application**s. **Government intervention and their impact on market equilibrium and efficiency-:** controls on prices (Price ceilings and price floors); indirect taxation.	
The Households	
Theory of consumer behaviour – cardinal and ordinal utility approach; Indifference curve and its properties; The consumption decision - budget constraint, consumption and income and price changes, demand for all other goods and price changes; description of preferences- most preferred bundle and its properties; consumer's optimum choice; income and substitution effects; Marshallian and compensated demand curves; Price consumption curve, income consumption curve, and Engel curve; Homothetic tastes; labour supply and savings decision - choice between leisure and consumption.	
The Firm and Perfect Market Structure	
Defining a firm- firm's legal forms; profit maximization hypothesis; Contractual theories and organizational theories of firms (concepts only); Behaviour of profit maximizing firms and the production process; short run costs and output decisions; costs and output in the long run.	
Imperfect Market Structure	

Monopoly and anti-trust policy; measuring monopoly power; government policies towards competition; various types of imperfect competition.

Input Markets

Theory of rent-Ricardo, Marshall, and Modern theory of rent; Labour and land markets - basic concepts **(derived demand, productivity of an input, marginal productivity of labour, marginal revenue product); demand for labour; input demand curves; shifts in input demand curves**, competitive labour markets; labour market and public policy.

Reference Books

► **Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education Inc., 8th Edition, 2007.**

► **N. Gregory Mankiw, Economics: Principles and Applications, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.**

► **Joseph E. Stiglitz and Carl E. Walsh, Economics, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.**

► Samuelson and Nordhaus, Economics, Mc GrawHill

• **S. P. S. Chauhan, Microeconomics: An Advanced Treatise, PHI Learning Private Ltd., New Delhi, 2009.**

• **Varian, H. R.** *Intermediate Microeconomics; a modern approach,* **Affiliated East West Press.1993.**

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Core-2

CC-2: Mathematical Methods in Economics-I   Credits 06

C2 T2 –Mathematical Methods in Economics-I

Mathematical Methods in Economics - I	
	6 Credits
Preliminaries	
Logic and proof techniques; sets and set operations; relations; functions and their properties; number systems. Convex sets; geometric properties of functions: convex functions, their characterizations, properties and applications; further geometric properties of functions: quasi-convex functions, their characterizations, properties and applications; limit and continuity.	
Functions of one real variable	
Continuous functions of different types and their graphs- quadratic, polynomial, power, exponential, and logarithmic; Derivatives of first and second order and their properties; convex, concave and linear function. Application in economics- concept of marginal.	
Single variable optimization	
Local and global optima; Geometric characterizations; characterizations using calculus; Applications in Economics- profit maximization and cost minimization.	
Integration of functions	
Integration of different types of functions; Methods of Substitution and by parts; Applications in economics- obtaining total from the marginal.	
Difference Equations	
Finite difference; Equations of first and 2nd orders and their solutions; Application in Economics- Cobweb model.	
Elementary Probability Theory	
Sample space and events; Probability axioms and properties; counting techniques; conditional probability; Bayes' rule and independence of events; Random variable and probability distributions- Discrete and continuous. Expectation of a random variable.	
Reference Books	

►   K. Sydsaeter and P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002.

►   A. Mukherji and S. Guha: Mathematical Methods and Economic Theory, Oxford University Press, 2011

►   Apostol T.M. Calculus, Volume 1, One-variable calculus, with an introduction to linear algebra, (1967) Wiley, ISBN 0-536-00005-0, ISBN 978-0-471-00005-1

     K. G. Binmore, Mathematical analysis, Cambridge University Press, 1991.
     R.V. Hogg and A.T. Craig , An Introduction to Mathematical Statistics, Third Edition, Amerind, New York, London
     Kenny and Keeping, Mathematics of Statistics, Van Nostrand.

- Alpha C. Chiang and Kevin Wainwright, Fundamental Methods of Mathematical Economics, McGraw Hill Education, Fourth Edition, 2013
- Gun, A.M., Gupta, M. K., & Dasgupta, B. *Fundamental of Statistics,* Vol.1. World Press Private.

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Generic Elective Syllabus

GE-1 [Interdisciplinary for other department]

GE- 1: Introductory Microeconomics   Credits 06

GE- 1 T1–Introductory Microeconomics

Introductory Microeconomics	
	6 Credits

Exploring the subject matter of Economics

Why study economics? Scope and method of economics; the economic problem: scarcity and choice; the question of what to produce, how to produce and how to distribute output; science of economics; the basic competitive model; prices, property rights and profits; incentives and information; rationing; opportunity sets; economic systems; reading and working with graphs.

Supply and Demand: How Markets Work, Markets and Welfare

Markets and competition; determinants of individual demand/supply; demand/supply schedule and demand/supply curve; market versus individual demand/supply; shifts in the demand/supply curve, demand and supply together; how prices allocate resources; elasticity and its application; controls on prices; taxes and the costs of taxation; consumer surplus; producer surplus and the efficiency of the markets.

The Households

The consumption decision - budget constraint, consumption and income/price changes, demand for all other goods and price changes; description of preferences (representing preferences with indifference curves); properties of indifference curves; consumer's optimum choice; income and substitution effects; labour supply and savings decision - choice between leisure and consumption.

The Firm and Perfect Market Structure

Behaviour of profit maximizing firms and the production process; short run costs and

output decisions; costs and output in the long run.

Imperfect Market Structure

Monopoly and anti-trust policy; government policies towards competition; imperfect competition.

Input Markets

Labour and land markets - basic concepts (derived demand, productivity of an input, marginal productivity of labour, marginal revenue product); demand for labour; input demand curves; shifts in input demand curves; competitive labour markets; and labour markets and public policy.

Reference Books

► Karl E. Case and Ray C. Fair, Principles of Economics, Pearson Education Inc., 8th Edition, 2007.

► N. Gregory Mankiw, Economics: Principles and Applications, India edition by South Western, a part of Cengage Learning, Cengage Learning India Private Limited, 4th edition, 2007.

► Joseph E. Stiglitz and Carl E. Walsh, Economics, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.

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Curriculum for B.Sc. Honours in Economics [Choice Based Credit System]

Semester-II

Sl. No.	Name of the Subject	Nature	Code	Teaching Scheme in hour per week			Credit	Marks
				L	**T**	**P**		
C3	**C3T:** Introductory Macroeconomics	Core Course-3		5	1	0	6	75
C4	**C4T:** Mathematical Methods in Economics-II	Core Course-4		5	1	0	6	75
GE-2	GE-2	GE					4/5	75
	GE-2	GE					2/1	
AEC C-2	Environmental Studies	AECC					4	100
						Total Credits = 22		

L=Lecture, T=Tutorial, P=Practical

AECC- Ability Enhancement Compulsory Course: Environmental Studies.

Interdisciplinary/Generic Elective (GE) from other Department
[**Four papers are to be taken and each paper will be of 6 credits**]:
[Papers are to be taken from any of the following discipline:
Mathematics/Statistics/Computer Sc/Geology/Geography/Bio-Technology/Zoology/ Botany/Anthropology/Nutrition/Aquaculture

Semester-II
Core-3

CC-3 : Introductory Macroeconomics   **Credits 06**

C3T : Introductory Macroeconomics   **Credits 04**

National Income Accounting, unemployment, and open economy issues
Macroeconomic data- National Income accounting and cost of living; Concept of Growth- role of savings, investment, and financial intermediation; Open Economy- Balance of Payments, exchange rates, and capital flow; Concept of unemployment- Types and their characteristics; Growth accounting and Solow residual.

Money and Inflation
Monetary system- definitions of money and determinants of money supply – money multiplier and central bank's role in controlling money supply; quantity theory of money; inflation and its costs.

The Closed Economy in the Short Run
Theory of aggregate demand- components and their interrelations - crowing out- Factors causing shift in the function; Theory of aggregate supply- determinants of supply and shift factors; Interaction of aggregate demand and supply.

Reference Books
1. Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. Principles of Macroeconomics, Indian Imprint of South Western by Cengage India, 6th edition, 2015.
3. Richard T. Froyen, Macroeconomics, Pearson Education Asia, 2nd edition, 2005.
4. Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011.
5. J. R. Hicks. The Social Framework: An Introduction to Economics, Clarendon Press, 3rd edition, 1960
6. Sikdar, Soumyen, Principles of Macroeconomics, Oxford University Press

Core-4

CC-4 : Mathematical Methods in Economics-II   **Credits 06**

C4 T : Mathematical Methods in Economics-II   **Credits 04**

Matrix Algebra
Matrix: its elementary operations; different types of matrix; Rank of a matrix; Determinants and inverse of a square matrix; solution of system of linear equations; Eigen values and Eigen vectors. System of nonlinear equations- Jacobian determinant and existence of solution.

Function of several variables
Continuous and differentiable functions: partial derivatives and Hessian matrix. Homogeneous and homothetic functions. Euler's theorem, implicit function theorem and its application to comparative statics problems. Economic applications- theories of consumer behaviour and theory of production.

Multi-variable optimization
Optimization of nonlinear functions: Convex, concave, and quasi-concave functions; Unconstrained optimization; Constrained optimization with equality constraints- Lagrangian multiplier method; role of Hessian determinant; Inequality constraints and Kuhn-Tucker Conditions; Value function and Envelope theorem; Economic applications – consumer behaviour and theory of production.
Optimization of linear function: Linear programming; concept of slack and surplus variables (graphical solution only) concept of convex set.

Differential Equations
Solution of Differential equations of first order and second order; Economic application-

price dynamics in a single market- multimarket supply demand model with two independent markets. Qualitative graphic solution to 2x2 linear simultaneous differential equation system- phase diagram, fixed point and stability.

Reference Books
1. K. Sydsaeter and P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002.
2. Lawrence Blume and Carl Simon. Mathematics for Economists, W. W. Norton andCompany, 1994.
3. Alpha Chiang and Kevin Wainwright, Fundamental Methods of Mathematical Economics, Fourth Edition, McGraw-Hill, 2005.

Generic Elective Syllabus

GE-2 [Interdisciplinary for other department]

GE-2: Introductory Macroeconomics   **Credits 06**

GE 2 T– Introductory Macroeconomics   **Credits 04**

Introduction to Macroeconomics and National Income Accounting
Basic issues studied in macroeconomics; measurement of gross domestic product; income, expenditure and the circular flow; real versus nominal GDP; price indices; national income accounting for an open economy; balance of payments: current and capital accounts

Money
Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy.

Inflation
Inflation and its social costs; hyperinflation.
The Closed Economy in the Short Run
Classical and Keynesian systems; simple Keynesian model of income determination; IS-LM model; fiscal and monetary multipliers.

Reference Books
1. Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. Macroeconomics, Worth Publishers, 7th edition, 2010.
3. Olivier Blanchard, Macroeconomics, Pearson Education, Inc., 5th edition, 2009.
4. Richard T. Froyen, Macroeconomics, Pearson Education Asia, 2nd edition, 2005.
5. Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011.
6. Errol D'Souza, Macroeconomics, Pearson Education, 2009.
7. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, International Economics, Pearson Education Asia, 9th edition, 2012.

Vidyasagar University

Curriculum for B.Sc (Honours) in Economics
[Choice Based Credit System]

Semester-III

Course	Course Code	Name of the Subjects	Course Type/ Nature	Teaching Scheme in hour per week			Credit	Marks
				L	T	P		
CC-5		**C5T:**Intermediate Microeconomics – I	Core Course - 5	5	1	0	6	75
CC-6		**C6T:**Intermediate Macroeconomics – I	Core Course - 6	5	1	0	6	75
CC-7		**C7T:**Statistical Methods for Economics	Core Course - 7	5	1	0	6	75
GE-3	TBD		Generic Elective-3				4/5	75
							2/1	
SEC-1		**SEC1T:** Data Analysis **Or** **SEC1T:** Contemporary Economic Issues	Skill Enhancement Course-1	1	1	0	2	50
Semester Total							**26**	**350**

L=Lecture, **T**= Tutorial, **P**=Practical, **CC** = Core Course, **GE**= Generic Elective, **SEC** = Skill Enhancement Course, **TBD =** to be decided

Generic Elective (GE)(Interdisciplinary) from other Department [**Four papers are to be taken and each paper will be of 6 credits**]:
Papers are to be taken from any of the following discipline: [Papers are to be taken from any of the following discipline: **Mathematics/Statistics/ComputerSc/Geology/Geography/Bio-Technology/Zoology/Botany/Anthropology/Nutrition/Aquaculture**

Modalities of selection of Generic Electives (GE): A student shall have to choose **04** Generic Elective (GE1 to GE4) strictly from **02** subjects / disciplines of choice taking exactly **02** courses from each subjects of disciplines. Such a student shall have to study the curriculum of Generic Elective (GE) of a subject or discipline specified for the relevant semester.

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CC-5: Intermediate Microeconomics – I   **Credits 06**

C5T: Intermediate Microeconomics – I

Consumer Theory

Cardinal utility; Preference: ordering and properties of ordinal utility; existence of utility functions, different utility functions and their properties, compensating and equivalent variation, Slutsky equation; consumption-leisure choice and labour supply; choice under uncertainty (expected utility and risk aversion), inter- temporal choice and savings decision; revealed preference approach.

Production and Costs

Technology- general concept of production function; returns to factor and returns to scale, isoquants and diminishing rate of factor substitution – elasticity of substitution –some examples of technology (fixed proportion, perfect substitute, Cobb– Douglas Production Function, CES Production Function), General concept of homogenous and homothetic production function and their properties; production with one and more variable inputs; isocost line and firms equilibrium and expansion paths; short run and long run costs; cost curves in the short run and long run; relation between short run and long run costs.

Competitive Equilibrium

Short run and long run equilibrium; determination of the supply curve of the firm and the industry: with reference to external economies and diseconomies of scale.

Input market in perfect competition

Derived demand for input, marginal product and marginal revenue product, input demand for competitive firm and competitive industry, returns to scale and product exhaustion.

Suggested Readings:

1. Hal R. Varian, Intermediate Microeconomics, a Modern Approach, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
2. C. Snyder and W. Nicholson, Fundamentals of Microeconomics, Cengage Learning (India), 2010.
3. B. Douglas Bernheim and Michael D. Whinston, Microeconomics, Tata McGraw-Hill (India), 2009.
4. Hugh Gravelle and Ray Rees. Microeconomics, Prentice Hall (UK); 3rd edition, 2004.
5. Anindya Sen , Microeconomics: Theory and Applications, Oxford University Press
6. Pindyck, Rubinfeld and Mehta, Microeconomics, Pearson

CC-6: Intermediate Macroeconomics – I   **Credits 06**

C6T: Intermediate Macroeconomics – I

Income Determination in the short-run

Simple Keynesian System: Multipliers; equilibrium in both closed and open economy and stability; autonomous expenditure, balanced budget, and net exports; paradox of thrift.

IS-LM Model - equilibrium, stability and comparative statics; effects of fiscal and monetary policies, real balance effects; IS-LM in the open economy under fixed and flexible exchange rate with perfect and imperfect capital mobility (Mundell-Fleming model).

Aggregate Demand and Aggregate Supply

Derivation of aggregate demand assuming price flexibility; Derivation of aggregate supply curves both in the presence and absence of wage rigidity; equilibrium, stability, and comparative statics-effects of monetary and fiscal policies; Unemployment and its causes-possible solutions, including real balance effect and wage cut policy.

Inflation, Unemployment and Expectations

Inflation and unemployment trade-off- Short run and long- run Phillips curve under adaptive expectations-outcome under rational expectations (non-rigorous).

Suggested Readings:

1. Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. Macroeconomics, Worth Publishers, 7th edition, 2010.
3. Steven M. Sheffrin, Rational Expectations, Cambridge University Press, 2nd edition, 1996.
4. Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011.
5. Richard T. Froyen, Macroeconomics, Pearson Education Asia, 10th edition, 2016.
6. William Branson. Macroeconomic Theory and Policy, Indian reprint, East West Press, 3rd edition, 2014.
7. Sikdar Soumyen, Principles of Macroeconomics, Oxford University Press
8. Acharyya Rajat, International Economics, OUP
9. Krugman and Obstfeld, International Economics, Pearson

CC-7: Statistical Methods for Economics   **Credits 06**

C7T: Statistical Methods for Economics

Descriptive Statistics

Presentation of Data; Frequency Distribution; Measures of central tendency, Dispersion, Moments, Skewness and Kurtosis; Bivariate Frequency Distribution- correlation and regression.

Univariate Probability Distribution

Discrete distribution-Binomial, Poisson; Continuous Distributions-Uniform, Normal, Exponential (Properties of each distribution; mean and variance).

Jointly Distributed Random Variables

Density function of Bivariate normal distribution and obtaining means, variances, and correlation coefficients.

Sampling

Concept of sampling and random sampling. Principal steps in a sample survey; methods of sampling;-SRSWR, SRSWOR, Stratified sampling. Sampling vs non-sampling error

Index Number

Price and quantity index number; Different formula; Tests for an ideal index application-Cost of living index; Real GDP

Estimation

Parameters and statistics; Point estimation-Properties of a good estimator; Maximum Likelihood Method and the method of moments; Estimation of population parameters using SRSWR and SRSWOR; Interval estimation.

Suggested Readings:

1. Jay L. Devore, Probability and Statistics for Engineers, Cengage Learning, 2010.
2. John E. Freund, Mathematical Statistics, Prentice Hall, 1992.
3. Richard J. Larsen and Morris L. Marx, an Introduction to Mathematical Statistics and its applications, Prentice Hall, 2011.
4. William G. Cochran, Sampling Techniques, John Wiley, 2007.R.V. Hogg . and A.T. Craig , An Introduction to Mathematical Statistics, Third Edition, Amerind, New York, London
5. Mood, A.M., F.A.Greybill and D.C. Boes: Introduction to the theory of statistics, McGraw Hill, 1974

SEC-1 – Data Analysis   **Credits 02**
SEC1T: Data Analysis

Unit 1
1. Sources of data. Population census versus sample surveys. Random sampling.
2. Frequency distribution and summary Statistics.

Unit 2
Analysis of Indian Data: Economic Survey, RBI Bulletin on currency and finance, ASI DATA, Foreign Trade Statistics, NSS Consumer surveys.

Suggested Readings:

1. P.H. Karmel and M. Polasek (1978), Applied Statistics for Economists, 4th edition, Pitman.
2. M.R. Spiegel (2003), Theory and Problems of Probability and Statistics (Schaum Series).
3. Official websites of RBI, Government of India, NSS, ASI.

OR

SEC-1 – Contemporary Economic Issues   **2 Credits**

SEC1T : Contemporary Economic Issues

Concepts

Fiscal Policy, need for government spending, area of government spending in India.
Capital Expenditure, revenue expenditure, plan expenditure, non-plan expenditure.
Deficits (fiscal, primary, revenue), impact of fiscal deficits on economy, need to control fiscal deficits.
Capital receipts, revenue receipts, tax and non-tax revenue, direct and indirect taxes, need to rationalize tax structure. Goods and Services Tax (GST).
Actuals, Revised Estimates, Budget Estimates
Zero-base budgeting
Gender budgeting
Fiscal devolution and centre-state financial relations in India
Index Numbers: Laspeyres, Paasche and Ideal index numbers, WPI, CPI and implicit deflators

Economic Survey
Understanding Economic Survey

Understanding 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

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b. Receipts: proposed sources of revenue and expected growth in revenue; steps taken to increase revenue such as tax simplification, improvement in tax administration, expansion of tax net;

c. Expenditure: expenditure pattern and expected growth in expenditure;
The thrust areas of the budget; areas/ sectors which have received higher or lower share of expenditure, reasons and consequences thereof; steps proposed to ensure effective spending

Suggested Readings:

- Economic Survey (latest), Government of India, Ministry of Finance. Full chapter (excluding boxed items) on 'Economic Outlook, Prospects, and Policy Challenges' and 'Fiscal Framework'. Other selections to be determined each year.
- 'Understanding the Budget Concepts and Terminologies', Centre for Budget and Governance Accountability
http://www.cbgaindia.org/files/documents/Understanding%20the%20Budget%20Concepts%20and%20Terminologies.pdf
- 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.
- Economic and Social Classification of the Budget, available at http://finmin.nic.in/reports/FunClass201415.pdf.
- http://www.unionbudget.nic.in/ub2016-17/bh/bh1.pdf (For Budget 2016-17 highlights)
- Pranab Mukherjee (2012), "Budget Making", in K. Basu and A. Maertens (eds), The New Oxford Companion to Economics in India, OUP.
- DipakDasgupta and Supriyo De (2012), "Fiscal Deficit", in Basu and Maertens.
- Uma Kapila (2016), "Fiscal and Budgetary Developments", in Indian Economy Since Independence, Academic Foundation, latest edition.
- Y V Reddy (2015), "Continuity, Change and The Way Forward: Fourteenth Finance Commission", EPW Vol. 50, Issue No. 21, 23 May, 2015
- 14th Finance Commission Report http: //finmin.nic.in/14fincomm/14th Finance Commission.htm

<u>**Generic Elective Syllabus**</u>
GE-3 [Interdisciplinary for other department]

GE3: Environmental Economics   **Credits 06**

GE3T: Environmental Economics

Environmental Economics

Introduction
Key environmental issues and problems, economic way of thinking about these problems, basic concepts from economics; Pareto optimality and market failure in the presence of externalities; property rights and other approaches.

The Design and Implementation of Environmental Policy
Overview, Pigouvian taxes and effluent fees, tradable permits, implementation of environmental policies in India and international experience; transboundary environmental problems; economics of climate change.

Environmental Valuation Methods and Applications
Valuation of non-market goods and services--theory and practice; measurement methods; cost-benefit analysis of environmental policies and regulations.

Sustainable Development
Concepts; measurement, perspectives from Indian experience

Suggested Readings:

- Roger Perman, Yue Ma, Michael Common, David Maddison and James McGilvray, "Natural Resource and Environmental Economics", Pearson Education/Addison Wesley, 4th edition, 2011.
- Charles Kolstad, "Intermediate Environmental Economics", Oxford University Press, 2ndedition, 2010.
- Robert N. Stavins (ed.), "Economics of the Environment: Selected Readings", W.W. Norton, 6th edition, 2012.
- Robert Solow, "An Almost Practical Step toward Sustainability," Resources for the Future 40th anniversary lecture, 1992.
- Kenneth Arrow et al., "Are We Consuming Too Much?" Journal of Economic Perspectives, 18(3): 147-172, 2004.
- IPCC (Intergovernmental Panel on Climate Change), Fifth Assessment Report (forthcoming 2014).

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OR

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GE3: Money and Banking   **Credits 06**

GE3T: Money and Banking

Money and Banking

Money

Concept, functions, measurement; theories of money supply determination.

Financial Institutions, Markets, Instruments and Financial Innovations
   1. Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises.
   2. Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations.

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Interest Rates

Determination; sources of interest rate differentials; theories of term structure of interest rates; interest rates in India.

Banking System

1. Balance sheet and portfolio management.
2. Indian banking system: Changing role and structure; banking sector reforms.

Central Banking and Monetary Policy

Functions, balance sheet; goals, targets, indicators and instruments of monetary control; monetary management in an open economy; current monetary policy of India.

Suggested Readings:

- F. S. Mishkin and S. G. Eakins, Financial Markets and Institutions, Pearson Education, 6th edition, 2009.
- F. J. Fabozzi, F. Modigliani, F. J. Jones, M. G. Ferri, Foundations of Financial Markets and Institutions, Pearson Education, 3rd edition, 2009.
- M. R. Baye and D. W. Jansen, Money, Banking and Financial Markets, AITBS, 1996.
- Rakesh Mohan, Growth with Financial Stability- Central Banking in an Emerging Market, Oxford University Press, 2011.
- L. M. Bhole and J. Mahukud, Financial Institutions and Markets, Tata McGraw Hill, 5th edition, 2011.
- M. Y. Khan, Indian Financial System, Tata McGraw Hill, 7th edition, 2011.
- N. Jadhav, Monetary Policy, Financial Stability and Central Banking in India,
- Macmillan, 2006.
- R.B.I. – Report of the Working Group: Money Supply Analytics and Methodology of Compilation, 1998.
- R.B.I. Bulletin, Annual Report and Report on Currency and Finance (latest).