



UNIVERSITY OF CALCUTTA

GURUPADA SAREN
SECRETARY

COUNCILS FOR UNDERGRADUATE STUDIES,
UNIVERSITY OF CALCUTTA.

Ref.No : CUS/ 221 (cir.)/18
Dated the 20th April, 2018

SENATE HOUSE

Kolkata – 700 073.
Phone : 2241-0071-74,
2241-0077-78,2241-4989-90,
2241-2850-51,2241-2859
Fax : 91-033-2241-3222
E-mail : u.g.councilsc.u@gmail.com
Website : www.caluniv.ac.in

To
The Principals/T.I.C.
of all the Undergraduate Colleges
offering B.Sc. (Honours & General) in Economics
affiliated to the University of Calcutta

Sir/Madam,

The undersigned is to inform you that the proposed revised semesterised draft Syllabus for Economics (Honours & General) Courses of Studies under CBCS has been uploaded in the Calcutta University website (www.caluniv.ac.in).

The said syllabus has been prepared by the U.G. Board of Studies in Economics, C.U., suppose to be implemented from the academic session 2018-2019

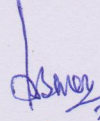
You are requested kindly to go through it and send your feedback within 30th April, 2018.

In this regard you may send your observation/ suggestion to the Department of U.G. Councils, C.U. or through email (u.g.councilsc.u@gmail.com), and you also may contact Prof. Sudakshina Gupta, Department of Economics through e-mail (sudakshinagupta@yahoo.co.in/ sudakshina_urbaneco@caluniv.ac.in).

Your cooperation in this regard will be highly appreciated. Kindly treat the matter as urgent.

Thanking you,

Yours faithfully,


20/04/18
Secretary

**DRAFT STRUCTURE OF BA/BSc ECONOMICS (HONOURS) SYLLABUS,
UNIVERSITY OF CALCUTTA, UNDER
CHOICE BASED CREDIT SYSTEM
To be effective from the academic session 2018-19**

Preamble and Definitions of Key Words:

- **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
- **Choice Based Credit System (CBCS):** The CBCS provides choice for students to select from the prescribed courses (core, generic elective, skill enhancement and ability enhancement courses).
- **Course:** Usually referred to, as 'papers' is a component of a programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. Different courses may have different marks.
- **Credit Based Semester System (CBSS):** Under the CBSS, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.
- **Credit Point:** It is the product of grade point and number of credits for a course.
- **Credit:** A unit by which the course work is measured. **It determines the number of hours of instructions required per week as per UGC-guideline. One credit is equivalent to one hour of teaching (theory) and two hours of tutorial class or practical class or field work per week. We have assumed there are 15 weeks of teaching per semester. For five credits of lecture hours (theory) per course there will be five hours of teaching per week so that for fifteen weeks all total there will be 75 hours of teaching (lecture hours) for theory classes per semester. For 1 credit tutorial or practical classes (each of two hours) there will be all total 30 hours for 15 weeks (one can refer to it a 30 tutorial contact hours or 30 project contact hours or 30 practical contact hours etc. Thus for a 5 credit (Theory)+1 credit(Tutorial)= 6 credit course all total the total teaching cum contact hours for 15 weeks is 75+30=105 lecture hours and tutorial contact hours.** Similarly for a 2 credit course (only theory) the teaching hours or lecture hours all total is 30. Within each course the total marks of 100 has been subdivided in the following manner. For 105 hours of teaching (Theory plus tutorial /alternative to tutorial) we have 80 marks. The remaining 20 marks has been divided into two equal parts: 10 marks is reserved for *continuous internal assessment(CIA)* and the remaining 10 marks for attendance. Out of 80 for written examination 50 marks has been allotted and the remaining 30 marks has been allotted for tutorial/practical/project/term paper/any other alternative examination.
- **Cumulative Grade Point Average (CGPA):** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

- **Grade Point:** It is a numerical weight allotted to each letter grade on a 10-point scale.
- **Letter Grade:** It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P and F. The details will be as per University regulations.
- **Semester Grade Point Average (SGPA):** It is a measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.
- **Semester:** Each semester usually consist of on an average **15 weeks of academic work equivalent to 90 actual teaching days (as per UGC norms)**. We have assumed 15 weeks of teaching per semester and for each course of 6 credits there are 105 hours of teaching plus tutorial (or equivalent) contact hours. It is to be noted that under each semester **odd semester** is to be scheduled from **July to December** and **even semester** from **January to June**.
- **Marks and Paper distributions with credit**

Course Type	Total Papers	Credits	
		Credit	Marks
Core Courses	14	14*6=84	14*100=1400
Discipline Specific Electives	4	4*6 =24	4*100 = 400
Generic Electives	4	4*6=24	4*100= 400
Ability Enhancement Compulsory Courses [Consisting of two types of Ability Enhancement Language courses [English and Modern Indian Languages (MIL)](AELC) of all total 2 credits (50+50=100 marks) plus Environmental Studies (ENVS) course of 2 credits (100 marks)]	2 [1paper classified as 1(a)[English] +1(b)[MIL] and referred to as AELC plus 1 paper as ENVS]	2*2=4	100*2= 200
Skill Enhancement Courses	2	2*2=4	100*2=200
Totals	22	140	2600

- **Continuous Internal Assessment and Students' Attendance:** For each paper **10% will be reserved for continuous internal assessment (CIA) and 10% will be reserved for attendance of the students**. CIA should not be confused with Tutorial examinations. The guidelines regarding tutorial examinations will be notified later. The guidelines regarding attendance of the students to appear in the end semester examination and to convert attendance into marks for each

paper will be as per University norms. *CIA may take the form of written examination/s, take-home assignments, viva-voce; presentation etc depending on the course instructor. As per definition CIA will be assessed fully internally by the course instructor.*

Tutorials and Laboratory based Tutorial (practical): Tutorial classes are introduced per course (except for AEC and SEC) to give the students an idea of detailed understanding of the course and also to build their confidence on the subject in terms of (i) solving problems, (ii) presenting a paper in terms of power point, (iii) preparation of term paper (iv) practical knowledge about the subject in terms of handling data and use of computer software etc. *Unlike all other Science subjects Economics should not be treated as a laboratory-based subject.* After all it is a subject under Social Science and so there is limited scope for introducing practical part for each course. Only under Discipline Specific Elective, 5th Semester, for Courses “Applied Econometrics” (DSE T₁) there will be a *laboratory based tutorial(practical)part* of 30 marks (1 credit). A tutorial class also helps a teacher to clarify any topic in detail to the students. A tutorial contact hour has been meant to promote teacher-student academic interaction. The norm of examination for this part of the course will be decided later.

- Course structure semester-wise: Economics (Honours)

Semester –I (July to December)

Type of Course	Name of the Course	Credit	Marks
Economics Core Course –I (CoreT ₁)	Introductory Microeconomics[Theory plus Tutorial]	5+1=6	100
Economics Core Course –II (CoreT ₂)	Mathematical Methods for Economics-I [Theory plus Tutorial]	5+1=6	100
Ability Enhancement Compulsory Course-I (AEC T ₁) [Ability Enhancement Language Course(AELC)] This course is the sum of two AELC courses having all total 2 credits	Group A [AELC1](50 marks) English } Group-B (50 marks) [AELC 2]- } Modern Indian Languages(MIL) or } Alternative English }	2 (=1+1)	100 (=50+50)
Generic Elective Course I (GE T ₁)	Other than Economics[Theory plus Tutorial/Practical/Project/Field Survey/Term Paper etc]	6	100
Total		20	400

- MIL includes Bengali and Hindi along with other subjects
- Instead of considering AELC1 and AELC2 as Group A and Group B respectively under one paper with 2 credits they can be treated as two separate papers of 50 marks each with 1 credit for each paper. Details about this will be announced centrally by the University.

Semester –II (January to June)

Type of Course	Name of the Course	Credit	Marks
Economics Core Course –III(CoreT ₃)	Introductory Macroeconomics [Theory plus Tutorial]	5+1=6	100
Economics Core Course –IV (CoreT ₄)	Mathematical Methods for Economics-II [Theory plus Tutorial]	5+1=6	100
Ability Enhancement Compulsory Course-II (AEC T ₂)	Environmental Studies (ENVS) [Theory]	2	100
Generic Elective Course II (GE T ₂)	Other than Economics[Theory plus Tutorial /Practical/Project/Field Survey/Term Paper etc]	5+1=6	100
Total		20	400

Semester –III (July to December)

Type of Course	Name of the Course	Credit	Marks
Economics Core Course –V (CoreT ₅)	Intermediate Microeconomics-I [Theory plus Tutorial]	5+1=6	100
Economics Core Course –VI(CoreT ₆)	Intermediate Macroeconomics-I [Theory plus Tutorial]	5+1=6	100
Economics Core Course –VII(CoreT ₇)	Statistics for Economics [Theory plus Tutorial]	5+1=6	100
Skill Enhancement Course-I (SEC T ₁)	Data Analysis [Theory]	2	100
Generic Elective Course III (GE T ₃)	Other than Economics [Theory plus Tutorial/Practical/Project/Field Survey/Term Paper etc]	5+1=6	100
Total		26	500

Semester-IV (January to June)

Type of Course	Name of the Course	Credit	Marks
Economics Core Course –VIII (CoreT ₈)	Intermediate Microeconomics-II[Theory plus Tutorial]	5+1=6	100
Economics Core Course –IX(CoreT ₉)	Intermediate Macroeconomics-II [Theory plus Tutorial]	5+1=6	100
Economics Core Course –X(CoreT ₁₀)	Introductory Econometrics[Theory plus Tutorial]	5+1=6	100
Skill Enhancement Course-II (SEC T ₂)	Research Methodology [Theory]	2	100
Generic Elective Course IV (GE T ₄)	Other than Economics [Theory plus Tutorial Tutorial/Practical/Project/Field Survey/Term Paper etc]	5+1=6	100
Total		26	500

Semester –V (July to December)

Type of Course	Name of the Course	Credit	Marks
Economics Core Course –XI(CoreT ₁₁)	International Economics [Theory plus Tutorial]	5+1=6	100
Economics Core Course –XII (CoreT ₁₂)	Indian Economy [Theory plus Tutorial based Term Paper]	5+1=6	100
Two Discipline Specific Elective(DSEs) out of four	Any <i>two</i> of the following: <ul style="list-style-type: none"> • Applied Econometrics • (DSE T₁)*[Theory plus Laboratory based Tutorial] • Economic History of India (1857-1947) (DSE T₂)[Theory plus Tutorial] • Money and Financial Markets (DSE T₃) [Theory plus Tutorial] • Issues in Indian Economy (DSE T₄)*[Theory plus Tutorial based Project] 	(5+1)=6 6 (5+1)=6 6	100+ 100
Total		24	400

Semester –VI (January to June)

Type of Course	Name of the Course	Credit	Marks
Economics Core Course –XIII(CoreT ₁₃)	Public Economics [Theory plus Tutorial]	5+1=6	100
Economics Core Course –IV (CoreT ₁₄)	Development Economics [Theory plus Tutorial]	5+1=6	100
Two Discipline Specific Elective(DSEs) out of four	Any <i>two</i> of the following: <ul style="list-style-type: none"> • Comparative Economic Development (1850-1950) (DSE T₅) [Theory plus Tutorial] • Financial Economics (DSE T₆) [Theory plus Tutorial] • Environmental Economics (DSE T₇) [Theory plus Tutorial] • Issues in Development Economics (DSE T₈) [Theory plus Tutorial] 	(5+1)=6 6 (5+1)=6	100 + 100
Total		24	400

- **In framing this syllabus the centralized structure is followed.**
- **Special Note**
- The four Generic Elective papers (courses) for Economics (Honours) students will be from any subject other than Economics. Similarly Economics as Generic Elective will be offered to students having Honours in any subject other than Economics. The Generic Elective papers in Economics for Honours students (for students having Honours in any subject other than Economics) will be treated as Core Papers in Economics for General students (for BA/BSc General students having Economics as a General paper). **This has been explained clearly in the context of the syllabus for BA/BSc Economics (General).**

Economics Core Course-I , CoreT1: Introductory Microeconomics

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours (Theory): 75, No. of Tutorial contact hours 30

[For Semester-I]

Unit 1: Exploring the subject matter of Economics

10 lecture hours

- 1.1 Scope and Method of Economics: Wants, Scarcity, Competing Ends and Choice - Defining Economics, Thinking like an economist: Basic Economics Questions, Microeconomics and Macroeconomics, Normative Economics and Positive Economics
- 1.2 Principles of Microeconomics – principles of individual decision making and principles of economic interactions – Introduce trade off, opportunity cost, efficiency, marginal changes and cost-benefit, trade, market economy, property rights, market failure, externality and market power.
- 1.3 Interdependence and the Gains from Trade- production possibilities frontier and increasing costs, absolute and comparative advantage, comparative advantage and gains from trade.
- 1.4 Reading and working with graphs

Unit 2: Market and Adjustments

10 lecture hours

- 2.1 The Evolution of Market Economies, Price System and the Invisible Hand
- 2.2 The Decision-takers - households, firms and central authorities
- 2.3 The Concepts of Markets- individual market, separation of individual markets, interlinking of individual markets. Difference among markets- competitiveness, goods and factor markets, free and controlled markets. Market and non-market sectors, public and private sectors, economies- free market, command and mixed.
- 2.4 Different goods: Public goods, Private goods, Common resources and Natural Monopolies.

Unit 3: Demand and Supply: How Markets Work

10 lecture hours

- 3.1 Elementary theory of Demand: Determinants of household demand and market demand, movement along and shift of the demand curve
- 3.2 Elementary theory of Supply: factors influencing supply, the supply curve, movement along and shift of the supply curve
- 3.3 The Elementary theory of market price: Determination of equilibrium price in a competitive market.
- 3.4 Market Adjustment without Government (with illustrations):the effect of shifts in demand and supply, the excess demand function, existence, uniqueness and stability of equilibrium

Unit 4: Market Sensitivity and Elasticity**12 lecture hours**

- 4.1 Importance of Elasticity in Choice-Decisions
- 4.2 Method of Calculation- Arc Elasticity, Point Elasticity-definition
- 4.3 Demand and supply Elasticities-types of elasticity and factors affecting elasticity, Demand Elasticity and Revenue, Long run and Short run elasticities of Demand and Supply
- 4.4 Income and Cross Price Elasticity
- 4.5 Applications: Case studies – OPEC and Oil Price, Illegal Drugs

Unit 5: Government Intervention**8 lecture hours**

- 5.1 The Economic Role of Government with respect to Market: (i) Price Ceiling, Price Floor and Market Adjustment (with short case studies of agricultural administered price, minimum wage and rent control); (ii) Black Market; (iii) Tax and market adjustment ; (iv) Elasticity and Tax incidence

Unit 6: Utilitarian Approach**25 lecture hours**

- 6.1 The History of Utility Theory – From Cardinal to Ordinal Approach.
- 6.2 Utility in Cardinal Approach- Utility and choice, Total Utility and Marginal Utility, Utility and choice-maximization, marginal utility, theory of demand
- 6.3 Ordinal utility: Assumptions on preference ordering, indifference curve, marginal rate of substitution and convexity of IC, budget constraint, consumers' equilibrium-interior and corner, Derivation of Demand Curves from ICs, composite good convention. Application: Cash subsidy versus subsidy in kind
- 6.4 Price consumption curve, Income consumption curve and Engel curve. Price effect - Income and Substitution effect (Hicks and Slutsky), inferior goods and Giffen goods, Marshallian and compensated demand curves

Tutorial Contact Hours: 30**Texts**

1. G.Mankiw. 2007, Economics: Principles and Applications, India edition by South Western, Cengage Learning
2. R.G. Lipsey. An Introduction to Positive Economics, ELBS (6th edition)
3. Lipsey and Crystal, 2007 Economics, OUP
4. Pindyck, Rubinfeld and Mehta, Microeconomics, Pearson
5. G.S.Maddala and E. Miller, 1989, Microeconomics, Prentice Hall, McGraw Hill International Editions

References

1. Karl e Case and Ray C Fair, Principles of Economics, Pearson Education, 8th Edition, 2007
2. P Samuelson and W.Nordhaus, Economics, McGraw hill International Edition (14th edition or later edition)
3. J.E.Stiglitz and C.E.Walsh, Principles of Economics, WW Norton and Company, NY, (3rd edition or later edition)

Economics Core Course II , Core T2:

Mathematical Methods in Economics-I

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours 30

[For Semester-I]

1. Preliminaries 10 lectures hours

- Sets and set operations; 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, quasi-concave functions, their characterizations, properties and applications.
- Limit and continuity-Different Limit Theorems with proof-concept of first principle.
- Uses of the concept of continuity.

2. Functions of one real variable 10 lecture hours

- Continuous functions of different types and their graphs- quadratic, polynomial, power, exponential, and logarithmic.
- Concept of derivatives. Limits and derivatives. L' Hospital's rule .Graphical meaning of derivatives. Derivatives of first and second order and their properties; convex, concave and linear function.
- Application in economics- concept of marginal. Concept of elasticity. Concept of average function

3. Single variable optimization 10 lecture hours

- Local and global optima; Geometric characterizations; characterizations using calculus. Significance of first and second order conditions.
- Interpretation of necessary and sufficient conditions with examples.

- Applications in Economics- profit maximization and cost minimization.

4. Integration of functions

15 lecture hours

- Integration of different types of functions;
- Methods of Substitution and integration by parts.
- Applications in economics- obtaining total from the marginal.

5. Difference Equations

15 lecture hours

- Finite difference; Equations of first and 2nd orders and their solutions
- Application in Economics- Cobweb model, Multiplier-Accelerator model.

6. Game Theory

15 lecture hours

- Concept of a game, strategies and payoffs
- Zero-sum games- maxmin and minmax solutions
- Dominant Strategy Equilibrium
- Nash equilibrium
- Nash equilibrium in the context of some common games – Prisoners' Dilemma, Battle of Sexes, Matching Pennies

Tutorial contact hours = 30

Texts :

- Alpha C. Chiang and Kavin Wainwright : Fundamental Methods of Mathematical Economics, Mc Graw Hill, 2005.
- Gibbons R. Game Theory for Applied Economists

References

- K. Sydsaeter and P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002.
- Mukherji and S. Guha: Mathematical Methods and Economic Theory, Oxford University Press, 2011.
- Hands, D. W.: Introductory Mathematical Economics, Second Edition, 2004
- Silberberg ,E. and Suen, W.: The Structure of Economics : A Mathematical Analysis, Third edition, Mc-Graw Hill, 2001
- 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, Londo.

Economics Core Course III, Core T3: Introductory Macroeconomics

Total Marks: 100 [Theory (Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours: 30

[For Semester-II]

1. Basic issues in National Income Accounting, Open Economy Accounting, Unemployment and Growth Accounting 30 lecture hours

Macroeconomic data- Basic concepts of National Income accounting. The circular flow. Concepts of GNP, GDP, NNP, and NDP at market price and at factor cost. The measurement of National Income-Value Added Method and Expenditure Method. The problem of double counting. The role of Government. Concepts of Corporate Income, Corporate Savings, Personal Income, Personal Disposable Income and Personal Savings. Saving-Investment gap and its relation with budget deficit and trade surplus. National Income accounting and cost of living. Basic idea of India's national income.

- Open Economy- Balance of Payments, exchange rates, and capital flow. Basic idea of India's Balance of payments position.
- Concept of unemployment - types and their characteristics. Basic idea of India's unemployment scenario.
- Concept of Growth- role of savings, investment, and financial intermediation; Growth accounting and Solow residual-basic ideas.

2. Basic ideas of the Classical system 15 lecture hours

- Basic ideas of Classical Macroeconomics
- Say's Law and Quantity Theory of Money
- Loanable fund theory
- Full Employment and wage-price flexibility
- Classical Dichotomy and Neutrality of Money-introductory ideas

3. Basic ideas of the Keynesian system 15 lecture hours

- Fixed-price framework- the Simple Keynesian Model-the Keynesian consumption function.

Equilibrium income determination. The demand-determined system and the Simple Keynesian multiplier. The concept of effective demand.

- Marginal efficiency of capital and marginal productivity of capital. Keynesian confusion and post-Keynesian refinements to distinguish between marginal efficiency of capital and marginal efficiency of investment.
- Bond price and rate of interest. Keynesian liquidity preference schedule-The role of the concept of speculative demand for money and liquidity trap in the Keynesian system.
- Wage rigidity and involuntary unemployment in the Keynesian system.

4. Basic elements of Money Supply and Inflation

15 lecture hours

- Measures of money supply with special reference to India
- Balance sheet view of money supplied by the banking sector as a whole
- High powered money –definition
- Balance sheet of Reserve Bank of India and High powered money
- Balance sheet of Commercial banks and basic ideas of money multiplier theory
- The concept of Inflationary Gap.
- Demand pull vs. Cost push inflation
- Mark-up inflation
- The concept of stagflation
- Central Bank's role in controlling inflation: Monetary policy.

Tutorial Contact hours: 30

Textbooks:

- Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.
- N. Gregory Mankiw. Principles of Macroeconomics, Indian Imprint of South Western by Cengage India, 6th edition, 2015.

References

- Richard T. Froyen, Macroeconomics, Pearson Education Asia, 2nd edition, 2005.
- Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011.
- Ghosh Chandana and Ghosh Ambar, Macroeconomics, PHI Learning Pvt Ltd, 2014
- Ghosh Chandana and Ghosh Ambar, Indian Economy : A Macro-theoretic Analysis, PHI Learning Pvt Ltd, 2016.

- J.R.Hicks. The Social Framework: An Introduction to Economics, Clarendon Press, 3rd edition, 1960
- Sikdar Soumyen, Principles of Macroeconomics, Oxford University Press
- Economic Survey , Government of India, various issues.

**Economics Core Course IV, Core T4:
Mathematical Methods in Economics-II**

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours 30

[For Semester-II]

1. Matrix Algebra

10 lecture hours

- 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.
- The concept of comparative statics

2. Function of several variables

15 lecture hours

- Continuous and differentiable functions: partial derivatives and Hessian matrix. Homogeneous and homothetic functions.
- Euler's theorem, implicit function theorem (without proof) and its application to comparative statics problems.
- Economic applications- the idea of level curves, theories of consumer behaviour and theory of production.

3. Multi-variable optimization

35 lecture hours

- 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. The Duality Theorem
- Economic Applications of Linear programming

4. Differential Equations

15 lecture hours

- Solution of Differential equations of first order and second order of linear differential equations.
- Economic application-price dynamics in a single market- multimarket supply demand model with two independent markets.
- Qualitative graphic solution to 2x2 linear simultaneous non-linear differential equation system- phase diagram, fixed point and stability. Economic applications in microeconomics and macroeconomics

Tutorial Contact hours: 30

Text:

- Alpha C. Chiang and Kavin Wainwright : Fundamental Methods of Mathematical Economics, Mc Graw Hill, 2005.

References:

- K. Sydsaeter and P. Hammond, Mathematics for Economic Analysis, Pearson Educational Asia: Delhi, 2002.
- Lawrence Blume and Carl Simon. Mathematics for Economists, W. W. Norton and Company, 1994
- A. Mukherji and S. Guha: Mathematical Methods and Economic Theory, Oxford University Press, 2011.
- Hands, D. W.: Introductory Mathematical Economics, Second Edition, 2004
- Silberberg, E. and Suen, W.: The Structure of Economics : A Mathematical Analysis, Third edition, Mc-Graw Hill, 2001
- K. G. Binmore, Mathematical analysis, Cambridge University Press, 1991.

Economics Core Course V, Core T 5:

Intermediate Microeconomics –I

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours 30

[For Semester- III]

Unit 1: Theories of Consumer Behaviour and Applications

17 lecture hours

1.1 Inter-temporal choice (saving and borrowing)

1.2 Revealed preference

1.3. Choice under uncertainty – utility function and expected utility, risk aversion and risk preference

1.4 Applications of Consumer Behaviour in Construction of Price Indices – Laspeyers and Paasche's indices

2. Unit 2: Production and Costs

20 lecture hours

2.1 Technology – general concept of Production Function, production with one and two variable inputs, total average and marginal products, short run and long run, returns to factor and returns to scale, Isoquants, marginal rate of technical substitution, isocost line and firm's equilibrium, elasticity of substitution

2.2 Types of production functions- Cobb-Douglas, fixed-coefficient and CES functions

2.3 Cost structure- implicit cost, explicit cost, accounting cost, sunk cost, economic cost, fixed cost, variable cost, total, average and marginal cost. Determinants of short run cost, cost curves, cost minimization and expansion path, short versus long run cost curves, economies of scale.

3. Unit 3: The Firm and Perfect Market Structure

20 lecture hours

3.1 Organization, Firms and Profit Maximization

3.2 Marginal Revenue, Marginal Cost and Profit Maximization

3.3 Perfect competition- short run competitive equilibrium of the firm, short run supply curve of firm and industry, Output choice and competitive equilibrium in long run, Economic rent and profit, long-run industry supply- constant, increasing and decreasing cost.

3.4 Consumer and Producer surplus, welfare and efficiency of competitive equilibrium. Government intervention and dead weight loss, Application- Minimum prices and price supports (price ceiling and price floors)

4. Unit 4: Input Market in Perfect Competition

18 lecture hours

- 4.1 Basic concepts- derived demand, productivity of an input, marginal product of an input, marginal revenue product
- 4.2 Marginal productivity theory of distribution
- 4.3 Labor market-supply of labor, competitive labor markets
- 4.4 Land markets and rent

Tutorial Contact hours: 30

Text

1. Pindyck, Rubinfeld and Mehta, Microeconomics, Pearson
2. G.S.Maddala and E. Miller, 1989, Microeconomics, Prentice Hall, McGraw Hill International Editions
3. Goon Gupta and Dasgupta, Fundamentals of Statistics

References

1. Hal. R Varian , Intermediate Microeconomics, A modern Approach, WW Norton and Company, 8th edition, 2010 (T)
2. Gravelle and Rees, Microeconomics
3. Anindya Sen, Microeconomics, OUP
4. SatyaChakrabarty, Microeconomics, Allied Publishers
5. Ferguson and Gould Microeconomic Theory
6. Lipsey and Chrystal, 2007, Economics, OUP

Economics Core Course VI, Core T6 – Intermediate Macroeconomics-I

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours 30

[For Semester- III]

1. Income Determination in the Short-run

25 lecture hours

- 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. Crowding out .Effects of fiscal and monetary policies.

2. Aggregate Demand and Aggregate Supply- the Complete Keynesian Model

15 lecture hours

- 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. Effects of wage cut.
- Unemployment equilibrium and its causes- possible solutions including real balance effect.

3. Schools of Macroeconomic Thought

18 lecture hours

- Classical System: Say's law and quantity theory.
- Classical dichotomy and neutrality of money.
- Friedman's restatement of classical ideas.
- Keynesian vs classical system.
- Hybrid models under Classical/Keynesian framework.

4. Inflation, Unemployment and Expectations

17 lecture hours

- Inflation and unemployment trade-off
- Four models of aggregate supply : The Sticky-Wage Model, The Worker-Misperception Model, The Imperfect Information Model and The Sticky-Price Model
- Deriving the Phillips Curve from Aggregate Supply Curve
- Short run and long- run Phillips curve under adaptive expectations
- Disinflation and the Sacrifice Ratio
- Rational expectations and Phillips curve

Textbooks:

- Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.
- N. Gregory Mankiw. Macroeconomics, Worth Publishers, 2010

References

- Richard T. Froyen, Macroeconomics, Pearson Education Asia, 2nd edition, 2005.
- Ackley Gardner (old), Macroeconomic Theory, Macmillan, 1961
- Ackley Gardner(new), Macroeconomics : Theory and Policy : Macmillan,1978
- Ghosh Chandana and Ghosh Ambar, Macroeconomics, PHI Learning Pvt Ltd, 2014
- Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011.
- Richard T. Froyen, Macroeconomics, Pearson Education Asia, 10th edition, 2016.

- William Branson. Macroeconomic Theory and Policy, Indian reprint, East West Press, 3rd edition, 2014.
- Levacic Rosalind and Rebmann Alexander, Macroeconomics: An Introduction to Keynesian and Neo-Keynesian Controversies, Palgrave Macmillan, 1982.
- Sikdar Soumyen, Principles of Macroeconomics, Oxford University Press
- Blaug Mark , Economic Theory in Retrospect, 5th Edition, Cambridge University Press, 1997

Economics Core Course VII, Core T7 – Statistical Methods for Economics

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours: 30

[For Semester III]

- | | |
|---|-------------------------|
| 1. Introduction and Overview | 5 lecture hours |
| <ul style="list-style-type: none"> • The distinction between population and sample; • Representation of data- graphical and tabular method, • Frequency Distribution | |
| 2. Descriptive Statistics | 8 lecture hours |
| <ul style="list-style-type: none"> • Measures of central tendency, • Dispersion, • Moments, Skewness and Kurtosis; • Correlation and Regression | |
| 3. Elementary Probability Theory | 15 lecture hours |
| <ul style="list-style-type: none"> • Sample spaces and events; • Axiomatic definition of probability and properties; • Conditional probability; • Bayes' rule. | |
| 4. Probability Distributions | 17 lecture hours |
| <ul style="list-style-type: none"> • Random variable; • Probability distributions; • Expected values of random variables; • Properties of commonly used discrete and continuous distributions (binomial, poisson and normal). | |

- Density and distribution functions for jointly distributed random variables; expected values; covariance and correlation coefficients

5. Sampling

12 lecture hours

- Principal steps in a sample survey;
- methods of sampling- SRSWR, SRSWOR,
- Stratified sampling (basic concepts only),
- Multi-staged sampling (basic concepts only)
- Sampling distribution of sample mean

6. Statistical inference

18 lecture hours

- Parameter and statistic;
- 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.
- Testing of hypothesis (basic concepts)

Tutorial contact hours: 30

Text books

- Goon, A. M, Gupta, M. K, and Dasgupta, B. Fundamentals of Statistics (Volume One, Volume two), The World Press Private Ltd
- William G. Cochran, Sampling Techniques, John Wiley, 2007

Reference books

- John E. Freund, Mathematical Statistics, Prentice Hall, 1992.
- Mood, A.M., F. A. Graybill and D.C. Boes, Introduction to the theory of statistics, McGraw Hill, 1974

Skill Enhancement Course I, SEC T1 - Data Analysis

Total Marks: 100 [Theory(Th) 80 + Internal Assessment 10+Attendance: 10]

Total Credits: 2,

No. of Lecture hours: 30

[For Semester III]

Unit 1: Collection and representation of data 12 hours

- 1.1 Collection of data (some methodological issues)
 - 1.1.1 Census
 - 1.1.2 Sample survey
- 1.2 Representation of data
- 1.3 The basics of data management in Stata / R / Eviews / SPSS / MS Excel

Unit 2: Indian Official Statistics (Basic concepts) 18 hours

- 1. Central Statistical Office (CSO) – National Accounts Statistics (NAS), Industrial Statistics (ASI, IIP)
- 2. National Sample Survey Office (NSSO) – Household Consumer Expenditure Survey Rounds, Employment and Unemployment Survey Rounds
- 3. Census of India – Population Census 2011 4. Reserve Bank of India (RBI) – Handbook of Statistics on Indian Economy (Selected parts)

Suggest Readings:

- 1. Goon, A. M, Gupta, M. K, and Dasgupta, B. *Fundamentals of Statistics (Volume One)*, The World Press Private Ltd
- 2. GOI, *Note on Sample Design and Estimation Procedure of NSS 68th Round*, National Sample Survey Office, Ministry of Statistics and Programme Implementation.
- 3. GOI, *SRS Statistical Report 2016*, Office of the Registrar General & Census Commissioner, India

Suggested Websites

www.mospi.nic.in

www.censusindia.gov.in

www.rbi.org.in

Economics Core Course VIII, Core T8 – Intermediate Microeconomics II

Total Marks: 100 [Theory (Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours 30

[For Semester IV]

Unit 1: Imperfect Market Structure

40 lecture hours

- 1.1 Monopoly and barriers to entry- output determination and price rule, measure and sources of monopoly power, social costs of monopoly power-deadweight loss
- 1.2 Pricing with market power- first, second and third degree price discrimination, multiplant monopoly
- 1.3 Monopolistic competition- short run and long run equilibrium, excess capacity
- 1.4 Oligopoly- Oligopoly equilibrium as Nash equilibrium, Cournot, Bertrand and Stackelberg Model, Competition versus collusion- the Prisoners' Dilemma

Unit 2: Input market under Imperfect Competition

5 lecture hours

- 2.1 Monopsony, bilateral monopoly in labour market

Unit 3: General Equilibrium, Efficiency and Welfare

30 lecture hours

- 3.1 General Equilibrium and Economic Efficiency- Exchange, production and welfare, Pareto Optimality, Edgeworth box and contract curve, Pareto efficiency and perfect competition
- 3.2 Reasons for Market failure, Pareto efficiency and market failure (externalities and public goods), property right and Coase Theorem
- 3.3 Markets with asymmetric information-adverse selection, moral hazards, agency problems (concepts only)

Tutorial Contact Hours: 30

Text

- Pindyck, Rubinfeld and Mehta, Microeconomics, Pearson

References

1. Hal. R Varian , Microeconomic Analysis, WW Norton and Company, 3rd edition, 2013
2. J Tirole, Theory of Industrial Organisation, MIT Press, 1988
3. K Binmore, Fun and Games: A text on Game Theory, OUP,1991
4. AnindyaSen, Microeconomics, OUP
5. C. Snyder and W. Nicholson, Fundamentals of Microeconomics, Cengage Learning, 2010

Economics Core Course IX, Core T9 – Intermediate Macroeconomics II

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours 30

[For Semester IV]

1. Basic Tenets of New Classical and New Keynesian Theories 12 lecture hours

- New Classical Theory-The concept of rational expectations and the theory of real business cycle-introductory ideas
- New Keynesian Theory- nominal rigidities and real rigidities, rigidities in interest rates and credit rationing-introductory ideas

2. Macroeconomic Foundations 28 lecture hours

- Consumption: Keynesian consumption function; Fisher's theory of optimal intertemporal choice; life-cycle and permanent income hypotheses; Dusenberry's relative income hypothesis; rational expectations and random-walk of consumption expenditure.
- Investment: MEC and MEI- Jorgenson's neo-classical theory- Acceleration principle- fixed and variable.
- Demand for money: Regressive expectations and Tobin's portfolio choice models; Baumol's inventory theoretic money demand.

3. Money supply , Monetary Policy and Government Budgetary Operations

15 lecture hours

- Money supply, High-powered money; money multiplier analysis.
- Monetary policy – Open Market Operations, Statutory Liquidity Ratio, Bank rate, variable reserve ratio, repo and reverse repo.
- Deficit financing and monetary policy
- Government Budget Deficit and Deficit Financing-Indian illustration
- Different types of Deficit in Indian context

4. Economic Growth 20 lecture hours

- Harrod and Domar models of economic growth.
- Solow one sector growth model-golden rule- -dynamic efficiency.
- Technological progress ,
- Elements of endogenous growth theory-basic ideas-the AK model

Tutorial Contact hours: 30

Textbooks:

- N. Gregory Mankiw. Macroeconomics, Worth Publishers, 2010
- Ghosh Chandana and Ghosh Ambar, Macroeconomics, PHI Learning Pvt Ltd, 2014

References

- Richard T. Froyen, Macroeconomics, Pearson Education Asia, 2nd edition, 2005.
- Romer David , Advanced Macroeconomics, McGraw Hill Education, 4th edition, 2011.
- Ghosh Chandana and Ghosh Ambar, Economics of the Public Sector, PHI Learning Pvt Ltd, 2008
- Andrew B. Abel and Ben S. Bernanke, Macroeconomics, Pearson Education, Inc., 7th edition, 2011.
- Richard T. Froyen, Macroeconomics, Pearson Education Asia, 10th edition, 2016.
- Steven M. Sheffrin, Rational Expectations, Cambridge University Press, 2nd edition, 1996.
- William Branson. Macroeconomics , Harper and Row, 3rd edition, 1989
- Snowdon and Vane (ed), A Macroeconomics Reader, Routledge, Taylor and Francis Group.
- R. Barro. Macroeconomics, 5th edition, The MIT Press, 1989
- A.K.Sen (ed). Growth Economics, Penguin, 1970
- Barro, R.J. and Xavier Sala-i-Martin , Economic Growth,
- Errol D'Souza. Macroeconomics, Pearson Education (New Delhi), 2009
- Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.

Economics Core Course X, Core T10 – Introductory Econometrics

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours:30

[For Semester IV]

1. Nature and Scope of Econometrics

2 lecture hours

- 1.1 What is Econometrics?
- 1.2 Distinction between Economic Model and Econometric model
- 1.3 Concept of stochastic relation
- 1.4 Role of random disturbance in econometric model

2. Classical Linear Regression Model (Simple linear regression and multiple linear regression):

part 1

18 lecture hours

- 2.1 The classical assumptions
- 2.2 Concepts of population regression function and sample regression function
- 2.3 Estimation of model by method of ordinary least squares

3. Classical Linear Regression Model (Simple linear regression and multiple linear regression):

part 2

15 lecture hours

- 3.1 Properties of the Least Squares Estimators (BLUE) - Gauss-Markov theorem
- 3.2 Qualitative (dummy) independent variables (only interpretation of the model)
- 3.3 Forecasting (only for two variable model): Ex-post forecast and Ex-ante forecast

4. Statistical inference in linear regression model

20 lecture hours

- 4.1 Sampling distribution of regression estimates: standard normal, chi², t, F
- 4.2 confidence intervals
- 4.3 Concepts of Type I and Type II errors
- 4.4 Testing hypothesis about β with σ^2 given and with unknown σ^2 (standard normal and t statistics)
- 4.5 Testing hypotheses involving several parameters: the F test
- 4.6 Goodness of fit (in terms of R^2 , adjusted R^2 and F statistic)

5. Violations of Classical Assumptions

10 lecture hours

- 5.1 Multicollinearity - Consequences, Detection and Remedies;
- 5.2 Heteroscedasticity - Consequences, Detection and Remedies
- 5.3 Autocorrelation - Consequences, Detection and Remedies

6. Specification Analysis

10 lecture hours

- 6.1 Omission of a relevant variable;
- 6.2 Inclusion of irrelevant variable;
- 6.3 Tests of specification errors.
- 6.4 Testing for linearity and normality assumptions

Tutorial Contact hours: 30

Text Books

- 1. Gujarati, Damodar (2004), *Basic Econometrics*, McGraw-Hill
- 2. Wooldridge, Jeffrey M. (2013), *Introductory Econometrics – A Modern Approach*, CENGAGE learning

Reference Books

- 1. Maddala, G. S. (2002), *Introduction to Econometrics*, Macmillan Publishing Company
- 2. Goon, A. M, Gupta, M. K, and Dasgupta, B., *Fundamentals of Statistics* (Volume One), The World Press Private Ltd

Skill Enhancement Course II, SEC T2 – Research Methodology

Total Marks: 100 [Theory (Th) 80 + Internal Assessment 10+Attendance: 10]

Total Credits: =2,

No. of Lecture hours: 30,

[For Semester IV]

Unit 1 : Methodological Issues 1

10 lecture hours

- Locating the basic issues- theme based literature survey and motivation behind any study-objectives of the study-development of writing skills
- Designing the sampling frame in case of field survey- the role of pilot survey
- The role of random numbers in drawing random sample
- Methods behind preparation of questionnaire in case of field survey
- Data entry after field survey
- Tabular representation of data and graphs for data interpretation

Unit 2: Methodological Issues 2

20 lecture hours

- Theoretical and Empirical Research in Economics.
- Common sections of an ideal research paper in Economics.
- Illustrations of empirical research work. Reporting the regression results and interpretation of the results: the role of statistical inference.[The course instructor should focus on framing the testable hypothesis and the role of statistical inference in empirical research]
- Illustrations of theoretical research: specification of the model, closing the model, checking stability of the model for meaningful comparative static results. [The course instructor should focus on the role of stability analysis in theoretical models by showing the method of linearizing non-linear differential equations. Illustrations can be made from IS-LM model by using trace and determinant conditions of the Jacobian matrix-the role of phase diagrams]
- Role of footnotes or end notes in a research paper
- Bibliography, reference and citation
- Writing the abstract of a research paper
- Key words and JEL Classification
- Presentation of a research paper through power point. Basic rules to be followed for a good presentation. Role of diagrams, graphs, pictures and charts.

Suggested Readings

1. Goon, A. M, Gupta, M. K, and Dasgupta, B. Fundamentals of Statistics (Volumes One and Two),The World Press Private Ltd
2. C.R. Kothari : Research Methodology : Methods and Techniques (second revised edition), New Age India (P) Ltd Publishers.
3. Alpha C. Chiang and Kavin WainWright : Fundamental Methods of Mathematical Economics, McGraw Hill, 2005.[For stability analysis]

Economics Core Course XI, Core T11 – International Economics

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours 30

[Semester V]

1. Absolute and Comparative Advantages of Trade

9 lecture hours

- Adam Smith's theory of absolute advantage.
- David Ricardo's theory of comparative advantage.
- Arbitrage as the basis and direction of trade; fundamental sources of cross-country price differences and arbitrage-concept of comparative advantage; externalities, regulation and perverse comparative advantage
- One factor economy, production possibility frontier, relative demand and relative supply, terms of trade, trade in the Ricardian world, determination of intermediate TOT, complete vs incomplete specialization, complete specialization and gains from trade.

2. The Building Blocks of Trade Theory

14 lecture hours

- The concept of community indifference curve-Justification and properties.
- The need for trade indifference curves, derivation of trade indifference curves, properties of trade indifference map, Offer curves and its properties. Three important elasticities- the elasticity of offer curves, the elasticity of demand for imports, the elasticity of supply of exports. International equilibrium and offer curves, terms of trade (TOT) and stability, the Marshall-Lerner condition,
- Gains from Trade (GFT) theorem, illustration of GFT, decomposition of GFT, substitution possibilities and magnitude of GFT.
- Production structure for neo-classical trade models, role of constant returns to scale, the concept of unit isoquants, duality in the production structure, significance of the envelope condition in trade models

3. Factor Endowment and Trade (Heckscher-Ohlin-Samuelson Model)

15 lecture hours

- Heckscher-Ohlin (HO) theorem and price vs physical definitions of relative factor abundance.
- Role of homotheticity of tastes in the context of physical definition
- Factor Intensity Reversal in the context of price and physical definitions and invalidity of HO Theorem.
- Factor intensity ranking, one-to-one correspondence between commodity price ratio & factor price ratio (Stolper-Samuelson theorem), One to one correspondence between endowment ratio and production proportion (Rybczynski theorem) .
- The Factor Price Equalization Theorem. Factor price equalization and complete specialization.
- Incomplete Specialization, Factor price equalization and Factor Intensity Reversal
- Empirical studies- Leontief Paradox.

4. Applications of Neo-classical Trade Models for developing countries

10 lecture hours

- Jones (1965) Heckscher-Ohlin type 2x2(two factors-two commodities) full employment model for small open developing economies. Basic structure –significance of the assumption of constant returns to scale- the decomposability property-the capital intensity condition in physical and value terms- Implications of Stolper-Samuelson and Rybczynski theorems-the price and output magnification effects.
- Jones (1971) 3x2(three factors-two commodities) specific-factor model. Basic structure-significance of the assumption of constant returns to scale-the indecomposability property. Implications of price magnification effects in specific factor model.

5. Trade Policy

12 lecture hours

- Partial Equilibrium Analysis of Tariff - cost–benefit, Quota, Quota- Tariff equivalence & non-equivalence, monopoly effects of quota, subsidy and voluntary export restraint.
- General Equilibrium Analysis- distinction between large and small economy, welfare effects of a tariff on small country and large country. Tariff ridden offer curve, Tariff war, Optimum tariff for large economy, Metzler’s Paradox.

6. Open Economy Macroeconomics and Balance of Payments

15 lecture hours

- Determination of equilibrium income in open economy. Foreign Trade Multiplier with & without repercussion effects.
- Balance of Payment accounts in an open economy. Autonomous and accommodating transactions.

- Fixed & Flexible Exchange Rates: adjustment of demand and supply of Foreign Exchange, Effect of devaluation, The Mundel-Fleming Model (IS LM BP model)

Tutorial Contact hours: 30

Texts

1. P. Krugman and M. Obstfeld- International Economics (8th Edition) ; Pearson Education
2. R. Caves, J. Frankel and R.W. Jones – World Trades & Payments (9th Ed); Pearson Education.
3. Rajat Acharyya- International Economics; Oxford University Press

References

- J.R. Markusen, J.R. Melvin, W.H. Kaempfer, K.E. Maskus – International Trade – Theory and Evidence, McGraw Hill
- B. Sodersten, and G. Reed (1994) : International Economics , Macmillan, London, 3rd edition.
- M. Chacoliades (1978) : International Trade: Theory and Policy, New York, McGraw- Hill
- R. Dornbusch : Open Economy Macroeconomics, Basic Books, Inc. Publishers, New York.
- Jones, R.W. : “ The Structure of Simple General Equilibrium Models”, Journal of Political Economy, Vol 73, 1965, pp 551-572
- Jones, R.W. : “ A Three Factor Model in Theory, Trade and History”, in Bhagwati. J. et al (eds) Trade, Balance of Payments and Growth, 1971, North Holland, Amsterdam.
- Chaudhuri, S. and Mukhopadhyay, U.: Foreign Direct Investment in Developing Countries: A Theoretical Evaluation, Springer, Chapter 2 only, 2014.

Economics Core Course XI, Core T12 – Indian Economy

Total Marks: 100

[Theory (Th) 50 + Tutorial Based Term Paper (Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial Based Term Paper contact hours: 30

[Semester V]

1. Economic Development since Independence 20 lecture hours

- Growth and development under different policy regimes (from planning to market based development) - goals, constraints, institutions and policy framework.
- Structural changes; an assessment of performance—sustainability and regional variation

2. Population and Human Development 15 lecture hours

- Demographic trends and issues.
- Education; health and malnutrition

3. Growth and Distribution

20 lecture hours

- Trends in income, poverty and inequality.
- Youth unemployment.
- Policy perspectives in growth and distribution

4. Economic Reforms in India

20 lecture hours

- Monetary, Fiscal, and Trade Policy Reforms

Tutorial Based Term Paper Contact Hours=30

A term paper is to be prepared by the student under Tutorial Based Term Paper on any topic under the four broad themes covering the syllabus for the tutorial. Term paper should cover a literature survey of the topic along with a critical evaluation of the policy measures undertaken in the Indian context to tackle the specified problem. It should be prepared under a full time teacher of the subject belonging to the institution. All total 30 hours are allotted for a term paper. It is to be evaluated (all total 30 marks) jointly by an internal and an external examiner on the basis of the content of the term paper along with viva-voce on the term paper.

References

- Jean Dreze and Amartya Sen, 2013. An Uncertain Glory: India and its Contradictions, Princeton University Press.
- Jean Dreze and Amartya Sen: Economic Development and social opportunity, OUP
- Mihir Rakshit, 2011, Macroeconomics of Post-Reform India, OUP
- Sukhomoy Chakraborty: Development Planning: The Indian Experience, OUP
- Uma Kapila: Indian Economy since independence, Academic Foundation
- Ahluwalia and Little (ed): India's Economic Reforms and Development, OUP
- Joshi and Little: India's Economic Reforms, OUP
- Pulapre Balakrishnan, 2007, the Recovery of India: Economic Growth in the Nehru Era, Economic and Political Weekly, November.
- Panchanan Das. (2012), Wage Inequality in India - Decomposition by Sector, Gender and Activity Status, Economic and Political Weekly, 47(50), pp. 58-64
- Rakesh Mohan, 2008, —Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment, Economic and Political Weekly, May.
- S.L. Shetty, 2007, —India's Savings Performance since the Advent of Planning, in K.L. Krishna and A. Vaidyanathan, editors, Institutions and Markets in India's Development.
- Himanshu, 2010, Towards New Poverty Lines for India, Economic and Political Weekly, January.

- Jean Dreze and Angus Deaton, 2009, Food and Nutrition in India: Facts and Interpretations, Economic and Political Weekly, February.
- Himanshu. 2011, —Employment Trends in India: A Re-examination, Economic and Political Weekly, September.
- Rama Baru et al, 2010, —Inequities in Access to Health Services in India: Caste, Class and Region, Economic and Political Weekly, September.
- Geeta G. Kingdon, 2007, —The Progress of School Education in India, Oxford Review of Economic Policy
- J.B.G. Tilak, 2007, —Post Elementary Education, Poverty and Development in India, International Journal of Educational Development.
- T. Dyson, 2008, —India's Demographic Transition and its Consequences for Development in Uma Kapila, editor, Indian Economy Since Independence, 19th edition, Academic Foundation.
- Kaushik Basu, 2009, —China and India: Idiosyncratic Paths to High Growth, Economic and Political Weekly, September.
- K. James, 2008, —Glorifying Malthus: Current Debate on Demographic Dividend in India, Economic and Political Weekly, June.
- Reetika Khera, 2011, —India's Public Distribution System: Utilisation and Impact Journal of Development Studies.
- Aniruddha Krishna and Devendra Bajpai, 2011, —Lineal Spread and Radial Dissipation: Experiencing Growth in Rural India, 1992-2005, Economic and Political Weekly, September.
- Kaushik Basu and A. Maertens, Eds, 2013, The New Oxford Companion to Economics, Oxford University Press.

Discipline Specific Elective, DSE T1 – Applied Econometrics

Total Marks: 100

[Theory (Th) 50 + Laboratory based Tutorial (Tu) 30 + Internal Assessment 10 + Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours 30

[Semester –V]

- | | |
|---|-------------------------|
| 1. Steps in empirical research | 20 lecture hours |
| 1.1 Introduction to econometric models and techniques | |
| 1.2 The basic commands in Stata | |
|
 | |
| 2. Regression Diagnostics and Specification | 30 lecture hours |
| 2.1 Misspecification; | |

- 2.2 Functional forms;
- 2.3 Model selection.
- 2.4 Application with Stata

3. Application of Regression Analysis

25 lecture hours

- 3.1 Cross section analysis – Linear regression model with two regressors (by using survey data like NSSO with Stata)
- 3.2 Time series analysis (very preliminary level) – Basic concepts of time series, Estimating linear trend (by using NAS with Stata)
- 3.3 Panel data analysis – basic concepts of fixed effects model; random effects model – (Application with Indian Official Statistics using Stata)

Laboratory based tutorial contact hours: 30

Text Books

1. Christopher F. Baum, (2006), An Introduction to Modern Econometrics Using Stata, Stata Press
2. Maddala, G. S. (2002), Introduction to Econometrics, Macmillan Publishing Company
3. Wooldridge, Jeffrey M. (2013), Introductory Econometrics – A Modern Approach, CENGAGE learning
4. Hamilton L. Statistics with Stata

References

STATA USER’S GUIDE RELEASE 13, <https://www.stata.com/manuals13/u.pdf>

Discipline Specific Elective, DSE T2 -

Economic History of India (1857-1947)

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours 30

[Semester V]

1. Impact of British rule on India

30 lecture hours

- Deindustrialization
- Commercialization of agriculture
- Economic Drain

2. Aspects of Economic Policies in British India

45 lecture hours

- Land policy
- Policy of Discriminating Protection
- Early Industrial Development and Managing Agency System
- Currency and monetary policy
- Development of Infrastructure – Railways

Tutorial contact hours: 30

References

1. Lakshmi Subramanian, “History of India 1707-1857”, Orient Blackswan, 2010, Chapter 4.
2. Sumit Guha, 1991, Mortality decline in early 20th century India’, Indian Economic and Social History Review (IESHR), pp 371-74 and 385-87.
3. Tirthankar Roy, The Economic History of India 1857-1947, Oxford University Press, 3rd edition, 2011.
4. B. Chandra B. (2010): Rise and Growth of Economic Nationalism in India, HarAnand Publications,
5. J. Krishnamurty, Occupational Structure, Dharma Kumar (editor), The Cambridge Economic History of India, Vol. II, (henceforth referred to as CEHI), 2005, Chapter 6.
6. Irfan Habib, Indian Economy 1858-1914, A People’s History of India, Vol.28, Tulika, 2006.
7. Ira Klein, 1984, —When Rains Fail: Famine relief and mortality in British India, IESHR 21.
8. Jean Dreze, Famine Prevention in India in Dreze and Sen (eds.) Political Economy of Hunger, WIDER Studies in Development Economics, 1990, pp.13- 35.
9. John Hurd, Railways, CEHI, Chapter 8, pp.737-761.
10. Rajat Ray (ed.), Entrepreneurship and Industry in India, 1994.
11. AK Bagchi, —Deindustrialization in India in the nineteenth century: Some theoretical implications Journal of Development Studies, 1976.
12. MD Morris, Emergence of an Industrial Labour Force in India, OUP 1965, Chapter 11, Summary and Conclusions.
13. K.N. Chaudhuri, Foreign Trade and Balance of Payments, CEHI, Chapter 10.
14. B.R. Tomlison, 1975, India and the British Empire 1880-1935, IESHR, Vol.XII.
15. Dharma Kumar, The Fiscal System, CEHI, Chapter 12.
16. Basudev Chatterjee, Trade, Tariffs and Empire, OUP 1992, Epilogue.
17. Daniel Thorner, Agrarian Prospect in India, 1977.
18. Visaria and P. Visaria, Population. CEHI, Chapter

Discipline Specific Elective, DSE T3 – Money and Financial Markets

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours 30

[Semester V]

1. Introduction to money and Money and Banking 5 lecture hours

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

2. Financial Institutions, Markets, Instruments and Financial Innovations 17 lecture hours

- Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises.
- Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations.
- Why banks are special Institutions? How banks act as a leveraging mechanism?

3. Financial Markets and Interest Rates Behaviour 18 lecture hours

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

4. Banking System 20 lecture hours

- Balance sheet and portfolio management;
- Multiple Deposit Creation,
- Determinants of the Money Supply.
- Indian banking system- Changing role and structure- banking sector reforms

5. Central Banking and Monetary Policy 15 lecture hours

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

Tutorial Contact hours: 30

Text

- F. S. Mishkin and S. G. Eakins, Financial Markets and Institutions, Pearson Education, 6th edition, 2009.

References

- 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).

Discipline Specific Elective, DSE T4 – Issues in Indian Economy

Total Marks: 100

[Theory (Th) 50 + Tutorial Based Project (Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Project Based Tutorial contact hours 30

[Semester V]

- 1. Growth and structural changes** **5 lecture hours**
 - Trends in national income and per capita income - Analysis with official statistics
 - Structural Composition of national income and employment with NAS and NSSO data
- 2. Macroeconomic Policies and Their Impact** **20 lecture hours**
 - Fiscal Policy
 - Trade and investment policy
 - Financial and monetary policies
 - Inflation and measures to control inflation
 - Labour laws and regulation
- 3. Policies and Performance in Agriculture** **15 lecture hours**
 - Growth; productivity; agrarian structure and technology, capital formation
 - Agricultural marketing
 - Food security and food policy

- Pricing and procurement
- WTO and Indian agriculture

4. Policies and Performance in Industry

20 lecture hours

- Output, employment and productivity growth
- Regional variation of industrial growth
- Small scale industries- problems and prospects
- Public sector; competition policy
- Foreign direct investment in industry
- Economic reforms and industry

5. Trends and Performance in Services

15 lecture hours

- Formal and informal sectors
- Banking and insurance
- Trade in services.

Total Tutorial Based Project Contact Hours: 30

A project report is to be prepared for Tutorial based project by the candidate (student) on any topic from this DSE T4 Course. It should be supervised by a full time teacher of the subject belonging to the institution. All total 30 project based tutorial contact hours are allotted for the supervisor to supervise the candidate. It is to be evaluated (all total 30 marks) jointly by the supervisor and an external examiner on the basis of the content of the project report along with the viva-voce based on a power point presentation of the project on part of the candidate.

References

- Shankar Acharya, 2010, —Macroeconomic Performance and Policies 2000-8,|| in Shankar Acharya and Rakesh Mohan, editors, India's Economy: Performances and Challenges: Development and Participation, Oxford University Press.
- Rakesh Mohan, 2010, —India's Financial Sector and Monetary Policy Reforms in Shankar Acharya and Rakesh Mohan, editors, India's Economy: Performances and Challenges: Development and Participation, Oxford University Press.
- PulapreBalakrishnan, Ramesh Golait and Pankaj Kumar, 2008, —Agricultural Growth in India Since 1991, RBI DEAP Study no. 27.
- B.N. Goldar and S.C. Aggarwal, 2005, —Trade Liberalisation and Price-Cost Margin in Indian Industries, The Developing Economics, September.

- P. Goldberg, A. Khandelwal, N. Pavcnik and P. Topalova, 2009, —Trade Liberalisation and New Imported Inputs, American Economic Review, Papers and Proceedings, May.
- Kunal Sen, 2010, —Trade, Foreign Direct Investment and Industrial Transformation in India, in Premachandra Athukorala, editor, The Rise of Asia, Routledge.
- A. Ahsan, C. Pages and T. Roy, 2008, —Legislation, Enforcement and Adjudication in Indian Labour Markets: Origins, Consequences and the Way Forward, in D. Mazumdar and S. Sarkar, editors, Globalization, Labour Markets and Inequality in India, Routledge.
- Dipak Mazumdar and Sandeep Sarkar, 2009, —The Employment Problem in India and the Phenomenon of the Missing Middle, Indian Journal of Labour Economics.
- J. Dennis Rajakumar, 2011, —Size and Growth of Private Corporate Sector in Indian Manufacturing, Economic and Political Weekly, April.
- Ramesh Chand, 2010, —Understanding the Nature and Causes of Food Inflation, Economic and Political Weekly, February.
- Bishwanath Goldar, 2011, —Organised Manufacturing Employment: Continuing the Debate, Economic and Political Weekly, April.
- Panchanan Das. (2007), Economic Reform, Output and Employment Growth in Registered Manufacturing Industries in India: Testing Kaldor's Hypotheses, Economic and Political Weekly, 42 (39), pp. 3978-3985.
- Kaushik Basu and A. Maertens, eds, 2013, The New Oxford Companion to Economics in India, Oxford University Press.
- A. Raychaudhury and P De, International Trade in Services in India: Implications for Growth and Inequality in a Globalizing World, OUP, 2012.
- India Development Reports, IGIDR

Economics Core Course XIII, Core T13 – Public Economics

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours: 30

[Semester VI]

Unit 1. Government in a Market Economy

15 lecture hours

- Market failure and externalities; public and merit goods;
- Government intervention;
- Public Expenditure for financing development

Unit 2. Choice and Public Economics

20 lecture hours

- Characteristics of Pure Public Good; Distinction between Pure Public Good and Private Good;

- Market Failure in case of Pure Public Good Optimal provision of Public Goods - Private Provision and Public Provision of Public Goods,
- Lindahl Equilibrium,
- Voting Equilibrium.

Unit 3. The Revenue and Expenditure of the Government

20 lecture hours

- Classification of Taxes; Canons of Taxation;
- Principles of Taxation - Benefit Principle, Equal Sacrifice Principle, Ability to Pay Principle;
- Incidence and Burden of Taxes;
- Effects of taxation on income distribution, work efforts, and on savings,
- The Laffer curve;
- Comparison between direct and indirect taxes – income and substitution effects;
- Optimal Taxation

Unit 4. Public Finance

20 lecture hours

- Meaning and Classification of Public Expenditure - government budget and its types, government expenditure and tax multipliers, balanced budget multiplier;
- Meaning of Public Debt; Sources of Public Borrowings: internal and external borrowing; Effects of Public Debt.
- Indian Public Finance – Fiscal Federalism in India

Tutorial contact hours: 30

References:

- J. F. Due and A. F. Friedlander. Government Finance-Economics of Public Sector, AITBS Publishers and Distributors, 1994
- J. Hindriks and G. D. Myles. Intermediate Public Economics, The MIT Press; Annotated Edition, 2006.
- R.A. Musgrave and P.B. Musgrave, Public Finance in Theory & Practice, McGraw Hill Publications, 5th edition, 1989.
- Amaresh Bagchi (ed), Readings in Public Finance, OUP
- J. E. Stiglitz. Economics of Public Sector, W. W Norton and Company, 3rd Edition, 2000.
- A Ghosh and C. Ghosh, Economics of the Public Sector, Prentice Hall India Learning Private Limited; 2nd Revised edition (2014)

Economics Core Course XIV, Core T14 – Development Economics

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours: 30

[Semester VI]

- 1. Meaning of Economic Development** **10 lecture hours**
 - Income Approach and Capability Approach,
 - Construction and interpretation of HDI; international variations in development measures; comparing development trajectories across nations and within them.
 - Dependency school of development.

- 2. Poverty and Inequality** **15 lecture hours**
 - Inequality axioms; a comparison of commonly used inequality measures.
 - Gender Inequality, connections between inequality and development.
 - Poverty measurement, HPI; poverty traps and path dependence of growth processes.
 - Vicious Circle of Poverty Hypothesis

- 3. Dual Economy Models** **20 lecture hours**
 - The concept of surplus labour and disguised unemployment
 - Peasants and Dualism with and without surplus labour
 - Interdependence of agriculture and Industry (Lewis model, Ranis-Fei model)
 - Rural-Urban Migration (Harris- Todaro model)

- 4. Population Growth and Economic Development** **10 lecture hours**
 - Basic concepts (Birth and Death Rates, mortality, fertility)
 - Demographic transition theory
 - Cost of children, externalities
 - Low Level Equilibrium Trap models and their criticism-critical minimum effort theory (Nelson and Leibenstein).

- 5. Development Strategies** **10 lecture hours**
 - Balanced vs. Unbalanced Growth Theories
 - Choice of Techniques

- 6. Political Institutions and the State** **10 lecture hours**
 - Definition of institutions, Evolution of Political and Economic Institutions.

- The determinants of democracy.
- Alternative institutional trajectories and their relationship with economic performance.
- Within-country differences in the functioning of state institutions. State ownership and regulation. Government failures and corruption.

Tutorial Contact hours: 30

Texts

1. Todaro and Smith: Economic Development, Pearson Education, 2009
2. Debraj Ray, Development Economics, Oxford University Press, 2009.
3. Kaushik Basu, Analytical Development Economics, OUP

References

- Partha Dasgupta, Economics, a Very Short Introduction, Oxford University Press, 2007.
- Abhijit Banerjee, Roland Benabou and Dilip Mookerjee, Understanding Poverty, Oxford University Press, 2006.
- Kaushik Basu, The Oxford Companion to Economics in India, OUP, 2007.
- Amartya Sen, Development as Freedom, OUP, 2000.
- Daron Acemoglu and James Robinson, Economic Origins of Dictatorship and Democracy, Cambridge University Press, 2006.
- Robert Putnam, Making Democracy Work: Civic Traditions in Modern Italy, Princeton University Press, 1994
- Meier and Rauch (ed)- Leading Issues in Development Economics, OUP
- Hayami and Godo, Development Economics, OUP
- Thirlwall; Growth and Development. 5th Edition

Discipline Specific Elective, DSE T5 –

Comparative Economic Development (1850-1950)

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours 30

[Semester VI]

1. Strategies and Policies for Economic Development

30 lecture hours

- Laissez-faire and free trade
- Strategy of industrialization in Soviet Union.

- Ha-Joon Chang. 2002. *Kicking Away the Ladder—Development Strategy in Historical Perspective*. London: Anthem Press. Chapter 2 (excluding NICs).
- Alec Nove. 1992. *An Economic History of the USSR 1917-1991*, London: Penguin 1992, chapter 8.

2. Regions of contemporary development

45 lecture hours

- Success stories of Asia : Japan, South East Asia and China
 - Crisis and failures of Latin America and Africa
-
- Ha-Joon Chang. 2002. *Kicking Away the Ladder—Development Strategy in Historical Perspective*. London: Anthem Press. Chapter 2, 46-51.
 - Ha-Joon Chang. 2004. “The East Asian Development Experience”, in *Rethinking Development Economics*, edited by Ha-Joon Chang, pp. 107-124. London: Anthem Press.
 - Pranab Bardhan, “What Makes a Miracle: Some Myths About the Rise of China and India”, *Boston Review*, January/February 2008; and “Introduction: The Myths Floating Around the Giants”, in *Awakening Giants, Feet of Clay: Assessing the Economic Rise of China and India* (Princeton: Princeton University Press, 2010).
 - Gabriel Palma. 2004. “Latin America During the Second Half of the Twentieth Century – From the ‘Age of Extremes’ to the Age of ‘End-of-History’ Uniformity”, in *Rethinking Development Economics*, edited by Ha-Joon Chang, pp. 125-151. London: Anthem Press.
 - Kwan Kim. 2005. “Development Crisis in Sub-Saharan Africa: Globalization, Adjustment and the Roles of International Institutions”, in *Global Development and Poverty Reduction*, edited by John-ren Chen and David Sapsford, pp. 294-320. Cheltenham and Northampton: Edward Elgar, 2005.

Tutorial Contact hours: 30

General References

- Ha-Joon Chang. 2003. "Kicking Away the Ladder: The "Real" History of Free Trade", *Foreign Policy*, 30 December
- Alice Amsden. Ch. 6 of *Escape from Empire: The Developing Worlds Journey through Heaven and Hell*, MIT Press.

- World Bank, “Overview”, in *World Development Report 2001: Attacking Poverty*, pp. 1-12.
- World Bank, “Overview”, in *World Development Report 2002: Building Institutions for Markets*, pp. 1-12.
- Barry Naughton. 2006. *The Chinese Economy: Transitions and Growth*. MIT Press.
- Kay, Cristobal. 2002. Why East Asia overtook Latin America: Agrarian Reform, Industrialisation and Development, *Third World Quarterly*, Vol 23.
- Mark Weisbrot, *Latin America: The End of an Era*, Center for Economic and Policy Research, December 2006
- Keith Griffin. 1999. *Alternative Strategies for Economic Development*, chapter 2, Palgrave Macmillan.
- T. Nakamura, Economic Growth in Pre-War Japan, Tr. by Robert A Feldman, Yale University Press, 1983.
- Okochi, Karsh and Levine, Workers and Employees in Japan, The Japanese Employment Relations System, University of Tokyo, 1965.
- Y. Hayami, A Century of Agricultural Growth in Pre-War Japan: Its Relevance to Asian Development, University of Minnesota Press, 1975.
- Chalmers Johnson, MITI and the Japanese Miracle: The Growth of Industrial Policy 1925-1975, Stanford University Press, 1982.
- W.W. Lockwood, Economic Development of Japan, Expanded edition, Princeton University Press, 1966.
- Dobb M., Soviet Economic Development since 1917, Universal Book Stall, New Delhi, 1995.
- Paul R. Gregory and Robert C. Stuart, Soviet Economic Structure and Performance, Harper & Row, 3rd edition, 1986.
- Rodrik D. 2007. Industrial Policy for the 21st Century, in *One Economics, Many Recipes: Globalization, Institutions, and Economic Growth*, Princeton University Press.

Discipline Specific Elective, DSE T6 – Financial Economics

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours: 75, No. of Tutorial contact hours: 30

[Semester-VI]

1. Investment Theory and Portfolio Analysis

35 lecture hours

- Deterministic cash-flow streams: Basic theory of interest; discounting and present value; internal rate of return; evaluation criteria; fixed-income securities; bond prices and yields; interest rate sensitivity and duration; immunisation; the term structure of interest rates; yield curves; spot rates and forward rates.
- Single-period random cash flows: Random asset returns; portfolios of assets; portfolio mean and variance; feasible combinations of mean and variance; mean-variance portfolio analysis: the Markowitz model and the two-fund theorem; risk-free assets and the one-fund theorem.
- CAPM: The capital market line; the capital asset pricing model; the beta of an asset and of a portfolio; security market line; use of the CAPM model in investment analysis and as a pricing formula.

2. Options and Derivatives

20 lecture hours

- Introduction to derivatives and options; forward and futures contracts; options; other derivatives; forward and future prices; stock index futures; interest rate futures; the use of futures for hedging; duration-based hedging strategies; option markets; call and put options; factors affecting option prices; put-call parity; option trading strategies: spreads; straddles; strips and straps; strangles; the principle of arbitrage; discrete processes and the binomial tree model; risk-neutral valuation.

3. Corporate Finance

20 lecture hours

- Patterns of corporate financing: common stock; debt; preferences; convertibles; Capital structure and the cost of capital; corporate debt and dividend policy; the Modigliani- Miller theorem.

Tutorial Contact hours: 30

Text

Hull, John C., Options, Futures and Other Derivatives, Pearson Education, 6th edition, 2005.

References

- David G. Luenberger, Investment Science, Oxford University Press, USA, 1997.
- Thomas E. Copeland, J. Fred Weston and Kuldeep Shastri, Financial Theory and Corporate Policy, Prentice Hall, 4th edition, 2003.

- Richard A. Brealey and Stewart C. Myers, Principles of Corporate Finance, McGraw-Hill, 7th edition, 2002.
- Stephen A. Ross, Randolph W. Westerfield and Bradford D. Jordan, Fundamentals of Corporate Finance. McGraw-Hill, 7th edition, 2005.
- Burton G. Malkiel, A Random Walk Down Wall Street, W.W. Norton & Company, 2003.
- William Sharpe, Gordon Alexander and Jeffery Bailey, Investments, Prentice Hall of India, 6th edition, 2003.

Discipline Specific Elective, DSE T 7 – Environmental Economics

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: $[5(Th)+1(Tu)]=6$,

No. of Lecture hours: 75, No. of Tutorial contact hours: 30

[Semester VI]

Unit 1. Introduction

7 lecture hours

- 1.1 What is environmental economics;
- 1.2 Review of microeconomics and welfare economics.
- 1.3 Interlinkages between the economy and environment

Reference for unit 1:

Hanley N, Shogren J.F. & White B. *Environmental Economics in Theory and Practice*, Macmillan

Unit 2. Efficiency and Market Failure

18 lecture hours

- 2.1 Pareto optimality and market failure in the presence of externalities
- 2.2 Property rights and the Coase theorem
- 2.3 Public goods/ bads and market failure

Reference for unit 2:

Kolstad C, *Environmental Economics*, OUP

Unit 3. The Design and Implementation of Environmental Policy

20 lecture hours

- 3.1 Pigouvian Fees – Single Polluter, Multiple Polluters, Fees vs Subsidies
- 3.2 Regulating Pollution : Command and Control, Economic Incentives
- 3.3 The Basic Theory of Tradeable Pollution Permits

Reference for unit 3:

Kolstad C, *Environmental Economics*, OUP

Hanley N, Shogren J.F. & White B. *Environmental Economics in Theory and Practice*, Macmillan

Unit 4. International Environmental Problems**13 lecture hours**

4.1 Transboundary Pollution – Transboundary Pollution as a problem of international externalities

4.2 International Trade and Environment – Pollution Havens

4.3 International Environmental Agreements – Basic idea about Montreal and Kyoto Protocol and Talks on Climate Change

Reference for unit 4:Hanley N, Shogren J.F. & White B. *Environmental Economics in Theory and Practice*, MacmillanKolstad C, *Environmental Economics*, OUP

Internet on Recent Environmental Agreements

Unit 5. Measuring the values of Environmental Costs and Benefits**17 lecture hours**

5.1 Concepts of Willingness to pay (WTP) and Willingness to accept compensation (WTAC), Difference between the two concepts

5.2 Direct and Indirect Methods of Valuation – Contingent valuation, Travel Cost, hedonic Pricing – basic concepts only (no econometric techniques) – when they should be used, what are the advantages and disadvantages of these methods.

Reference for unit 5:Hanley N, Shogren J.F. & White B. *Environmental Economics in Theory and Practice*, Macmillan**Tutorial Contact hours: 30****Discipline Specific Elective, DSE T8 – Issues in Development Economics*****Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]******Total Credits: [5(Th)+1(Tu)]=6 ,******No. of Lecture hours: 75, No. of Tutorial contact hours 30*****[Semester VI]****1. Demography and Development****10 lecture hours**

- Demographic concepts; birth and death rates, age structure, fertility and mortality
- Demographic transitions during the process of development; gender bias in preferences and outcomes and evidence on unequal treatment within households
- Connections between income, mortality, fertility choices and human capital accumulation
- Migration.

2. Land, Labor and Credit Markets**20 lecture hours**

- The distribution of land ownership; land reform and its effects on productivity

- Contractual relationships between tenants and landlords
- Land acquisition; nutrition and labor productivity
- Informational problems and credit contracts
- Microfinance
- Inter- linkages between rural factor markets.

3. Individuals, Communities and Collective Outcomes

15 lecture hours

- Individual behavior in social environments
- Multiple social equilibria;
- Governance in organizations and in communities;
- Individual responses to organizational inefficiency.

4. Environment and Sustainable Development

15 lecture hours

- Defining sustainability for renewable resources
- A brief history of environmental change;
- Common-pool resources;
- Environmental externalities and state regulation of the environment;
- Market based instruments, economic activity and climate change.

5. Globalization

15 lecture hours

- Globalization in historical perspective
- the economics and politics of multilateral agreements;
- Trade, production patterns and world inequality
- Financial instability in a globalized world.
- India in the context of global economy

Tutorial contact hours: 30

Text

- Debraj Ray, Development Economics, Oxford University Press, 2009.

References

- ParthaDasgupta, Economics, a Very Short Introduction, Oxford University Press, 2007.
- Abhijit Banerjee, Roland Benabou and DilipMookerjee, Understanding Poverty, Oxford University Press, 2006.
- Thomas Schelling, Micromotives and Macrobehavior, W. W. Norton, 1978.

- Albert O. Hirschman, *Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States*, Harvard University Press, 1970.
- RaghuramRajan, *Fault Lines: How Hidden Fractures Still Threaten the World Economy*, 2010.
- Elinor Ostrom, *Governing the Commons: The Evolution of Institutions for Collective Action*, CambridgeUniversity Press, 1990.
- DaniRodrik, *The Globalization Paradox: Why Global Markets, States and Democracy Can't Coexist*, Oxford University Press, 2011.
- Michael D. Bordo, Alan M. Taylor and Jeffrey G. Williamson (ed.), *Globalization in Historical Perspective*, University of Chicago Press, 2003

**DRAFT STRUCTURE OF BA/BSC ECONOMICS (GENERAL) SYLLABUS,
UNIVERSITY OF CALCUTTA, UNDER CHOICE BASED CREDIT SYSTEM
To be effective from the academic session 2018-19**

Preamble

- As the subject Economics falls under both BA and BSc two types of structures are proposed for BA/BSc Economics (General). One for BA Economics (General) and the other for BSc Economics (General).
- For any student with Honours in a subject other than Economics (say Sociology (Honours) or Political Science (Honours) or Statistics (Honours)) may opt for Economics as a Generic Elective subject. So provisions are to be kept for Economics Generic Elective for four courses (papers).
- For any BA (General) student with subjects other than Economics [say Political Science (General) and History (General)] may opt for Economics as a Generic Elective Course [two Generic Elective courses are to be chosen from different inter-disciplinary subjects. Thus one subject can be Economics and provision should be kept for two courses. This should be treated as Generic Elective Course for BA (General) student].
- Finally as part of skill-enhancement Course under BA/BSc Economics (General) provision should be kept for two skill-enhancement courses.
- The conversion of credit to lecture hours is same as that of the Honours course. **For five credits of lecture hours (theory) per course there will be five hours of teaching per week so that for fifteen weeks all total there will be 75 hours of teaching (lecture hours) for theory classes per semester. For 1 credit tutorial or practical classes (each of two hours) there will be all total 30 hours for 15 weeks (one can refer to it a 30 tutorial contact hours or 30 project contact hours or 30 practical contact hours etc. Thus for a 5 credit (Theory)+1 credit(Tutorial)= 6 credit course all total the total teaching cum contact hours for 15 weeks is 75+30=105 lecture hours and tutorial contact hours.** Similarly for a 2 credit course (only theory) the teaching hours or lecture hours all total is 30. Within each course the total marks of 100 has been subdivided in the following manner. For 105 hours of teaching (Theory plus tutorial /alternative to tutorial) we have 80 marks. The remaining 20 marks has been divided into two equal parts: 10 marks is reserved for *continuous internal assessment(CIA)* and the remaining 10 marks for attendance. Out of 80 for written examination 50 marks has been allotted and the remaining 30 marks has been allotted for tutorial/practical/project/term paper/any other alternative examination.

- We first focus on BSc Economics (General) . To illustrate the structure we start from a hypothetical example. Suppose the three general subjects opted by a student for BSc (General) are Economics, Mathematics and Statistics. Then the syllabus for Economics should be treated as the syllabus for BSc Economics (General) and it would be based on the following structure.

Table 1: Structure for BSc (General) Course covering three subjects

Type of Course	Total Number of Courses	Number of Courses for Economics out of total number of Courses	Credit for each course	Total Credit	Total Marks
Core Course (CC)	12	4	5(Th) +1 (Tu)=6 for each course	Total credit for 12 courses = 72	12x100 =1200
Discipline Specific Elective (DSE)	6	2	5(Th) +1 (Tu)=6 for each course	Total credit for 6 courses =36	6x100 =600
Ability Enhancement Compulsory course (AECC)	2	Nil	2 (Th) for each course	Total credit for 2 courses =4	2x100 =200
Skill Enhancement Elective Course (SEC)	4	2	2 (Th) for each course	Total credit for 4 courses =8	4x100 =400
Total	24	8		120	2400

- In case of BSc (General) for each CC we have 100 marks, for each DSE we have 100 marks, for each AECC we have 50 marks, for each SEC we have 50 marks so that all total we have 2100 marks for BSc (General) stream (as shown in Table 1). For each semester we have 350 marks as shown in table 3
- We next focus on BA Economics (General) . To illustrate the structure we start from a hypothetical example. Suppose the two general subjects opted by a student for BA (General) are Political Science and Economics. Then the syllabus for Economics should be treated as the syllabus for BA Economics (General) and it would be based on the structure shown in table 2
- In Language Core Course (LCC) as per decision of the University there will 2 English Courses and 2 MIL Courses.
- Ability Enhancement Courses can be conducted along with the Honours students in 1st and 2nd semesters.

Table 2: Structure for BA (General) Course covering two subjects (with two different subjects under Generic Elective)

Type of Course	Total Number of Courses	Number of Courses for Economics out of total number of Courses	Credit for each course	Total Credit	Total Marks
Core Course (CC)	8	4	5(Th) +1 (Tu)=6 for each course	Total credit for 8 courses = 48	8x100 =800
Language Core Course (LCC)	4	Nil	5(Th) +1 (Tu)=6 for each course	Total credit for 4 courses = 24	4x100 =400
Generic Elective (GE) [From two interdisciplinary subjects]	2	2 GE Economics (provided none of the main two general subjects is Economics)	5(Th) +1 (Tu)=6 for each course	Total credit for 2 courses = 12	2x100 =200
Discipline Specific Elective (DSE)	4	2	5(Th) +1 (Tu)=6 for each course	Total credit for 4 courses =24	4x100 =400
Ability Enhancement Compulsory course (AECC)	2	Nil	2 (Th) for each course	Total credit for 2 courses =4	2x100 =200
Skill Enhancement Elective Course (SEC)	4	2 can be offered from Economics	2 (Th) for each course	Total credit for 4 courses =8	4x100 =400
Total	24	8 (without considering GE courses) + 2 GE Courses (if the general subject is other than Economics)		120	2400

- In case of BA (General) for each CC we have 100 marks, for each LCC we have 100 marks, for each GE we have 100 marks, for each DSE we have 100 marks, for each AECC we have 100 marks and for each SEC we have 100 marks (as shown in table 2) so that all total we have 2400 marks for BA (General) stream. For each semester we have 400 marks as shown in table 4.

- We now consider semester-wise break-up of BSc (General) and BA (General) Courses:

Table 3 : Semester-wise Break-up of BSc (General) Course covering three subjects

Semester	Types of Courses	Economics Course	Total Credit for all Courses for each semester	Total Marks
I	3 CC, 1AECC	1 CC	20	400
II	3CC, 1AECC	1CC	20	400
III	3CC, 1 SEC	1CC plus 1 SEC	20	400
IV	3CC, 1 SEC	1CC	20	400
V	3DSE, 1SEC	1DSE plus 1SEC	20	400
VI	3DSE, 1 SEC	1DSE	20	400
Total	24Courses	8 Courses	120	2400

Table 4 : Semester-wise Break-up of BA (General) Course covering two subjects (with two different subjects under Generic Elective)

Semester	Types of Courses	Economics Course	Total Credit for all Courses for each semester	Total Marks
I	2 CC, 1 LCC, 1AECC	1 CC	20	400
II	2CC,1 LCC, 1AECC	1CC	20	400
III	2CC, 1 LCC,1 SEC	1CC plus 1 SEC	20	400
IV	2CC, 1LCC, 1 SEC	1CC	20	400
V	1 GE, 2DSE, 1SEC	1DSE plus 1SEC plus 1 GE (to be offered if the general subject is other than Economics)	20	400
VI	1 GE, 2DSE, 1 SEC	1DSE plus 1 GE (to be offered if the general subject is other than Economics]	20	400
Total	24Courses	8 Courses + 2 GE (in case if the general subject is other than Economics)	120	2400

- Economics as Generic Elective can be offered for students having Honours in any subject other than Economics. The semester break-up of the course is as follows

Table 5 : Semester-wise break-up of Generic Elective for students having Honours in subject other than Economics

Semester	Course
I	Generic Elective Course I (GET ₁)
II	Generic Elective Course II(GE T ₂)
III	Generic Elective Course III(GE T ₃)
IV	Generic Elective Course IV (GE T ₄)

- The four GE courses for students having Honours in any subject other than Economics can be treated as Core courses (CC) in first four semesters for students under BA/BSc General Courses.

We have thus the following classification of GE and CC:

Table 6 : Semester-wise distribution of CC and GE

Semester	Name of the Course	Core Course (CC) for BA/BSc General students	GE Course for students who have Honours in any subject other than Economics
I	Introductory Microeconomics	Core Course 1(Econ)-CC1	Generic Elective Course I (GE T ₁)
II	Introductory Macroeconomics	Core Course 2(Econ)-CC2	Generic Elective Course II (GE T ₂)
III	Issues in Economic Development and India	Core Course 3(Econ)-CC3	Generic Elective Course III (GE T ₃)
IV	Indian Economic Policies	Core Course 4(Econ)-CC4	Generic Elective Course IV(GE T ₄)

- For the two Discipline Specific Elective (DSE) courses and two Skill Enhancement Courses(SEC) we suggest the following :

Table 7 : Distribution of DSE and SEC for BA (General) and BSc (General) : Economics

Semester	Name of the Course for DSE	Name of the Course for SEC
III		Introductory Methods of Field Survey (SEC Eco1)
V	Money and Banking (DSE Eco1)	Economic Data Analysis and Report Writing (SEC Eco2)
VI	Public Finance (DSE Eco 2)	

- For two Generic Elective courses for BA (General) students who do not have Economics (General) we suggest the following

- Table 8 : Distribution of GE for BA (General) students who do not have Economics (General)**

Semester	Name of the Course for GE
V	Sustainable Development (GE Eco 1)
VI	Economic History of India (1857-1947) (GE Eco 2)

- Based on the above-mentioned structure we have framed the syllabus in the following manner

Core Course 1 (CC 1) BA/BSc (General) / Generic Elective Course I (GE T₁) for BA/BSc Honours students [other than students having Economics (Honours)]:

Name of the Course: Introductory Microeconomics

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours (Theory): 75, No. of Tutorial contact hours 30

[For Semester-I]

1. Exploring the subject matter of Economics 7 lecture hours

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.

2. Supply and Demand: How Markets Work, Markets and Welfare

16 lecture hours

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.

3. The Households 15 lecture hours

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.

4. The Firm and Perfect Market Structure 15 lecture hours

Production function of a firm. Total product, average product and marginal product.. Concept of Isoquant. Behaviour of profit maximizing firms and the production process; the cost function,

short run costs and output decisions; costs and output in the long run. Features of a perfectly competitive market. Short run and long run equilibrium under perfect competition.

5. Imperfect Market Structure

10 lecture hours

Monopoly equilibrium-differences with perfect competition. Basic ideas of monopolistic competition (detail analysis of group equilibrium is not required).

6. Input Markets

12 lecture hours

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.

Tutorial Contact Hours: 30

Text

- R.G. Lipsey. An Introduction to Positive Economics, ELBS (6th edition)

Reference Books

- 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.
- P. Samuelson and W. Nordhaus, Economics, 19th edition, McGraw Hill

Core Course 2 (CC 2) BA/BSc (General) / Generic Elective Course II (GE T₂) for BA/BSc Honours students [other than students having Economics (Honours)]:

Name of the Course: Introductory Macroeconomics

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours (Theory): 75, No. of Tutorial contact hours 30

[For Semester-II]

1. Introduction to Macroeconomics and National Income Accounting **22 lecture hours**

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.

- 2. Money** **14 lecture hours**
 Functions of money; quantity theory of money; determination of money supply and demand; credit creation; tools of monetary policy.
- 3. Inflation** **14 lecture hours**
 Inflation and its social costs; hyperinflation.
- 4. The Closed Economy in the Short Run** **25 lecture hours**
 Classical and Keynesian systems; simple Keynesian model of income determination; IS- LM model; fiscal and monetary multipliers.

Tutorial Contact Hours: 30

Text

- Sikdar Soumyen, Principles of Macroeconomics, Oxford University Press

Reference Books

- Dornbusch, Fischer and Startz, Macroeconomics, McGraw Hill, 11th edition, 2010.
- N. Gregory Mankiw. Macroeconomics, Worth Publishers, 7th edition, 2010.
- Errol D'Souza, Macroeconomics, Pearson Education, 2009.

Core Course 3 (CC 3) BA/BSc (General) / Generic Elective Course III (GE T₃) for BA/BSc

Honours students [other than students having Economics (Honours)]:

Name of the Course: Issues in Economic Development and India

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours (Theory): 75, No. of Tutorial contact hours 30

[For Semester-III]

1. Meaning of Economic Development **30 lecture hours**

Meaning of economic development; growth vs. development; income approach and the capability approach; concept of human development and its measurement, population and human

development; education and health sectors in India; growth and development of Indian economy under different policy regimes.

2. Poverty , Inequality and Development

25 lecture hours

- Basic issues of poverty and inequality; basic ideas about measurement of poverty and inequality; the poverty line. Vicious circle of poverty; low level equilibrium trap and critical minimum effort thesis; trends and policies to eradicate poverty and income inequality in India

3. Development of the Dual Economy

20 lecture hours

Surplus labour and disguised unemployment; the Lewis model;

Tutorial Contact Hours: 30

Text

- Todaro and Smith: Economic Development, Pearson Education, 2009
- Misra D. and Puri K. Indian Economy, Himalaya Publishing House

References

- Debraj Roy, Development Economics, Oxford University Press,2009
- Thirlwall, Growth and Development, 5th Edition
- Rakesh Mohan, 2008, —Growth Record of Indian Economy: 1950-2008. A Story of Sustained Savings and Investment, Economic and Political Weekly, May.
- Datt and Sundharam (Revised by G.Datt and A. Mahajan) , Indian Economy, 70th edition, S. Chand
- T. Dyson, 2008, —India's Demographic Transition and its Consequences for Development in Uma Kapila, editor, Indian Economy Since Independence, 19th edition, Academic Foundation.

Core Course 4 (CC 4) BA/BSc (General) / Generic Elective Course IV (GE T₄) for BA/BSc

Honours students [other than students having Economics (Honours)]:

Name of the Course: Indian Economic Policies

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours (Theory): 75, No. of Tutorial contact hours 30

[For Semester-IV]

- 1. Macroeconomic Policies and their Impact** **15 lecture hours**
Fiscal Policy; trade and investment policy; financial and monetary policies; labour regulation.
- 2. Policies and Performance in Agriculture** **21 lecture hours**
Growth; productivity; agrarian structure and technology; capital formation; trade; pricing and procurement.
- 3. Policies and Performance in Industry** **21 lecture hours**
Growth; productivity; diversification; small scale industries; public sector; competition policy; foreign investment.
- 4. Trends and Performance in Services** **18 lecture hours**
Role of the service sector in the context of the Indian economy; trends and performance of the service sector in India.

Tutorial Contact Hours: 30

Text

- Misra D. and Puri K. Indian Economy, Himalaya Publishing House
- Datt and Sundharam (Revised by G.Datt and A. Mahajan) , Indian Economy, 70th edition, S. Chand

References

- Shankar Acharya, 2010, —Macroeconomic Performance and Policies 2000-8, in Shankar Acharya and Rakesh Mohan, editors, India's Economy: Performances and Challenges: Development and Participation, Oxford University Press.

- Rakesh Mohan, 2010, —India’s Financial Sector and Monetary Policy Reforms, in Shankar Acharya and Rakesh Mohan, editors, India’s Economy: Performances and Challenges: Development and Participation, Oxford University Press.

Discipline Specific Elective Course [Economics] 1 (DSE Eco 1) BA/BSc (General)

Name of the Course: Money and Banking

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours (Theory): 75, No. of Tutorial contact hours 30

[For Semester-V]

- 1. Money** **10 lecture hours**
Concept, functions, measurement; theories of money supply determination
- 2. Financial Institutions, Markets, Instruments and Financial Innovations** **22 lecture hours**
 - Role of financial markets and institutions; problem of asymmetric information – adverse selection and moral hazard; financial crises.
 - Money and capital markets: organization, structure and reforms in India; role of financial derivatives and other innovations.
- 3. Interest Rates** **12 lecture hours**
Determination; sources of interest rate differentials; theories of term structure of interest rates; interest rates in India.
- 4. Banking System Banking System** **18 lecture hours**
 - Balance sheet and portfolio management.
 - Indian banking system: Changing role and structure; banking sector reforms.
- 5. Central Banking and Monetary Policy** **13 lecture hours**
Functions, balance sheet; goals, targets, indicators and instruments of monetary control; monetary management in an open economy; current monetary policy of India.

Tutorial Contact Hours: 30

Texts

- 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.

References

- 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).

Discipline Specific Elective Course [Economics] 2 (DSE Eco 2) BA/BSc (General)

Name of the Course: Public Finance

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours (Theory): 75, No. of Tutorial contact hours 30

[For Semester-VI]

1. Theory of Public Finance

40 lecture hours

- Overview of Fiscal Functions, Tools of Normative Analysis, Pareto Efficiency, Equity and the Social Welfare.
- Market Failure, Public Good and Externalities.
- Elementary Theories of Product and Factor Taxation (Excess Burden and Incidence).

2. Issues from Indian Public Finance

35 lecture hours

- Current Issues of India's Tax System.
- Working of Monetary and Fiscal Policies.
- Analysis of Budget and Deficits
- Fiscal Federalism in India
- State and Local Finances

Tutorial Contact Hours: 30

Text

- Ganguly Subrata , Public Finance : A Normative Approach, Nababharat Publishers

References

- Musgrave, R.A. and P.B. Musgrave, Public Finance in Theory and Practice, Mc- Graw Hill, 1989.
- M.M Sury, Government Budgeting in India, Commonwealth Publishers, 1990.
- Shankar Acharya, "Thirty years of tax reform" in India, Economic and Political Weekly, May 2005.
- Government of India, Report of the 13th Finance Commission.
- Economic Survey, Government of India (latest).
- State Finances: A Study of Budgets, Reserve Bank of India (latest).

Skill Enhancement Course [Economics] 1 (SEC Eco 1) BA/BSc (General)

Name of the Course: Introductory Methods of Field Survey

Total Marks: 100 [Theory(Th) 80 + Internal Assessment 10+Attendance: 10]

Total Credits: 2,

No. of Lecture hours: 30

[For Semester III or may be adjusted as per decision of the University]

1. Basic ideas of economic data

8 lecture hours

- Types of data-cross section, time series , pooled data, panel data etc.
- Nature of field survey data – types of cross section data
- Advantages and disadvantages of field survey data
- Importance of field survey data for economic analysis
- Role of pilot survey

2. Methodologies of collection of data

15 lecture hours

- Complete enumeration vs. sample survey
- Sampling techniques : basic ideas of simple random sampling (with and without replacement), stratified random sampling, circular sampling, sampling proportional to size (mathematical proof/mathematical demonstration not required for any type of sampling)
- Practical methods of drawing random sample using random number tables.
- Prerequisites for field survey –preparation of blank tables
- Preparation of questionnaire depending on nature of survey- illustrations on the basis of preparation of hypothetical questionnaire

3. Recording of data

7 lecture hours

- How to record data after completion of survey : use of manual methods and recording through the use of computers
- Tabular representation of data collected
- Cross checking of data after tabular representation
- Role of units of measurement

References

- Goon, A. M, Gupta, M. K, and Dasgupta, B. Fundamentals of Statistics (Volumes One and Two),The World Press Private Ltd
- Kapur J.N. and Saxena H.C. , Mathematical Statistics, Sultan Chand Publishing

Skill Enhancement Course [Economics] 2 (SEC Eco 2) BA/BSc (General)

Name of the Course: Economic Data Analysis and Report Writing

Total Marks: 100 [Theory(Th) 80 + Internal Assessment 10+Attendance: 10]

Total Credits: 2,

No. of Lecture hours: 30

[For Semester V or may be adjusted as per decision of the University]

1. Tabular and Graphical representation of Statistical Data

6 lecture hours

- Tabular representation of data for analysis

- Graphical representation of data-use of line diagram, bar chart, divided bar chart, pie chart etc.
- Frequency distribution table: uses and implications
- Pictorial descriptions of frequency table: frequency polygon, histogram, ogive etc.

2. Basic Descriptive Statistics and its role in Data Analysis

16 lecture hours

- Measures of Central Tendency-Concept of arithmetic mean, geometric mean and harmonic mean-their uses (explicit mathematical proof of the properties of different types mean are not required).The concept of median and mode-their uses in analyzing economic data. Comparison of mean, median and mode as measures of central tendency
- Measures of dispersion: range, mean deviation, standard deviation and quartile deviation. Properties of various measures and their implications (explicit proof of properties is not required). Comparison of various measures of dispersion. Significance of the concept of coefficient of variation. Use of range, standard deviation and coefficient of variation in measuring income inequality. Basic concept of Gini coefficient and Lorenz curve.
- Introductory ideas of correlation and regression analysis.

3. Elements of Report writing

8 lecture hours

- Locating the basic issues- theme based literature survey and motivation behind any study-objectives of the study-development of writing skills
- Methodological issues: Use of tables and graphs. Use of various measures of central tendency and dispersion in analyzing the results.
- Insertion of footnotes or end notes.
- Preparation of Bibliography

References

- Goon, A. M, Gupta, M. K, and Dasgupta, B. Fundamentals of Statistics (Volume One), The World Press Private Ltd.
- A.L. Nagar and R.K. Das : Basic Statistics, 2nd edition, Oxford University Press.
- C.R. Kothari: Research Methodology: Methods and Techniques (second revised edition), New Age India (P) Ltd Publishers.

Generic Elective Course [Economics] 1 (GE Eco 1) BA (General)

**[For students not having Economics as a General Paper
but opted for Economics as a Generic Elective Paper]**

Name of the Course: Sustainable Development

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours (Theory): 75, No. of Tutorial contact hours 30

[For Semester-V]

1. The Approach Towards Sustainability-Introductory ideas 15 lecture hours

Key environmental issues and problems, economic way of thinking about these problems, circular flow of environmental pollutants and waste recycling-laws of thermodynamics, renewable and non-renewable resources-the issue of sustainability

2. The meaning of Sustainable Development 25 lecture hours

Different definitions of sustainable development, rules of sustainable development, measures of sustainable development, sustainable management of resources-the role of property rights, stakeholders associated with sustainable management of different types of renewable resources-fishery, forestry and water, the concept of sustainable livelihood in the context of sustainable resource management.

3. Trans-boundary pollution, climate change and sustainable development 15 lecture hours

Implementation of environmental policies in developing countries and international experience; transboundary environmental problems-international meetings, protocols and treaties; economics of climate change-basic ideas of the carbon credit market-clean development mechanism and international emission trading.

4. Sustainable Resource Management Policies in India 20 lecture hours

Water policy, forestry policy and fishery policy of India. Basic objectives of the policies along with goals and visions.

Tutorial Contact Hours : 30

Texts

- Rabindranath Bhattacharya : “Environmental Economics : An Indian Perspective”, Oxford University Press.
- Pearce and Turner : ‘Environmental and Natural Resource Economics’, John Hopkins University Press,1991

References

- 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, 2nd edition, 2010.
- IPCC (Intergovernmental Panel on Climate Change), Fifth Assessment Report (forthcoming 2014).
- National Water Policy 2012, Ministry of Water Resources, Government of India.
- National Forest Policy 2016 : Ministry of Environment and Forests, Government of India
- National Policy on Marine Fisheries, 2017 : Ministry of Animal Husbandry, Dairying and Fisheries, Government of India.

Generic Elective Course [Economics] II (GE Eco 2) BA (General)

**[For students not having Economics as a General Paper
but opted for Economics as a Generic Elective Paper]**

Name of the Course: Economic History of India (1857-1947)

Total Marks: 100 [Theory(Th) 50 + Tutorial(Tu) 30 + Internal Assessment 10+Attendance: 10]

Total Credits: [5(Th)+1(Tu)]=6 ,

No. of Lecture hours (Theory): 75, No. of Tutorial contact hours 30

[For Semester-VI]

1. Colonial India: Background and Introduction

10 lecture hours

Overview of the colonial economy

2. Macro Trends

13 lecture hours

National Income; population; occupational structure.

3. Agriculture

17 lecture hours

Agrarian structure and land relations; agricultural markets and institutions – credit, commerce and technology; trends in performance and productivity; famines.

4. Railways and Industry

20 lecture hours

Railways; the de-industrialisation debate; evolution of entrepreneurial and industrial structure; nature of industrialisation in the interwar period; constraints to industrial breakthrough; labor relations.

5. Economy and State in the Imperial Context

15 lecture hours

The imperial priorities and the Indian economy; drain of wealth; international trade, capital flows and the colonial economy – changes and continuities; government and fiscal policy.

Tutorial Contact Hours : 30

Text

Bhattacharya, Dhires, A Concise History of Indian Economy, Progressive Publishers, 1972

References

- Irfan Habib, Indian Economy 1858-1914, A People's History of India, Vol.28, Tulika, 2006.
- B.R. Tomlison, 1975, India and the British Empire 1880-1935, IESHR, Vol.XII.
- Dharma Kumar, the Fiscal System, CEHI, Chapter 12.
- Basudev Chatterjee, Trade, Tariffs and Empire, OUP 1992, Epilogue.
- Daniel Thorner, Agrarian Prospect in India, 1977
- Amiya Kumar Bagchi , Private Investment in India 1900-1939, Taylor and Francis, 2000.