

Controller of Examinations
SAMBALPUR UNIVERSITY
JYOTI VIHAR, BURLA
Sambalpur (Odisha), PIN- 768 019



PHONE and Fax: 0663-2430806
e-mail: coesuniv@gmail.com

Urgent

(Both by post and by e- mail)

No. 7825 / Acd.-I

Dated: 27/10/16

To

The Principals,

(All the Affiliated Colleges under Sambalpur University having
Three Year Degree Courses excluding Autonomous Colleges.)

Sub: Syllabus & Implementation of CBCS pattern Arts/Science/Commerce (Pass and
Hons.) from the Academic Session 2016-17.

Ref :- This office letter No 5314/ Acd.-I dated 21.7.16 and letter No. 5970/Acd.-I
dated 8.8.16.

Sir,

In continuation to the letters and the subject cited above, I am directed to intimate you that the Vice- Chancellor has been pleased to approve the syllabus for Courses / papers related to ***Economics*** for CBCS + 3 courses degree B.A. (Both Pass & Hons.) examinations under 6 (15) of O.U. Act -1989 giving it effect from the Academic Session, 2016-17. The detail Courses of Studies is enclosed herewith for your reference and necessary action.

This may kindly be noted that it is the final syllabus for *Economics* subject/ papers under CBCS pattern. It may be made available to teachers and students concerned. Further you are requested to ensure teaching of the courses in your colleges accordingly.

Any error and omission etc. may kindly be intimated to this office.

. Any queries on the matter may be made through e-mail: coesuniv@gmail.com.

Thanking you,

Yours faithfully,

Encl: *As above*

L.K.W.
27/10/16
Controller of Examinations
Blair

P.T.O.

Memo No. 7826 /Acad.-I(BOS),

dtd. 27/10/16

Copy forwarded with enclosure for information and necessary action to:

1. The Chairman, Post Graduate Council, Sambalpur University.
2. The H.O.D., P.G. Department of *Economics*, Sambalpur University.
3. The Director, College Development Council, Sambalpur University.
4. The Director, Directorate of Distance and Continuing Education, Sambalpur University.
5. The Co-ordinator, Private Examination Cell, Sambalpur University.
6. Asst. Registrar (Examination), Sambalpur University.
7. Programmer, University Computer Unit, Sambalpur University.
8. Asst. Controller of Examinations, Sambalpur University.
9. Section Officer / Assistant –in- Charge, *e – Governance Cell*, Sambalpur University with request to provide all the materials in the official web- site accordingly. (as + 3 cbcs- syllabus – *Economics –Final*)
10. Section Officers, Computer Unit, E.G.-I, EG-II, E.C-I, EC-II, EC-VI Sections.
11. Five spare Copies for Academic-I Sections with enclosure.

B.K.W.
27/10/16
Controller of Examinations
Blaik

Memo No. 7827 /Acad.-I(BOS),

dtd. 27/10/16

Copy forwarded without enclosure for information and necessary action to:

1. *The Dy. Director, e – Governance Cell*, Sambalpur University with request for needful to provide all the materials in the official web- site accordingly .
2. P.A. to the Vice- Chancellor, Sambalpur University.
3. P.A. to the Registrar, Sambalpur University.
4. P.A. to the Controller of Examinations, Sambalpur University.

B.K.W.
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SYLLABUS FOR
B.A. (HONOURS) ECONOMICS
UNDER CHOICE BASED CREDIT SYSTEM

Approved by
the Board of Studies of Economics
held on 29th September 2016



SAMBALPUR UNIVERSITY
JYOTI VIHAR, BURLA – 768019
ODISHA, INDIA

S.D. Das
29/9/16

Syllabus for B.A. (Hons.) Economics

Course Structure for B.A. (Hons.) Economics

There are a total of fourteen economics **core courses** that students are required to take across six semesters. All the core courses are compulsory. In addition to core courses in economics, a student of B.A. (Hons.) Economics will choose four Discipline Specific Elective (DSE) Courses. The Discipline Specific Elective (**DSE**) Courses are offered in the fifth and sixth semesters and two such courses will be selected by a student from a set of courses specified for each of these semesters (Groups I and II in the attached table). It is recommended that each college should offer at least three Discipline Specific Elective (DSE) Courses in the fifth and sixth semesters to allow the students some minimal element of choice. Further, a student will take two **Skill Enhancement Courses** (SEC-I & SEC-II) in third and fourth semesters. For this she/he can choose one out of the two choices (for example, one out of SEC-Ia & SEC-Ib; similarly he/she can take SEC- Iia or SEC-IIb).

Contact Hours: Each course has 5 lectures and 1 tutorial (per group) per week. The size of a tutorial group is 8-10 students.

Note on Course Readings : The nature of several of the courses is such that only selected readings can be specified in advance. Reading lists should be updated and topic-wise readings should be specified at regular intervals, ideally on an annual basis.

Besides own subject, students will study subjects of other Departments. **Generic Elective Courses** (GEC) are meant for this. The students of Economics (Hons) will choose Generic Elective Course (GEC) from other Departments. Students of other Department (Hons) may choose Economics as Generic Elective Course. The GECs are offered in first, second, third and fourth semesters.

Students will also study **Ability Enhancement Compulsory Course (AECC)-I & Ability Enhancement Compulsory Course (AECC)-II** in first and second semester respectively.

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Course Structure for B.A. (Hons.) Economics

Semester-I	Semester-II
Economics Core Course 1 : Introductory Microeconomics	Economics Core Course 3 : Introductory Macroeconomics
Economics Core Course 2 : Mathematical Methods for Economics-I	Economics Core Course 4 : Mathematical Methods for Economics-II
Ability Enhancement Compulsory Course (AECC)-I	Ability Enhancement Compulsory Course (AECC)-II
Generic Elective Course(GEC) -I	Generic Elective Course(GEC) -II

Semester-III	Semester-IV
Economics Core Course 5 : Intermediate Microeconomics-I	Economics Core Course 8 : Intermediate Microeconomics-II
Economics Core Course 6 : Intermediate Macroeconomics-I	Economics Core Course 9 : Intermediate Macroeconomics-II
Economics Core Course 7 : Statistical Methods for Economics	Economics Core Course 10 : Introductory Econometrics
Skill Enhancement Course (SEC)-I:a.Computer Application, /b. Tribal Economy	Skill Enhancement Course (SEC)-II:a. Odisha Economy, /b. Odisha Budget
Generic Elective Course(GEC) -III	Generic Elective Course(GEC) -IV

Semester-V	Semester-VI
Economics Core Course 11 : Indian Economy-I	Economics Core Course 13 : Indian Economy-II
Economics Core Course 12 : Development Economics-I	Economics Core Course 14 : Development Economics-II
Discipline Specific Elective (DSE) Course-I (From List of Group-I)	Discipline Specific Elective (DSE) Course-III (From List of Group-II)
Discipline Specific Elective (DSE) Course-II (From List of Group-I)	Discipline Specific Elective (DSE) Course-IV (From List of Group-II)
Group-I (Discipline Specific Elective (DSE) Courses)	Group-II (Discipline Specific Elective (DSE) Courses)
(i) Economics of Health and Education	(v) Political Economy-II
(ii) Political Economy-I	(vi) Financial Economics
(iii) Money and Financial Markets	(vii) Environmental Economics
(iv) Public Economics	(viii) International Economics

Course Structure for Economics as Generic Electives

(N.B.The students of Economics (Hons) shall choose Generic Elective from Other departments)

Semester	Code	Course Title
I	GECI	Introductory Microeconomics
II	GECII	Introductory Macroeconomics
III	GEC-III (Choose A or B)	A. Indian Economy -I
		B. Money and Financial Markets
IV	GEC-IV(Choose A or B)	A. Indian Economy- II
		B. Public Economics

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Core Economics Course 1: INTRODUCTORY MICROECONOMICS

Course Description

This course is designed to expose the students to the basic principles of microeconomic theory. The emphasis will be on thinking like an economist and the course will illustrate how microeconomic concepts can be applied to analyze real-life situations.

Course Outline

1. Exploring the subject matter of Economics

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

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

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

3. The Households

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

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income and substitution effects; labour supply and savings decision - choice between leisure and consumption.

4. The Firm and Market Structure

Behavior of profit maximizing firms and the production process; short run costs and output decisions; costs and output in the long run; monopoly and anti-trust policy; government policies towards competition; imperfect competition.

5. Input Markets

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

Readings

1. Karl E. Case and Ray C. Fair, *Principles of Economics*, Pearson Education Inc., 8th Edition, 2007.
2. 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.
3. Joseph E. Stiglitz and Carl E. Walsh, *Economics*, W.W. Norton & Company, Inc., New York, International Student Edition, 4th Edition, 2007.

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Core Economics Course 2: MATHEMATICAL METHODS IN ECONOMICS-I

Course Description

This is the first of a compulsory two-course sequence. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

Course Outline

1. Preliminaries

Logic and proof techniques; sets and set operations; relations; functions and their properties; number systems.

2. Functions of one real variable

Types of functions- constant, polynomial, rational, exponential, logarithmic; Graphs and graphs of functions; Limit and continuity of functions; Limit theorems

3. Derivative of a function

Rate of change and derivative; Derivative and slope of a curve; Continuity and differentiability of a function; Rules of differentiation for a function of one variable; Application- Relationship between total, average and marginal functions

4. Functions of two or more independent variables

Partial differentiation techniques; Geometric interpretation of partial derivatives; Partial derivatives in Economics; Elasticity of a function – demand and cost elasticity, cross and partial elasticity

5. Integration of functions

Indefinite integrals: Rules of integration; Techniques of integration-substitution rule, integration by parts and partial fraction; Definite integrals.

Readings:

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

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Core Economics Course 3: INTRODUCTORY MACROECONOMICS

Course Description

This course aims to introduce the students to the basic concepts of Macroeconomics. Macroeconomics deals with the aggregate economy. This course discusses the preliminary concepts associated with the determination and measurement of aggregate macroeconomic variable like savings, investment, GDP, money, inflation, and the balance of payments.

Course Outline

1. Introduction to Macroeconomics and Basic Concepts

Macro vs. Micro Economics; Why Study Macroeconomics? Limitations of Macroeconomics ; Stock and Flow variables, Equilibrium and Disequilibrium, Partial and General Equilibrium Statics – Comparative Statics and Dynamics ; National Income Concepts – GDP, GNP, NDP and NNP at market price and factor cost; Personal Income and Disposable personal Income; Real and Nominal GDP.

2. Measurement of Macroeconomic Variables

Rules and approaches of Measurement of GDP (Income, expenditure, product and Value added approaches), Difficulties of Estimating National Income, Circular Flow of Income and expenditure in two, three, and four-sector economy. National Income and Economic Welfare; Green Accounting.

3. Money

Functions of money; Quantity Theory of Money –Cash Transactions, Cash Balances and Keynesian Approaches; determination of money supply and demand; credit creation; tools of monetary policy.

4. Inflation, Deflation, Depression and Stagflation

Inflation- Meaning, Types, causes and Effects. Demand-pull and cost-push inflation; the cost of inflation and anti-Inflationary Measures; Deflation-

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Meaning, Causes, Costs and Anti-Deflationary Measures, Depression and Stagflation; Inflation vs. Deflation

5. The Closed Economy in the Short Run

The Classical Approach - Say's Law, Theory of Determination of Income and Employment with and without saving and Investment; Basics of Aggregate Demand and Aggregate Supply and Consumption- Saving - Investment Functions, The Keynesian Approach - Basics of Aggregate Demand and Aggregate Supply and Consumption, Saving, Investment Functions; The Principle of Effective Demand; Income Determination in a Simple 2-Sector Model; Changes in Aggregate Demand and Income- The Simple Investment Multiplier; Income Determination in a 3-Sector Model with the Government Sector and Fiscal Multipliers

Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009.
4. Richard T. Froyen, *Macroeconomics*, Pearson Education Asia, 2nd edition, 2005.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011.
6. Errol D'Souza, *Macroeconomics*, Pearson Education, 2009.
7. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012.
8. Edward Shapiro, *Macroeconomic Analysis*, 5th Edition, 2013.

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Core Economics Course 4: MATHEMATICAL METHODS IN ECONOMICS - II

Course Description

This course is the second part of a compulsory two-course sequence. This part is to be taught in Semester II following the first part in Semester I. The objective of this sequence is to transmit the body of basic mathematics that enables the study of economic theory at the undergraduate level, specifically the courses on microeconomic theory, macroeconomic theory, statistics and econometrics set out in this Syllabus. In this course, particular economic models are not the ends, but the means for illustrating the method of applying mathematical techniques to economic theory in general. The level of sophistication at which the material is to be taught is indicated by the contents of the prescribed textbook.

Course Outline

1. Matrices and Determinants

Matrices: concept, types, matrix algebra, transpose, inverse, rank; Determinants: concept, properties, solving problems using properties of determinants, solution to a system of equations - Cramer's rule and matrix inversion method.

2. Linear models

Input- Output Model: Basic concepts and structure of Leontief's open and static Input-Output model; solution for equilibrium output in a three industry model; The closed model.

3. Dynamic Methods

Linear first order differential equations, linear second order differential equations. Linear first-order difference equations, linear second order difference equations.

N.B. Trigonometric functions are excluded

4. Single and multivariable optimisation

Optimum values and extreme values; Relative maximum and minimum; Necessary versus sufficient conditions - First and Second derivative tests;

5. Optimisation with Equality Constraints:

Effects of a constraint; Finding stationary value – Lagrange-Multiplier method(Two variable single constraint case only): First and second order condition;The Bordered Hessian determinant.

Readings:

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

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Core Economics Course 5: INTERMEDIATE MICROECONOMICS - I

Course Description

The course is designed to provide a sound training in microeconomic theory to formally analyze the behavior of individual agents. Since students are already familiar with the quantitative techniques in the previous semesters, mathematical tools are used to facilitate understanding of the basic concepts. This course looks at the behavior of the consumer and the producer and also covers the behavior of a competitive firm.

Course Outline

1. Consumer Theory I

Preferences and Utility: Axioms of Rational Choice, Utility, Trades and Substitutions, Indifference Curves, Utility Functions for Specific Preferences, The Many-Good case; Utility Maximization and Choice: The Two-Good Case (Graphical Analysis), The n-Good Case, Indirect Utility Function, The Lump Sum Principle, Expenditure Minimization, Properties of Expenditure Function.

2. Consumer Theory II

Income and Substitution Effects: Demand Functions, Changes in Income, Changes in a Good's Price, The Individual's Demand Curve, Compensated (Hicksian) Demand Curves and Functions, Demand Elasticities, Consumer Surplus; Demand Relationships among Goods: The Two-Good Case, Substitutes and Complements, Net (Hicksian) Substitutes and Complements, Substitutability with Many Goods, Composite Commodities, and Home Production, Attributes of Goods and Implicit Prices.

3. Production Theory

Marginal Productivity, Isoquant Maps and the Rate of Technical Substitution, Production with One Variable Input (labour) and with Two-

Variable Inputs, Returns to Scale, Four Simple Production Functions (Linear, Fixed Proportions, Cobb-Douglas, CES), Technical Progress.

4. Cost Functions

Definition of Costs, Cost Functions and its Properties, Shift in Cost Curves, the elasticity of substitution, Cost in the Short-Run and Long-Run, Long-Run versus Short-Run Cost Curves, the translog cost function, Production with Two Outputs – Economies of Scope.

5. Profit Maximization

The Nature and Behaviour of Firms, Profit Maximization, Marginal Revenue, Short-Run Supply by Price-Taking Firm, Profit Functions and its Properties, Profit Maximization and Input Demand – Single-Input Case and Two-Input Case.

Readings:

1. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, W.W. Norton and Company/Affiliated East-West Press (India), 8th edition, 2010. The workbook by Varian and Bergstrom may be used for problems.
2. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.
3. B. Douglas Bernheim and Michael D. Whinston, *Microeconomics*, Tata McGraw-Hill (India), 2009.

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Core Economics Course 6: INTERMEDIATE MACRO ECONOMICS - I

Course Description

This course introduces the students to formal modeling of a macro-economy in terms of analytical tools. It discusses various alternative theories of output and employment determination in a closed economy in the short run as well as medium run, and the role of policy in this context. It also introduces the students to various theoretical issues related to an open economy.

Course Outline

1. Consumption Function

Consumption – Income Relationship, Propensities to Consume and the Fundamental Psychological Law of Consumption; Implications of Keynesian Consumption Function; Factors Influencing Consumption Function; Measures to Raise Consumption Function; Absolute, Relative, Permanent and Life – Cycle Hypotheses.

2. Investment Function

Autonomous and Induced Investment, Residential Investment and Inventory Investment, Determinants of Business Fixed Investment, Decision to Invest and MEC, Accelerator and MEI Theories of Investment.

3. Demand for and Supply of Money

Demand for Money – Classical, Neoclassical and Keynesian Approaches, The Keynesian Liquidity Trap and its Implications, Supply of Money – Classical and Keynesian Approaches, The Theory of Money Supply Determination and Money Multiplier, Measures of Money Supply in India.

4. Inflation, Unemployment and Expectations, and Trade Cycles

Inflation – Unemployment Trade off and the Phillips Curve – Short run and Long run Analysis; Adaptive and Rational Expectations; The Policy Ineffectiveness Debate; Meaning and Characteristics of Trade Cycles; Hawtrey's Monetary Theory, Hayek's Over-investment Theory and Keynes' views on Trade Cycles

5. Aggregate Demand and Aggregate Supply

Derivation of Aggregate Demand and Aggregate Supply Curves in the IS-LM Framework; Nature and Shape of IS and LM curves; Interaction of IS and LM curves and Determination of Employment, Output, Prices and Investment; Changes in IS and LM curves and their Implications for Equilibrium.

Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009.
4. Steven M. Sheffrin, *Rational Expectations*, Cambridge University Press, 2nd edition, 1996.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011.
6. Errol D'Souza, *Macroeconomics*, Pearson Education, 2009
7. Paul R. Krugman, Maurice Obstfeld and Marc Melitz, *International Economics*, Pearson Education Asia, 9th edition, 2012.

Core Economics Course 7: STATISTICAL METHODS FOR ECONOMICS

Course Description

This is a course on statistical methods for economics. It begins with some basic concepts and terminology that are fundamental to statistical analysis and inference. It then develops the notion of probability, followed by probability distributions of discrete and continuous random variables and of joint distributions. This is followed by a discussion on sampling techniques used to collect survey data. The course introduces the notion of sampling distributions that act as a bridge between probability theory and statistical inference. The semester concludes with some topics in statistical inference that include point and interval estimation.

Course Outline

1. Data Collection and measures of central tendency and dispersion

Basic concepts: population and sample, parameter and statistic; Data Collection: primary and secondary data, methods of collection of primary data; Presentation of Data: frequency distribution; cumulative frequency; graphic and diagrammatic representation of data; Measures of Central Tendency: mean, median, mode, geometric mean, harmonic mean, their relative merits and demerits; Measures of Dispersion: absolute and relative - range, mean deviation, standard deviation, coefficient of variation, quartile deviation, their merits and demerits; Measures of skewness and kurtosis.

2. Correlation and Regression Analysis

Elementary Analysis of Linear Correlation: Covariance, Scatter Diagram, Karl Pearson's Coefficient of Correlation—Properties and the Method of Calculation, Concept of Spearman's Rank Correlation. The Concept of Regression, Regression Lines and their Estimation in a Bivariate series, Least Squares Method, The coefficient of determination (r^2) and Standard Error of Estimate.

3. Time Series and Index Number

Time Series: definition and components, measurement of trend- free hand method, methods of semi-average, moving average and method of least squares (equations of first and second degree only), measurement of seasonal component; Index Numbers: Concept, price relative, quantity relative and value relative; Laspeyer's and Fisher's index, family budget method, problems in construction and limitations of index numbers, test for ideal index number.

4. Probability theory

Probability: Basic concepts, addition and multiplication rules, conditional probability; Random variables and their probability distribution; Mathematical expectations; Theoretical Distribution: normal distribution - Properties and uses, problems using area under standard normal curve.

5. Sampling

Principal steps in a sample survey; Errors in statistics: sampling vs. non-sampling errors, methods of sampling: simple and stratified random sampling, Selection of a simple random sample, Allocation of sample size in stratified sampling and STRS, Systematic sampling, Cluster and Multistage sampling, Quota sampling.

Readings:

1. Jay L. Devore, *Probability and Statistics for Engineers*, Cengage Learning, 2010.
2. John E. Freund, *Mathematical Statistics*, Prentice Hall, 1992.
3. Richard J. Larsen and Morris L. Marx, *Introduction to Mathematical Statistics and its Applications*, Prentice Hall, 2001
4. S. C. Gupta, *Fundamentals of Statistics*, Himalaya Publishing House, Delhi,
5. Murray R. Spiegel, *Theory & Problems of Statistics*, Schaum's publishing Series
6. P. Mukyopadhyay, *Mathematical Statistics*. Kolkata Publishing House.
7. A. M. Mood, F A. Graybill, and D. C. Boes, *Introduction to the Theory of Statistics*, McGraw Hill.
8. William G. Cochran, *Sampling Techniques*, John Wiley, 2007

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Core Economics Course 8: INTERMEDIATE MICROECONOMICS - II

Course Description

This course is a sequel to Intermediate Microeconomics I. The emphasis will be on giving conceptual clarity to the student coupled with the use of mathematical tools and reasoning. It covers general equilibrium and welfare, imperfect markets and topics under information economics.

Course Outline

1. The Partial Equilibrium Competitive Model

Market Demand, Timing of the Supply Response, Pricing in the Very Short-Run, Short-Run Price Determination, Shifts in Supply and Demand Curves – a Graphical Analysis, Mathematical Model of Market Equilibrium, Long-Run Analysis: Long-Run Equilibrium-Constant Cost Case, Shape of the Long-Run Supply Curve, Long-Run Elasticity of Supply, Comparative Statics An analysis of Long-Run Equilibrium, Producer Surplus in the Long-Run, Economic Efficiency and Welfare Analysis, Price Controls and Shortages, Tax Incidence Analysis.

2. General Equilibrium and Welfare

Perfectly Competitive Price System, A Graphical Model of General Equilibrium with Two Goods, Comparative Statics Analysis, General Equilibrium Modeling and Factor Prices, A Mathematical Model of Exchange, A Mathematical Model of Production and Exchange, Computable General Equilibrium Models.

3. Monopoly

Barriers to Entry, Profit Maximization and Output Choice, Monopoly and resource Allocation, Monopoly, Product Quality and Durability, Price Discrimination, Second Degree Price Discrimination through Price Schedules, Regulation of Monopoly, Dynamic Views of Monopoly

4. Oligopoly

Short-run pricing and output decisions: Bertrand model, Cournot model, Stackelberg model, capacity constraints, product differentiation, tacit collusion and punishment strategies; longer-run decisions: investment, entry and exit, strategic entry deterrence, signalling, innovations.

5. Market Failure

Asymmetric information: Complex contracts, principal-agent problem, hidden actions, owner-manager relationships, moral hazards, non-linear pricing, adverse selection, signalling, auctions; externalities and allocative inefficiency.

Readings:

1. Hal R. Varian, *Intermediate Microeconomics, a Modern Approach*, 8th edition, W.W. Norton and Company/Affiliated East-West Press (India), 2010.
2. Hal R. Varian, *Answers to Exercises, Micro Economics analysis*, W.W. Norton & Company, 1992 (for solving problems).
3. R. S. Pindyck, D. N. Rubinfeld and P. L. Meheta (2009): *Microeconomics*, 7th Edition, Pearson, New Delhi.
4. C. Snyder and W. Nicholson, *Fundamentals of Microeconomics*, Cengage Learning (India), 2010.

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Core Economics Course 9: INTERMEDIATE MACROECONOMICS- II

Course Description

This course is a sequel to Intermediate Macroeconomics I. In this course, the students are introduced to the long run dynamic issues like growth and technical progress. It also provides the micro-foundations to the various aggregative concepts used in the previous course.

Course Outline

1. Open Economy Macroeconomics

Balance of payments- Concept, Equilibrium and Disequilibrium, Measures to Correct Disequilibrium, Determination of Foreign Exchange Rate- the PPP Theory and its Implications, Fixed vs. Flexible Exchange Rates, The Short-run open economy Model, the basic Mundell-Fleming Model. International Financial Markets

2. Modelling Economic Growth

The Basic Harrod- Domar Model, Joan Robinson and the Golden Rule of Capital Accumulation, The Basic Solow Model, Theory of Endogenous Growth – the Rudimentary A-K Model.

3. Macroeconomic Policy

The Goals of Macroeconomic Policy and of Policy Makers, The Budget and Automatic Fiscal Stabilisers, The Doctrine of Balanced Budget and Keynesian Objections; Concepts of Budget, Revenue and Fiscal Deficits, Fiscal Policy: Objectives and Limits to Discretionary Policy, The Crowding –Out Hypothesis and the Crowding – in Controversy Meaning, Scope and Objectives of Monetary Policy, Instruments of Monetary Policy, the Transmission Mechanism of Monetary Policy, Rules vs. Discretion in Monetary Policy, Implications of Targeting the Interest Rate, Limits to Monetary Policy

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4. Classical and Keynesian Macroeconomic Thoughts

Keynes vs. the Classics – Aggregate Demand and Aggregate Supply, Underemployment Equilibrium and Wage Price Flexibility. Monetarists and Friedman's Reformulation of Quantity Theory; Fiscal and Monetary Policy: Monetarists vs. Keynesians.

5. New Classical and New Keynesian Macroeconomic Thoughts

The new classical critique of micro foundations, the new classical approaches- the policy implications of new classical approach — empirical evidence. The New Classical View of Macroeconomics and the Keynesian Counter-critique. The New Keynesian Economics with reference to the Basic Features of Real Business Cycle Models, the Sticky Price Model.

Readings:

1. Dornbusch, Fischer and Startz, *Macroeconomics*, McGraw Hill, 11th edition, 2010.
2. N. Gregory Mankiw. *Macroeconomics*, Worth Publishers, 7th edition, 2010.
3. Olivier Blanchard, *Macroeconomics*, Pearson Education, Inc., 5th edition, 2009.
4. Charles I. Jones, *Introduction to Economic Growth*, W.W. Norton & Company, 2nd edition, 2002.
5. Andrew B. Abel and Ben S. Bernanke, *Macroeconomics*, Pearson Education, Inc., 7th edition, 2011.
6. Errol. D'Souza, *Macroeconomics*, Pearson Education, 2009.
7. Robert J. Gordon, *Macroeconomics*, Prentice-Hall India Limited, 2011.

Course Description

This course provides a comprehensive introduction to basic econometric concepts and techniques. It covers statistical concepts of hypothesis testing, estimation and diagnostic testing of simple and multiple regression models. The course also covers the consequences of and tests for misspecification of regression models.

Course Outline

1. Nature and Scope of Econometrics

What is Econometrics? Why it is a separate discipline? Methodology of econometrics, Mathematical and statistical prerequisites, the role of computer.

2. Statistical Concepts

Normal distribution; chi-sq, t- and F-distributions; estimation of parameters; properties of estimators; testing of hypotheses: defining statistical hypotheses;

distributions of test statistics; testing hypotheses related to population parameters; Type I and Type II errors; power of a test; level of significance, Confidence Interval, confidence limits, Degrees of freedom.

3. Simple Linear Regression Model: Two Variable Case

Estimation of model by method of ordinary least squares; properties of estimators; goodness of fit; tests of hypotheses; scaling and units of measurement; confidence intervals; Gauss-Markov theorem; forecasting.

4. Multiple Linear Regression Model

Estimation of parameters; properties of OLS estimators; goodness of fit - R^2 and adjusted R^2 ; partial regression coefficients; qualitative (dummy) independent variables.

5. Violations of Classical Assumptions: Consequences, Detection and Remedies

Multicollinearity: Sources, Consequences, Detection and Remedies; Heteroscedasticity- tests, consequences, detection and solution; Autocorrelation- sources, consequences, detection and remedial measures.

Readings

1. Jay L. Devore, *Probability and Statistics for Engineers*, Cengage Learning, 2010.
2. John E. Freund, *Mathematical Statistics*, Prentice Hall, 1992.
3. Richard J. Larsen and Morris L. Marx, *An Introduction to Mathematical Statistics and its Applications*, Prentice Hall, 2011.
4. D. N. Gujarati and D.C. Porter, *Essentials of Econometrics*, McGraw Hill, 4th edition, International Edition, 2009.
5. Christopher Dougherty, *Introduction to Econometrics*, Oxford University Press, 3rd edition, Indian edition, 2007.
6. Gujarati D. N. *Basic Econometrics*. McGraw Hill, New Delhi.
7. Johnston J. *Econometrics Methods*, McGraw Hill
8. Kmenta J. *Elements of Econometrics*. University of Michigan Press
9. Maddala G. S. *Econometrics Methods and Application*. E. Elgar Pub

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Core Economics Course 11: INDIAN ECONOMY-I

Course Description

Using appropriate analytical frameworks, this course reviews major trends in economic indicators and policy debates in India in the post -Independence period, with particular emphasis on paradigm shifts and turning points. Given the rapid changes taking place in India, the reading list will have to be updated annually.

Course Outline

1. Introduction to Indian Economy

Major features of Indian Economy at independence; characteristics of economic underdevelopment of India (with reference to colonial rule of India); Trend in National Income and Percapita income; Growth and development under different policy regimes—goals, constraints, institutions and policy framework.

2. Population and Human Development

Broad demographic features — Population size and growth rates; Sex and age composition, Occupational distribution; Density of population, Urbanisation and economic growth in India. Population growth as a factor of economic development, National Population Policy, Progress of human development in India. Development of education in India, health and family welfare and the development of health infrastructure.

3. Growth and Distribution

Growth, Distribution and trends of national income and sectoral distribution. An assessment of performance—sustainability and regional contrasts; structural change, Trends, measurement and policies in poverty; Inequality-measurement, causes and effects, Unemployment-types, causes and employment policies in India.

4. Economic Planning in India

Economic planning: Planning Commission and its functions, Planning exercises in India, Objectives, Strategies and achievements.

